U.S. DEPARTMENT OF COMMERCE
C. R. SMITH, Secretary

ENVIRONMENTAL SCIENCE SERVICES ADMINISTRATION
ENVIRONMENTAL DATA SERVICE

CLIMATOLOGICAL DATA

NATIONAL SUMMARY

JANUARY 1968
Volume 19 No. 1

ASHEVILLE: 1968

CONTENTS

NOTE: Delayed data and corrections will be carried in the June and December issues of this publication.

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CLIMATOLOGICAL DATA

NATIONAL SUMMARY

Volume 19 No. 1 JANUARY 1968

GENERAL SUMMARY OF WEATHER CONDITIONS

HIGHLIGHTS:
1. Extreme cold east of Rockies first half of month.
2. Freezing on record number of days in southeast.
3. Continued drought northeastern Oregon.
4. Damaging floods south-central Texas.
5. Midmonth snowstorm Ohio Valley and Appalachian region.

TEMPERATURE.--Temperatures for January averaged below normal along the Continental Divide and well below east of the Mississippi River. Except for Florida and a few areas in the Far West, the first half of January was part of a prolonged period of extreme cold which persisted through the last week of December 1967 and the first 2 weeks of January 1968. During the second half of the month temperatures rose rapidly to above normal levels and remained that way until the end of the month except in the Appalachian region and Atlantic Coast States where temperatures were alternately above and below.

The first week of January was extremely cold nearly everywhere except Florida and Washington State. Average temperatures for the week ranged from 27° below normal in northeastern North Dakota and northwestern Minnesota to 1° to 3° below in Washington and along the southern borders and Gulf Coast. Freezing occurred everywhere except in the Florida Peninsula and some southern portions of Arizona and California, and subzero minima spread southward over northern interior and central areas to the northern portion of the Southern States. A few stations in the northern Great Plains recorded more than 40° below zero.

With rapid advection of cold air from western Canada on the 6th and 7th, barometer readings in the lower Ohio and middle Mississippi Valleys reached record and near record high levels. Cairo, Ill., recorded 31.00 inches m.s.l. on the 5th, tieing the previous record set on January 5, 1929. At Springfield, Ill., 30.99 inches m.s.l. equaled the alltime low recorded there on January 15, 1888 and again on December 20, 1924, and 30.96 inches m.s.l. on the 7th tied the record for Memphis, Tenn., which had stood since January 5, 1924.

The second week of January was colder than the first in the Atlantic Coast States but warmer elsewhere. North of Florida temperatures averaged from 12° to 24° below normal. In the Pacific Northwest the week was a few degrees warmer than normal.

An alltime low temperature of -26° for Albany, N. Y., was equaled on the 12th. From the 7th through the 12th at Burlington, Vt., subzero temperatures persisted for 115 hours, the longest such period on record; also this was the fourth coldest month and third coldest January. At Concord, N. H., the week ending the 13th was the third coldest week in January since the beginning of records in 1871. Buffalo, N. Y., recorded -11° on the 12th, the lowest ever so early in the winter. In the Midwest at Sault Ste. Marie, Mich., -28° on the 8th was the lowest there since February 1934.

The severe cold weather froze over Nantucket Harbor, a phenomenon many compared with a similar occurrence during the coldest winter on record in the northeastern United States in 1917-18.

In the Chesapeake Bay ice conditions were the worst since 1963. Many Eastern Shore streams draining into the Bay were frozen over with 6 inches or more of ice.

In the Midwest, Iowa reported frost penetration of 2 to 4 feet in northern sections, but topsoil had thawed in southern sections by the end of the month. Wisconsin reported frost averaged about 15 inches deep in the south and 30 inches in the north.

The third week was warmer than normal everywhere except the Ohio Valley, Southeast, and the snow-covered areas of eastern Utah, western Colorado, northeastern Arizona, and southwestern Wyoming. The week was 9° to over 15° warmer than normal in north-central areas and the Pacific Northwest, in contrast to 3° to 21° colder than normal in the upper Colorado River Basin.

Temperatures averaged below normal for the fourth week in the Appalachian region and Atlantic Coast States except eastern New England. In nearly all the rest of the Country the week was warmer than normal, by as much as 15° in north-central areas. The last 3 days of the week were abnormally warm nearly everywhere.

At Red Bluff, Calif., a high of 78° on the 22d was only 1° less than the highest ever recorded there in January.

PRECIPITATION.--Precipitation in the 48 States was well above normal in the Texas-southern Oklahoma-eastern New Mexico area, most of Montana, and a few other small scattered areas. Monthly totals were less than 50% of normal in the Florida Peninsula, eastern Kentucky, much of the central Great Plains and central Rockies, the Colorado River Basin and northeastern Oregon.

In central Texas where monthly totals ranged up to more than 400% of normal, this was one of the wettest Januarys on record. The heaviest rainfall occurred during the period January 18-21 and totaled up to 10 inches or more. The heavy rains caused flooding in many streams. In San Antonio where 8.52 inches was the greatest January total since records began in 1871, flash flooding was blamed for the death of five persons and property damage of about $4 million.

The Florida Peninsula was unusually dry, with monthly totals nearly all less than 1 inch. Jacksonville had only 0.07 inch, its second driest January. Lakeland's total of 0.29 inch was its least for January in the last 53 years. Despite the January deficits, however, soil moisture was adequate owing to heavy rains in December.

In large areas of the central Great Plains precipitation was less than 50% of normal, and in parts of western Nebraska and Kansas, and eastern Colorado less than 25%. At the end of the month the soil was dry in western Kansas.

SNOWFALL.--January snowfall was below normal except an area that included the lower Appalachians, the lower Ohio Valley and nearly all of Indiana and Illinois, and a few other widely scattered localities.

In the Ohio Valley and adjacent areas, heaviest snowfall occurred on the 13th and 14th. Indianapolis, Ind., received 11 inches during this storm and 17 inches for the month which was the greatest monthly total since 1895 when 20 inches fell.

Some stations in the Great Plains measured less than 50% of their normal January snowfall, and nearly

all stations reported below normal amounts. During the second half of the month the snow cover in the midcontinent area receded northward from Kansas, Missouri, and the Ohio Valley to North Dakota and northern portions of Minnesota, Wisconsin, and Michigan. No general snowstorm occurred in the northern Plains.

STORMS.--Icing was more frequent and widespread than usual east of the Rockies. In North Carolina icing occurred daily over large areas from the 9th through the 13th, and broken trees and limbs falling on utility lines disrupted services from a few hours up to a week. Ice storms also affected the entire State on the 6-7th and 24-25th. On the 8th ice caused hazardous driving conditions over almost the entire State of Texas - a very unusual situation.

The snowstorm about midmonth in the Midwest and East hampered traffic and caused considerable damage. Up to 14 inches of snow in the southern Appalachian area collapsed roofs of several commercial buildings in Roanoke and Carroll Counties, Va., and also damaged windows, awnings, carports, roofs, and sheds. Schools closed for 1 or 2 days in parts of the Carolinas, Virginia, West Virginia, and Ohio.

CONDENSED CLIMATOLOGICAL SUMMARY

JANUARY 1968

Section	Temperature						Precipitation			
	Monthly extremes						Monthly extremes			
	Station	Highest	Date	Station	Lowest	Date	Station	Greatest	Station	Least
		°F			°F			In.		In.
Alabama	2 Stations	79	30+	Waterloo	5	8	Double Springs	9.15	Mobile WBAP	0.98
Alaska	Data delayed									
Arizona	Sabino Canyon	83	22	2 Stations	-17	6	Payson 12NNE	3.64	13 Stations	.00
Arkansas	2 Stations	75	31	Harrison	-9	7	Hamburg	12.56	Paragould Radio KDRS	1.82
California	do	86	23	2 Stations	-20	11	Honeydew 2WSW	28.60	17 Stations	.00
Colorado	do	75	25	Fraser	-42	12	Wolf Creek Pass 1E	4.77	4 Stations	.00
Connecticut	West Thompson Dam	52	20	Falls Village	-22	11	Colchester 1E	3.61	Norwalk Gas Plant	1.24
Delaware	2 Stations	66	30	Middletown 1WSW	-6	2	2 Stations	2.91	Newark University Farm	1.47
Florida	Sanford Exp Station	89	10	Fountain 3SSE	17	15	De Funiak Springs	3.46	Key West WBAP	.07
Georgia	2 Stations	80	29+	Blairsville Exp Station	7	8	Louisville	7.80	Moultrie 2ESE	1.15
Hawaii	Data delayed									
Idaho	Grasmere	62	24	Island Park Dam	-31	6	Mullan FAA	5.36	3 Stations	.19
Illinois	Quincy	68	27	2 Stations	-20	7+	Kewanee	3.56	Rockford 6ENE	.36
Indiana	Jeffersonville	64	31	do	-21	8+	Greenfield	4.91	Brookville 1S	.48
Iowa	Keokuk Lock and Dam 19	62	27	Le Mars 2N	-28	7	Corning	1.84	Peterson 1W	.10
Kansas	Elkhart	78	25	Centralia	-18	7	Columbus 6NNW	2.31	6 Stations	.00
Kentucky	Nolin River Reservoir	70	30	Owenton 2S	-16	8	Williamsburg 1E	3.81	Bowling Green	.86
Louisiana	Donaldsonville	81	7	4 Stations	15	8	Stevenson Fire Tower	11.26	New Orleans WB Moisant	.54
Maine	West Buxton 2NNW	48	19	Hiram	-38	9	Belfast	4.69	St Francis	1.35
Maryland	Leonardtown 3NW	65	30	Oakland 1SE	-23	2	Leonardtown 3NW	4.42	Cumberland Police Brks	D .77
Massachusetts	Hyannis 2NNE	54	12	Birch Hill Dam	-28	11	Spot Pond	5.67	Adams	1.28
Michigan	Mio Hydro Plant	50	19+	Stambaugh 1S	-34	8	Harbor Beach 3NW	3.55	Eagle Harbor Coast GD	.41
Minnesota	2 Stations	53	22+	Baudette 22S	-52	6	Cokato	1.54	2 Stations	.22
Mississippi	Monticello	79	31	7 Stations	10	14+	Greenville	10.66	Saucier Exp Forest	1.01
Missouri	3 Stations	72	22+	2 Stations	-22	7	Ozark	4.47	Mercer 6NW	.05
Montana	Roy 24NE Mobridge	68	24	Opheim 10N	-40	29	Jardine	7.27	Dodson 3W	.02
Nebraska	Beaver City	70	25	3 Stations	-29	7	Beemer 5N	.62	9 Stations	T
Nevada	Sunrise Manor Las Vegas	74	23	do	-19	29+	Glenbrook	2.59	8 Stations	.00
New Hampshire	Windham	50	27+	Mount Washington	-46	8	Mount Washington	4.12	Lebanon FAA AP	1.11
New Jersey	2 Stations	60	31+	Newton	-23	12	Phillipsburg Bridge	4.35	Hammonton 2NNE	.69
New Mexico	Jal	78	31	Gavilan	-32	12	Elida	2.16	12 Stations	.00
New York	Suffern Water Works	55	21+	Wanakena Ranger School	-41	9	Oswego Teachers Col	D 4.05	Peru 2WSW	.75
North Carolina	2 Stations	75	30	Grandfather Mountain	-4	7	Andrews 2E	6.43	Carthage 1SSE	1.72
North Dakota	4 Stations	59	24	Willow City	-45	1	Verona	D 1.67	2 Stations	T
Ohio	2 Stations	64	28+	Tom Jenkins Dam	-23	9+	Chardon	4.39	London Water Works	1.26
Oklahoma	do	76	25	2 Stations	-5	7	Flashman Tower	7.37	Regnier	.05
Oregon	Port Orford No 2	76	22	Ukiah	-14	7	Illahe 1N	18.29	Redmond KPRB	.09
Pennsylvania	Burnt Cabins 2NE	59	4	Clermont 4NW	-32	12	Union City Filt Plant	5.19	Bloserville 1N	.65
Puerto Rico	Red Hook Bay	97	21	Cayey 1E	51	31	Rio Blanco Upper	9.33	3 Stations	.00
Rhode Island	Greenville	49	19	Kingston	-10	12	Kingston	4.41	Block Island WBAP	2.37
South Carolina	Bamberg	76	30	Caesars Head 1NE	10	8	Caesars Head 1NE	7.66	Charleston WB City	2.01
South Dakota	2 Stations	69	24	2 Stations	-35	4	Deadwood	1.05	5 Stations	T
Tennessee	Selmer	71	22	Mountain City No 2	-2	17	Moscow	D 7.30	Clarksville Sew Plt	1.63
Texas	2 Stations	84	31+	Gruver	-3	7	Freeport 2NW	12.76	Plata	.17
Utah	La Verkin	63	20	2 Stations	-34	12	Silver Lake Brighton	3.91	2 Stations	.00
Vermont	Vernon	45	21	Mount Mansfield	-39	9	Mount Mansfield	3.91	Bellows Falls	1.06
Virginia	4 Stations	70	30	2 Stations	-13	12+	Woolwine 4S	5.72	Mount Weather	.87
Washington	Walla Walla WB City	71	20	Chesaw 4NNW	-18	28	Quinault Ranger Sta	D30.85	Lower Monumental Dam	.55
West Virginia	2 Stations	65	30	Bayard	-27	2	Flat Top	3.97	Mathias	1.58
Wisconsin	Dodge	53	20	2 Stations	-37	7	Merrill	1.96	Frederic	.23
Wyoming	4 Stations	64	24	Linch 10ESE	-41	6	Yellowstone Park	3.81	5 Stations	T

\+ And also on an earlier date or dates.

NOTE: Dates in the above Condensed Climatological Summary apply to the period 24 hours prior to time of observation. In some cases the actual occurrence is on the calendar date preceding that shown. (See individual Climatological Data for times of observations).

D Water equivalent of snowfall wholly or partly estimated, using a ratio of 1 inch water equivalent to every 10 inches of snowfall.

CLIMATOLOGICAL DATA
ENGLISH UNITS

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	No. of days: Max. 90 F. or above	No. of days: Min. 32 F. or below	Average dew point	Average relative humidity	Precipitation: Total	Departure from normal	Greatest in 24 hours	No. of days: .01 inch or more	No. of days: With thunderstorms	Snow, Sleet: Total	Snow, Sleet: Maximum depth on ground	Wind: Resultant speed	Resultant direction	Fastest mile: Speed	Fastest mile: Direction	Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	Ft.	Mb.	Mb.	F.	F.	F.	F.	F.		F				F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
ALABAMA																																
BIRMINGHAM	620	1001.4	1024.5	52	33	42.5	- 4.0	72	29	18	14	0	14	31	69	5.56	0.53	2.29	12	0	1.0	1	2.0	3	26	[illegible]	7	7	6	18	7.0	39
HUNTSVILLE	624	1000.7	1024.5	48	29	38.0	- 4.9	70	31	9	8	0	22	31	80	6.01	0.79	1.70	13	0	4.3	4	2.2	4	26	36	24	6	3	20	6.9	
MOBILE	211	1015.2	1023.4	61	40	50.3	- 2.7	74	29	24	14	0	9	40	71	0.98	- 3.66	0.35	9		T	0	2.6	5	25	36	7	10	3	18	6.3	
MONTGOMERY	194	1016.9	1024.3	55	35	45.0	- 3.1	73	30+	24	17+	0	12	34	70	2.78	- 1.28	0.94	12	1	T	T	2.1	3	17	[illegible]	23+	5	6	17	7.0	53
ALASKA												B																				
ANCHORAGE	114	1010.2	1015.1	18	7	12.5	0.4	41	2	-10	19	0	31	2	61	0.83	0.03	0.34	7	0	7.3	6	4.4	[illegible]	44	4	31	10	8	13	5.9	45
ANNETTE	110	1005.1	1009.2	37	27	32.2	- 2.2	52	15	13	10	0	24	23	70	11.05	- 0.31	3.45	18	0	25.2	9	4.0	8	35	15	22	5	8	18	7.[illegible]	
BARROW	31	1021.0	1021.7	- 2	-17	- 9.6	6.6	31	6	-47	21	0	31	-16	73	0.41	0.23	0.11	11	0	6.2	16	1.5	18	39	23	2	V	V	V		
BARTER ISLAND	39	1021.7	1023.6	- 2	-17	- 9.4	7.4	31	2	-40	21+	0	31	-16	72	0.73	0.33	0.39	7	0	8.4	11	5.9	16	48	27	31	X	X	X		
BETHEL	125	1015.2	1021.2	17	5	11.2	7.6	41	1	-30	20	0	29	8	88	0.48	- 0.64	0.27	5	0	2.9	3	1.5	7	33	10	25	10	5	16	6.2	
COLD BAY	96	1015.2	1019.1	33	24	28.3	0.5	42	26+	7	20	0	27	24	83	2.77	0.45	1.06	14	0	6.8	6	1.4	8	57	17	24	5	[illegible]	19	7.[illegible]	
FAIRBANKS	436	1004.7	1023.3	- 2	-20	-11.0	0.1	32	27+	-46	17	0	31	-15	77	1.19	0.50	0.58	9	0	22.6	33	0.9	15	21	27	29	7	5	[illegible]	7.0	
JUNEAU	12	1011.9	1012.6	25	12	18.7	- 6.4	45	23	- 9	31	0	31	13	80	3.25	- 0.75	1.16	13	0	31.1	14	5.5	[illegible]	[illegible]	12	22	10	4	17	6.5	44
KING SALMON	49	1015.6	1017.7	16	4	10.0	- 3.4	47	1	-26	20	0	30	2	69	1.10	0.03	0.72	6	0	9.3	[illegible]	4.5	1	[illegible]	14	1	13	10	8	4.9	
KOTZEBUE	10	1021.0	1021.5	9	- 6	1.4	7.1	37	2	-35	21	0	31	- 5	75	0.31	- 0.08	0.12	6	0	6.8	16	5.0	[illegible]	47	10	25	5	6	[illegible]	7.5	
MC GRATH	344	1008.5	1022.2	4	-14	- 4.9	4.1	38	2	-52	20	0	30	-11	71	0.98	- 0.28	0.31	10	0	14.2	15	[illegible]	27	26	01	[illegible]	1	5	[illegible]	6.1	
NOME	13	1019.6	1020.3	17	0	8.5	4.1	36	1	-29	19	0	31	0	67	1.26	0.24	0.55	9	0	6.9	18	2.2	17	21	9	24+	5	5	[illegible]	7.6	[illegible]
ST. PAUL ISLAND	22	1016.6	1017.7	34	26	30.1	4.7	40	25+	12	19+	0	20	27	85	1.63	- 0.18	0.43	17	0	6.0	5	4.0	15	56	16	3	[illegible]	[illegible]	[illegible]	8.2	
SHEMYA	122	1002.7	1006.4	37	30	33.4	2.1	40	30+	22	21	0	20	30	88	1.77	- 0.73	0.33	21	0	5.3	1	11.1	17	62	14	[illegible]	[illegible]	4	[illegible]	[illegible]	
YAKUTAT	28	1008.5	1009.7	26	10	18.2	- 9.1	39	22	- 3	15+	0	31	13	78	8.09	- 2.77	3.41	14	0	33.7	26	4.6	9	27	11	16	[illegible]	6	19	7.1	
ARIZONA																																
FLAGSTAFF	6993	768.0	1022.9	40	11	25.5	- 1.8	53	15	- 6	5	0	31	16	70	1.55	- 0.28	1.29	5	0	15.2	[illegible]	1.3	13	26	[illegible]	27	16	4	11	4.7	
PHOENIX	1117	979.3	1018.8	66	39	52.4	2.7	74	14	31	6+	0	5	34	56	0.19	- 0.54	0.12	3	0	0.0	0	3.3	[illegible]	28Y	ENE	13	15	[illegible]	[illegible]	4.5	[illegible]
TUCSON	2584	928.9	1017.9	65	40	52.4	2.6	75	14	32	20+	0	4	34	56	0.18	- 0.64	0.09	5	0	0.0	0	4.7	[illegible]	36	E	13	16	2	12	4.6	72
WINSLOW	4895	856.4	1030.6	23	2	12.9	-18.1	46	31	- 9	8	0	31	8	81	T	- 0.43	T	0	0	0.3	7	1.5	21	25	[illegible]	27	14	5	12	5.1	
YUMA	194	1011.5	1018.8	69	43	55.2	1.8	77	23	34	1	0	0	29	42	T	- 0.39	T	0	0	0.0	0	1.5	[illegible]	[illegible]	NE	[illegible]	15	9	7	4.2	[illegible]
ARKANSAS																																
FORT SMITH	447	1007.1	1024.3	49	31	39.6	- 0.2	70	31	7	7	0	21	30	72	2.81	0.15	1.02	10	0	0.3	T	2.7	5	[illegible]	NW	[illegible]	[illegible]	4	[illegible]	[illegible]	[illegible]
LITTLE ROCK	257	1014.6	1024.6	45	30	37.7	- 2.9	68	26	10	7	0	22	31	78	4.76	- 0.46	1.09	12	1	1.0	1	3.[illegible]	5	28	N	[illegible]	4	6	21	7.[illegible]	47
TEXARKANA	391	1010.5	1024.1	51	37	44.0	- 1.1	75	31	16	8+	0	12	35	74	5.07	0.23	1.35	14	0	0.1	1	1.8	11	21	19	29+	5	1	25	6.[illegible]	
CALIFORNIA																																
BAKERSFIELD	475	1003.4	1021.4	57	38	47.9	0.5	75	23	31	5	0	1	37	69	0.49	- 0.68	0.28	[illegible]	0	0.0	0	0.7	4	21	30	27	5	7	16	6.5	
BISHOP	4108	876.1		56	20	37.9	1.1	71	24+	10	2[illegible]	0	30			0.01	- 0.98	0.01	1		T	T						[illegible]	7	[illegible]	[illegible]	
BLUE CANYON	5280			44	31	37.6	0.5	65	23	17	28+	0	19			11.71	0.01	3.18	11		34.9	51			36	21	29	[illegible]	6	15	6.[illegible]	
EUREKA U	43			53	40	46.6	- 0.8	70	22	32	11	0	1			7.59	0.89	2.34	15		T	T			34	[illegible]	25+	[illegible]	7	[illegible]	6.7	58
FRESNO	328	1009.1	1021.3	54	35	44.8	- 1.3	69	23	26	4	0	7	38	81	1.05	- 0.98	0.41	5	1	0.0	0	0.9	11	22	NW	16	5	11	15	[illegible]	47
LONG BEACH	34	1018.3	1019.6	67	44	55.6	2.5	82	23	36	30+	0	0	37	55	0.52	- 1.47	0.23	5	0	0.0	0	1.[illegible]	31	18	21	27	14	8	9	4.9	
LOS ANGELES	97	1015.2	1018.9	66	48	57.3	2.9	82	23	41	30+	0	0	40	57	0.84	- 1.82	0.40	6	0	0.0	0	0.5	34	28Y	S	17	12	7	12	5.[illegible]	
LOS ANGELES U	270			68	49	56.5	2.7	84	23	40	29+	0	0			0.90	- 2.17	0.53	6		0.0	0			17	SW	27	13	7	11	4.8	55
MT SHASTA R	3544			42	24	33.0	- 0.3	62	23	4	11	0	27			8.40	2.04	2.57	14		76.0	37										
OAKLAND	6	1020.7	1020.8	54	41	47.1	- 0.9	74	22	33	7+	0	0	39	75	5.05	1.22	2.58	11	0	0.0	0	2.2	12	31	15	29	[illegible]	6	15	6.[illegible]	
RED BLUFF	342	1007.8	1020.8	53	33	43.1	- 2.4	78	22	20	4	0	15	34	77	5.82	1.53	1.87	[illegible]	0	.1	T	1.[illegible]	3	45	[illegible]	25	7	7	17	7.0	[illegible]
SACRAMENTO	17	1020.0	1021.0	52	35	43.4	- 1.8	63	25+	24	4+	0	8	37	84	3.77	0.59	1.6[illegible]	9	0	0.0	0	1.5	17	30	SE	29	[illegible]	[illegible]	15	7.2	55
SANDBERG R	4517	864.5		46	33	39.[illegible]	- [illegible]	61	24+	18	28	0	18	18	52	0.31	- 2.24	0.31	1		[illegible]	[illegible]	4.[illegible]	7	[illegible]	[illegible]	16	15	4	[illegible]	5.1	
SAN DIEGO	13	1018.0	1016.9	67	48	57.2	2.2	81	23	41	30+	0	0	40	57	0.35	- 1.66	0.31	5	0	0.0	0	0.9	32	17	NW	[illegible]	14	[illegible]	[illegible]	4.5	44
SAN FRANCISCO	8	1020.0	1020.6	55	38	46.5	- 2.1	71	22	32	6+	0	3	40	80	5.25	1.24	2.45	12	1	0.0	0	2.2	17	45	[illegible]	10	[illegible]	5	16	6.[illegible]	
SAN FRANCISCO U	52			55	44	47.8	- [illegible]	74	22	36	7	0	0			4.54	- 0.01	1.88	12		0.0	0			32	SW	29					[illegible]
SANTA CATALINA	1568	962.8		59	49	54.1	0.5	74	21	38	29	0	0			0.53	- 2.13	0.21	5		0.0											
SANTA MARIA	236			63	38	50.9	0.7	77	24	28	6	0	6			0.60	- 2.24	0.35	6		0.0	0						10	7	14	5.[illegible]	
STOCKTON	22	1020.7	1021.6	50	35	42.6	- 2.1	61	15	25	5+	0	7	36	81	4.10	1.55	2.70	6	0	0.0	0	2.4	17	[illegible]	16	[illegible]	[illegible]	9	[illegible]	7.8	
COLORADO																																
ALAMOSA	7536	772.8		27	-11	7.9	- 9.5	41	31	-27	7	0	31			0.04	- 0.22	0.02	[illegible]		1.3	8						14	11	[illegible]	4.4	
COLORADO SPRINGS	6145	811.0	1021.6	43	19	30.7	2.1	63	25	0	3+	0	30	14	55	0.10	- 0.19	0.04	5	0	3.0	2	2.5	[illegible]	[illegible]	36	[illegible]	[illegible]	7	[illegible]	5.4	
DENVER	5283	836.4	1019.7	44	15	29.7	1.2	62	25	-10	5	0	30	14	57	0.51	- 0.04	0.47	4	0	3.0	4	2.4	17	29	NW	3	[illegible]	[illegible]	11	5.1	[illegible]
GRAND JUNCTION	4855	857.1	1029.4	27	4	15.4	-10.6	45	27	-15	8+	0	30	9	78																	

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure: Station ∅	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No. of days: Max. 90 F. or above	Temperature: No. of days: Min. 32 F. or below	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No. of days: .01 inch or more	Precipitation: No. of days: With thunderstorms	Precipitation: Snow, Sleet: Total	Precipitation: Snow, Sleet: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile: Speed	Wind: Fastest mile: Direction	Wind: Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	No. of days (sunrise to sunset): Partly cloudy, 4-7	No. of days (sunrise to sunset): Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	Ft.	Mb.	Mb.	F.	F.	F.	F	F		F.				F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
COLORADO																																
PUEBLO	4684	857.1	1022.2	42	14	27.9	- 2.1	64	25	- 8	7+	0	30	17	67	0.10	- 0.21	0.04	5	0	2.9	3	1.2	34	30	W	28	12	8	11	5.2	73
CONNECTICUT																																
BRIDGEPORT	7	1023.4	1024.0	33	18	25.5	- 4.7	47	21+	- 3	9	0	25	15	67	1.92	- 1.77	0.75	13	0	6.4	7	6.7	32	36	7	14	11	8	12	5.5	
HARTFORD	169	1016.6	1023.4	30	12	21.1	- 4.9	48	19	-11	12+	0	29	7	56	1.92	- 1.66	0.57	13	0	7.5	17	4.5	33	37	NW	7	11	8	12	5.5	62
NEW HAVEN	6	1023.7		33	17	24.8	- 4.8	50	31	- 5	9	0	28			1.92	- 2.04	0.73	12		7.0	5			30	W	4	11	9	11	5.5	61
DELAWARE																																
WILMINGTON	74	1021.7	1024.7	36	20	28.0	- 5.4	52	27+	1	2	0	28	17	65	2.29	- 1.11	1.61	10	0	1.6	3	4.0	32	39	28	4	8	7	16	6.5	
DIST.OF COLUMBIA																																
WASH NATL AP	14	1022.7	1025.0	40	23	31.4	- 5.5	58	30	7	12	0	27	18	61	1.97	- 1.06	0.96	9	0	2.8	3	2.7	34	38	NE	14	7	8	16	6.6	46
FLORIDA																																
APALACHICOLA U	13			60	44	52.2	- 2.9	75	4	31	14	0	1			1.82	- 1.32	0.73	7	0	T	0			31	N	7	9	9	13	6.0	48
DAYTONA BEACH	31	1021.7	1022.9	68	49	58.2	- 1.0	81	4	33	16	0	0	48	74	0.42	- 1.54	0.30	5	2	0.0	0	3.8	34	25	26	24	7	13	11	6.1	
FORT MYERS	15	1021.7	1021.9	76	54	64.6	1.1	83	3+	37	26	0	0	55	76	0.40	- 1.12	0.22	2	0	0.0	0	3.6	4	25	27	14	11	16	4	4.6	
JACKSONVILLE	20	1022.4	1023.3	64	43	53.4	- 2.5	78	4	29	15	0	5	44	75	0.82	- 1.63	0.40	6	0	0.0	0	3.5	35	33	NE	8	9	7	15	6.3	50
KEY WEST	4	1020.0	1020.5	76	67	71.7	2.1	82	7	56	26	0	0	61	72	0.07	- 1.46	0.04	3	0	0.0	0	7.6	5	28	E	9	13	10	8	4.7	81
LAKELAND U	214			70	51	60.4	- 1.3	83	2	33	26	0	0			0.29	- 1.76	0.29	2		0.0	0						9	15	7	5.2	78
MIAMI	7	1020.7	1020.8	74	58	66.1	- 0.8	80	7+	38	26	0	0	58	75	1.92	- 0.11	1.02	6	0	0.0	0	4.7	5	30	6	8	8	17	6	5.5	
ORLANDO	108	1018.6	1022.8	70	49	59.6	- 0.8	81	4	32	26	0	1	50	76	0.65	- 1.35	0.58	3	3	0.0	0	3.6	1	26	28	24	8	12	11	5.6	
PENSACOLA	112	1019.3	1023.4	59	40	49.6	- 3.9	73	3	25	14	0	9	41	74	1.22	- 3.00	0.57	9		0.0	0	2.8	4	37	SW	23	7	7	17	6.3	55
TALLAHASSEE	55	1021.0	1023.5	65	39	51.9	- 2.0	80	4	23	26+	0	8	42	76	2.15	- 1.27	1.01	6	0	T	T	2.0	2	20	35	7	10	5	16	6.2	
TAMPA	19	1022.0	1022.3	70	49	59.4	- 1.8	79	7	31	26	0	1	50	75	0.41	- 1.72	0.41	2	1	0.0	0	3.2	4	24	29	23	10	13	8	5.2	71
WEST PALM BEACH	15	1020.7	1021.3	74	55	64.8	- 2.1	83	4	36	26	0	0	54	70	0.56	- 1.92	0.31	3	1	0.0	0	3.2	5	25	30	24	7	12	12	6.1	
GEORGIA																																
ATHENS	802	994.2	1024.0	49	30	39.6	- 5.0	70	21	20	8	0	21	30	72	5.26	0.37	1.61	12	0	1.9	1	1.6	3	20	35	7	7	4	20	7.1	
ATLANTA	1010	986.1	1024.0	48	30	39.2	- 5.5	69	31+	17	8	0	20	30	75	4.07	- 0.37	1.31	12	0	0.7	T	1.4	2	32	NW	7	7	5	19	6.8	52
AUGUSTA	145	1018.6	1023.9	54	30	41.9	- 5.7	74	30+	19	16	0	20	30	71	3.77	0.78	1.85	13	0	1.4	1	2.2	35	26	27	15	7	5	19	6.8	
COLUMBUS	385			55	34	44.2	- 3.6	72	30+	22	17	0	16	34	75	1.78	- 2.28	0.57	9		T	T	2.3	2	18	30	13	9	3	19	6.8	
MACON	354	1010.5	1023.8	54	31	42.3	- 6.9	72	30+	19	17	0	22	31	71	2.88	- 0.49	1.34	14	0	T	T	2.6	36	23	NW	7	8	4	19	6.9	45
ROME	637			49	27	38.2	- 3.9	71	31	15	8	0	23			5.51	0.00	2.27	12		0.5	2										
SAVANNAH	46	1021.7	1023.5	57	34	45.7	- 6.0	76	30+	22	17	0	16	36	75	1.79	- 0.99	0.65	11	0	T	T	2.2	36	25	NW	4	8	7	16	6.6	54
HAWAII																																
HILO	27	1010.5	1011.7	81	65	72.9	2.1	87	21	60	9+	0	0	65	77	4.77	- 7.05	1.44	12	3	0.0	0	1.6	18	30	SE	20	4	11	16	6.8	36
HONOLULU	7	1010.8	1011.4	80	66	73.0	0.5	83	22+	59	10+	0	0	64	75	8.17	4.41	3.45	12	4	0.0	0	1.0	11	43	N	16	8	13	10	6.0	65
KAHULUI	48	1008.8	1011.2	78	64	70.8	- 1.3	83	15	55	10	0	0	65	84	4.31	1.17	1.33	11	3	0.0	0	1.7	14	34	SW	17+	8	9	14	6.2	58
LIHUE	103	1006.4	1011.7	76	63	69.5	- 1.4	81	20	56	12	0	0	63	82	7.43	1.92	2.43	12	3	0.0	0	1.9	23	32	SW	16	15	4	12	5.3	55
IDAHO																																
BOISE	2838	920.1	1023.3	38	21	29.5	0.4	51	16	6	6	0	30	20	72	0.43	- 0.89	0.18	6	0	3.3	3	4.3	14	30	NW	16	5	8	18	7.1	53
LEWISTON	1413			42	28	34.8	4.1	58	20	15	28+	0	22			0.65	- 0.45	0.14	12		2.7	1						1	3	27	8.7	
POCATELLO	4454	866.2	1025.1	32	10	21.2	- 1.1	43	24	- 9	29	0	31	14	73	0.75	- 0.46	0.41	7	0	11.6	7	4.3	20	36	S	10	3	13	15	7.1	55
ILLINOIS																																
CAIRO U	314			41	26	33.4	- 4.0	60	30+	2	7	0	24			1.55	- 2.91	0.58	12		4.6	4			27	N	23	9	5	17	6.7	37
CHICAGO O HARE	658	998.6	1024.4	31	17	23.8	- 0.4	51	29	-13	7	0	27	16	73	1.77	- 0.05	0.44	12	0	10.4	6	2.4	23	30	28	4	4	9	18	7.3	
CHICAGO MIDWAY	607	1001.0		32	18	24.8	- 1.2	53	29	-11	7	0	26	16	70	1.69	- 0.17	0.39	14	1	12.7	5	2.5	21	28	W	4	5	7	19	7.4	40
MOLINE	582	1002.0	1024.7	30	13	21.0	- 1.6	52	29+	-17	1	0	30	12	67	0.80	- 0.81	0.31	10	0	8.6	7	1.7	25	28	W	4	5	10	16	6.9	46
PEORIA	652	999.7	1024.8	30	14	22.1	- 3.6	52	29	-15	7	0	27	16	77	1.12	- 0.76	0.43	10	1	8.4	9	1.1	18	30	W	4	7	7	17	6.7	48
ROCKFORD	724	995.9	1024.1	30	13	21.2	- 0.8	49	29	-17	7	0	27	15	78	0.58	- 1.40	0.21	7	0	2.9	3	1.1	23	27	31	4	7	8	16	7.0	
SPRINGFIELD	588	1001.7	1024.8	31	16	23.8	- 4.6	57	29	-14	7	0	27	17	75	1.79	- 0.10	0.52	10	1	13.0	13	1.7	19	28	S	5	9	6	16	6.4	51
INDIANA																																
EVANSVILLE	381	1010.5	1025.4	38	19	28.5	- 5.7	61	31	- 8	8	0	26	19	69	2.44	- 1.54	1.15	11	0	10.0	8	0.8	32	26	NW	6	10	4	17	6.6	43
FORT WAYNE	791	993.6	1025.0	28	13	20.3	- 6.7	48	29	-17	8	0	29	14	74	2.05	- 0.62	0.66	11	0	8.9	8	1.7	22	32	W	4	7	7	17	7.1	48
INDIANAPOLIS	792	994.2	1024.9	33	17	25.1	- 4.0	53	27	-12	1	0	25	16	69	2.96	- 0.09	1.28	10	0	17.0	10	0.6	16	25	NW	15+	8	6	17	6.8	39

See footnotes at end of table

CLIMATOLOGICAL DATA
ENGLISH UNITS

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	No. of days: Max. 90 F. or above	No. of days: Min. 32 F. or below	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	No. of days: .01 inch or more	No. of days: With thunderstorms	Snow, Sleet: Total	Snow, Sleet: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Fastest mile: Speed	Fastest mile: Direction	Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	Ft.	Mb.	Mb.	F.	F.	F.	F.	F.		F.				F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
INDIANA																																
SOUTH BEND	773	994.9	1024.3	29	15	22.3	- 3.3	48	29	-10	1	0	26	16	77	2.06	- 0.14	0.79	15	0	12.6	9	2.3	19	25	28	4	4	6	21	7.7	
IOWA																																
BURLINGTON	692			32	14	23.2	- 1.2	58	27	-13	7	0	29	17	75	0.40	- 1.24		6	0	5.6		1.3	27	23	33	23+	10	7	14	6.2	
DES MOINES	938	988.2	1024.8	31	14	22.3	2.4	55	29+	-14	7	0	26	16	79	0.78	- 0.52	0.45	7	2	8.5	8	1.5	28	26	NW	22	12	4	15	6.0	51
DUBUQUE	1056	983.1		27	12	19.1	- 0.1	45	31+	-19	7	0	31			1.20	- 0.63	0.51	9		5.7	6						6	8	17	7.0	
SIOUX CITY	1095	982.4	1024.4	27	10	18.6	- 0.1	49	24+	-19	7	0	29	11	76	0.32	- 0.46	0.18	8	0	3.4	2	1.3	31	31	S	8	13	7	11	5.3	64
WATERLOO	868	990.9	1024.3	27	9	18.0	0.1	47	29+	-20	7	0	31	10	70	0.73	- 0.42	0.33	9	1	6.2	4	1.2	25	26	34	22+	7	7	17	6.5	
KANSAS																																
CONCORDIA	1470	968.5	1023.7	37	16	26.2	- 1.3	68	28	-12	7	0	30	19	78	0.17	- 0.53	0.11	3	0	2.0	3	1.3	23	37	S	8	11	6	14	5.6	59
DODGE CITY	2582	928.2	1022.0	44	20	32.1	1.0	73	25	- 3	7+	0	26	19	65	0.14	- 0.43	0.12	3	0	0.2	1	1.2	24	33	S	8	7	8	16	6.4	64
GOODLAND	3650	889.9	1021.0	45	17	31.2	3.8	69	25	- 9	6	0	30	18	67	0.06	- 0.33	0.03	3	0	1.4	2	4.4	26	33	33	17	15	6	10	4.6	
TOPEKA	876	991.5	1024.8	37	16	26.6	- 2.2	65	28	- 9	7	0	28	19	76	0.89	- 0.13	0.48	6	1	4.7	4	0.8	31	33	N	29	6	11	14	6.3	52
WICHITA	1321	973.9	1023.5	42	23	32.5	0.5	69	28	- 3	7	0	25	23	70	0.14	- 0.67	0.05	7	0	0.6	1	0.6	15	37	S	8	6	6	19	7.3	39
KENTUCKY																																
COVINGTON	869	992.2	1025.1	35	19	26.8	- 4.8	55	30+	-10	8	0	24	17	69	1.79	- 1.77	0.72	11	0	8.7	6	0.8	22	26	30	4	8	5	18	7.0	
LEXINGTON	966	988.2	1025.2	38	22	29.6	- 4.9	58	28	- 3	8	0	24	21	71	1.44	- 3.50	0.44	11	0	12.1	10	1.9	18	21	27	4	8	4	19	6.9	
LOUISVILLE	477	1006.8	1025.1	38	23	30.3	- 4.7	60	31	- 2	1	0	26	22	73	2.13	- 1.97	0.86	9	0	13.8	7	0.2	7	25	W	4	8	4	19	7.1	39
LOUISIANA																																
ALEXANDRIA	92	1019.3	1023.6	55	35	45.0	- 5.3	73	31+	21	14+	0	13	39	82	6.12	0.80	3.50	10	1	0.0	0	1.9	36	25	18	22	6	4	21	7.5	
BATON ROUGE	64	1020.7	1023.4	60	39	49.6	- 3.3	76	30	25	14	0	9	41	79	3.59	- 1.19	2.08	10	2	T	0	2.9	6	24	32	12	7	3	21	7.0	
LAKE CHARLES	9	1021.7	1022.7	59	43	50.8	- 2.9	76	31	26	14	0	6	45	85	3.89	- 0.55	1.60	7	1	0.0	0	3.8	6	24	1	6	6	4	21	7.5	
NEW ORLEANS	3	1022.4	1023.1	62	42	51.6	- 3.0	76	6	27	15+	0	6	43	74	0.54	- 3.30	0.15	8	0	0.0	0	3.2	3	25	25	23	9	3	19	6.6	
SHREVEPORT	254	1013.9	1023.4	53	38	45.4	- 2.1	76	31	18	8	0	13	38	80	8.33	3.53	2.85	15	1	1.0	1	2.0	9	23	30	13+	4	3	24	8.2	31
MAINE																																
CARIBOU	624	995.6		16	- 4	6.1	- 4.4	34	20+	-23	3	0	31			2.31	0.20	0.58	13		33.5	35						9	8	14	5.9	
PORTLAND	47	1019.6	1022.0	28	5	16.6	- 5.2	44	20+	-20	11	0	30	5	59	3.00	- 1.37	0.98	11	0	20.0	24	4.2	31	31	W	5	15	4	12	4.6	65
MARYLAND																																
BALTIMORE	148	1019.0	1024.9	38	21	29.2	- 5.6	55	27+	0	2	0	28	17	62	3.42	- 0.01	2.54	9	0	2.5	2	3.6	31	35	NW	4	12	4	15	6.1	52
MASSACHUSETTS																																
BLUE HILL OBS R	629			31	15	22.6	- 4.4	49	19	- 9	9	0	31			4.01	- 0.48	1.37	13		23.2	20			59	NW	7					58
BOSTON	15	1021.7	1022.6	33	18	25.6	- 4.3	50	19	- 4	9+	0	28	12	57	3.85	- 0.09	1.25	13	0	17.7	13	7.8	31	36	NW	8	12	7	12	5.0	63
NANTUCKET	43	1021.7	1021.9	36	21	28.9	- 4.1	46	14	2	9	0	27	20	71	2.46	- 1.76	0.62	14	0	4.3	2	6.6	33	47	NW	8	13	4	14	5.3	54
PITTSFIELD	1170			27	7	16.6	- 5.2	43	20+	-20	9	0	30			1.86	- 1.11	0.66	14		10.6	12										
WORCESTER	986	984.1	1022.7	27	11	19.2	- 4.8	44	19	-13	9	0	31	8	63	3.00	- 0.71	0.63	12	0	18.6	22	7.2	30	40	28	7	12	7	12	5.3	
MICHIGAN																																
ALPENA	689	997.6	1024.2	26	10	18.3	- 1.4	48	18	-21	8	0	30	12	74	1.19	- 0.76	0.49	12	0	13.6	8	0.7	23	27	NE	15	2	5	24	8.3	29
DETROIT	619			30	18	23.7	- 3.2	48	29	0	1	0	29	16	73	1.85	- 0.20	0.59	11	0	11.4		1.8	25	32	29	4					
DETROIT M WAYNE CO	633	999.0	1024.2	28	14	20.9	- 5.3	44	29	- 8	8	0	29	15	76	2.30	0.37	0.78	14	0	11.8	10	1.1	26	35	W	4	6	7	18	7.3	44
DETROIT WILLOW RUN	711	994.9	1024.5	29	15	22.0	- 4.6	43	29	- 6	8	0	29	14	70	1.95	0.01	0.57	12	0	9.7	10	1.9	24	31	30	4	5	8	18	7.4	
FLINT	770	994.9	1024.0	29	14	21.1	- 3.4	44	29	- 8	8	0	28	12	68	1.54	- 0.16	0.48	14	0	14.1	11	1.9	23	27	1	15	4	6	21	7.5	
GRAND RAPIDS	784	993.6	1024.0	29	13	21.0	- 3.0	45	29	-15	1	0	29	14	72	1.55	- 0.36	0.75	14	0	11.8	8	0.6	20	29	NW	4	5	3	23	7.9	35
HOUGHTON LAKE	1149	980.0	1024.2	26	10	17.6		47	18	-21	8	0	31	12	77	1.03		0.39	14	0	9.0	7	1.2	22	21	S	14+	4	4	23	7.7	
LANSING	841	990.9	1024.2	29	11	20.1	- 4.2	47	29	- 9	8	0	29	15	77	1.46	- 0.50	0.54	14	0	10.8	9	2.2	22	33	W	4	3	9	19	7.7	49
MARQUETTE C	677			25	11	17.8	- 1.7	43	19	-14	7	0	31			1.24	- 0.65	0.48	10		11.6	8			30	S	25	3	3	25	8.4	37
MUSKEGON	627	999.7	1023.8	28	17	22.8	- 3.2	44	29	- 2	1	0	26	14	69	1.87	- 0.23	0.53	15	0	22.5	15	1.1	16	25	29	4	5	1	25	8.3	
SAULT STE MARIE	721	996.3	1024.4	20	3	11.5	- 4.3	39	18	-28	8	0	31	6	76	1.40	- 0.67	0.46	13	0	14.8	20	3.2	6	33	NW	6	6	5	20	7.4	30
MINNESOTA																																
DULUTH	1428	968.8	1023.7	19	0	9.1	0.4	44	20	-33	6	0	31	2	69	0.77	- 0.38	0.22	11	0	10.8	8	0.8	25	34	NE	27	4	6	21	7.9	40
INTERNATIONAL FALLS	1179	978.0	1024.4	16	- 8	3.8	0.7	45	21	-46	6	0	31	- 4	68	0.77	- 0.07	0.19	12	0	10.1	17	1.3	18	28	27	29	10	6	15	6.0	
MINNEAPOLIS	834	992.2	1024.4	23	5	14.3	1.9	41	20	-21	7+	0	30	8	72	0.71	0.01	0.30	9	0	10.6	7	1.1	24	30	S	8	6	5	20	7.2	43
ROCHESTER	1297	973.6	1024.1	23	6	14.6	1.0	45	21+	-22	7	0	31	9	76	0.77	- 0.14	0.42	7	1	4.7	3	3.5	23	32	30	5	7	8	16	6.6	

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure		Temperature								No. of days				Precipitation			No. of days		Snow, Sleet		Wind		Fastest mile			No. of days (sunrise to sunset)				
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 90 F. or above	Min. 32 F. or below	Average dew point	Average relative humidity	Total	Departure from normal	Greatest in 24 hours	.01 inch or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	Ft.	Mb.	Mb.	F.	F.	F.	F.	F.		F.				F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
MINNESOTA																																
ST CLOUD	1034	983.4	1023.7	21	1	10.7	0.6	43	21	-27	6	0	31		71	0.86	0.14	0.27	10		9.0	5						6	4	21	7.2	
MISSISSIPPI																																
JACKSON	310	1011.9	1024.1	54	33	43.4	- 4.5	74	31+	16	8	0	16	37	84	4.56	- 0.62	1.71	13	0	T	T	1.1	5	38	N	23	9	1	21	7.2	43
MERIDIAN	290	1012.9	1024.4	56	33	44.6	- 3.5	76	30+	18	8	0	14	35	78	3.70	- 0.99	0.95	11	0	T	T	1.9	36	28	34	23	6	3	22	7.5	
MISSOURI																																
COLUMBIA	778	994.6	1024.2	38	20	29.1	- 1.2	65	27+	-11	7	0	24	22	75	1.79	0.08	1.24	10	2	4.6	3	1.3	22	24	NW	13+	5	6	20	7.4	43
KANSAS CITY	742	996.3	1024.7	38	19	28.4	- 3.3	65	26	- 7	7	0	25	23	80	0.27	- 1.14	0.18	6	0	2.8	3	1.1	23	24	NW	29	6	10	15	6.7	41
ST JOSEPH	811			36	16	26.3	- 0.9	61	29	-14	7	0	28	19	80	0.27	- 0.93	0.16	4	0		4	0.7	29	30	33	29	12	6	13	5.5	
ST LOUIS	535	1003.7	1025.2	38	20	28.6	- 3.3	65	29	- 7	7+	0	24	22	77	1.86	- 0.12	1.10	9	1	6.9	6	1.3	24	26	S	26+	5	9	17	7.0	42
SPRINGFIELD	1268	977.0	1024.1	43	24	33.3	- 0.3	66	26	- 7	7	0	21	25	75	3.07	1.11	1.55	11	0	1.0	2	2.2	17	27	N	23	4	6	21	7.8	31
MONTANA																																
BILLINGS	3567	891.6	1020.5	32	14	23.4	0.2	58	24	-16	2	0	25	10	58	1.22	0.68	0.35	9	0	13.2	8	9.3	25	36	SW	2	5	8	18	7.3	40
GLASGOW	2284	935.3		21	1	11.2	1.4	55	24	-23	6	0	31	2	59	0.13	- 0.35	0.09	3		2.7	3						6	5	20	7.3	
GREAT FALLS	3662	887.6	1020.2	33	11	22.0	- 0.1	61	24	-18	6+	0	24	9	59	1.29	0.68	0.36	7	0	12.8	5	10.9	22	43	SW	4	3	5	23	7.6	48
HAVRE	2582	924.1		22	1	11.9	- 2.0	63	24	-25	6	0	28	6	73	0.27	- 0.22	0.21	5		4.8	4	2.8	23	42	NW	4	3	6	22	7.8	47
HELENA	3828	881.8	1023.6	27	5	15.7	- 2.9	51	24	-23	2	0	31	7	70	0.59	0.12	0.18	10	0	8.7	10	4.4	26	41	S	10	5	8	18	7.5	50
KALISPELL	2965	912.3		29	12	20.4	0.6	50	24	-22	2	0	30			1.01	- 0.36	0.40	18	0	14.1	11			37	2	1	0	3	28	9.0	
MILES CITY	2629	924.1	1022.1	25	4	14.3	- 2.2	51	24	-23	29	0	30	6	72	0.84	0.40		11	0	7.5		1.4	30								
MISSOULA	3190	906.2	1022.8	29	12	20.2	1.0	44	24	- 8	7	0	30	14	77	0.87	- 0.05	0.30	12	0	14.5	12	1.4	11	34	SW	24	0	6	25	8.6	24
NEBRASKA																																
GRAND ISLAND	1841	954.6	1023.8	35	13	23.9	1.3	64	25	-16	7+	0	31	16	74	0.13	- 0.50	0.10	4	0	1.1	1	2.2	28	28	36	29+	12	4	15	5.6	
LINCOLN U	1150			34	16	24.9	- 0.2	58	25+	-11	7	0	25			0.38	- 0.54	0.28	6		4.3	3			32	S	8	11	8	12	5.3	61
NORFOLK	1544			30	10	19.8	0.4	55	21	-25	7	0	31			0.19	- 0.59	0.14	3		2.4	4						13	5	13	5.5	
NORTH PLATTE	2775	920.8	1023.1	36	8	22.2	- 1.8	61	25+	-20	7	0	31	12	69	0.12	- 0.31	0.10	2	0	1.6	2	2.0	35	28	N	28	8	8	15	5.7	70
OMAHA	977	987.1	1024.3	32	13	22.6	0.3	55	28	-16	7	0	28	14	71	0.49	- 0.33	0.36	6	0	4.6	5	1.1	35	32	N	22+	12	7	12	5.3	61
SCOTTSBLUFF	3957	881.1	1022.3	38	11	24.1	- 1.2	61	24	-22	2	0	29	16	73	0.15	- 0.14	0.07	4	0	2.1	3	2.9	33	33	28	4	11	7	13	5.5	
VALENTINE	2587			34	7	20.8	0.8	59	24	-28	7	0	30			0.20	- 0.20	0.08	7		5.9	5			33	SW	10	9	6	16	6.3	66
NEVADA																																
ELKO	5050	846.6	1022.7	41	13	27.0	4.4	53	22	-11	29	0	30	15	65	1.16	0.00	0.77	8	0	16.1	11	1.2	23	25	17	10	11	10	10	5.3	
ELY	6253	810.0	1022.9	38	8	23.1	0.3	51	25+	-12	12	0	31	10	61	0.15	- 0.63	0.08	5	1	2.4	3	7.7	19	37	S	27	12	6	13	5.2	84
LAS VEGAS	2162	943.1	1021.2	57	32	44.2	1.1	68	22	24	8	0	19	21	43	0.01	- 0.52	0.01	1	0	0.0	0	3.1	25	31	SW	31	17	5	9	4.0	83
RENO	4404	867.9	1021.3	47	17	31.7	1.3	57	22	- 1	7	0	30	9	42	1.11	- 0.08	0.71	4	0	12.4	9	2.5	20	80	SW	10	10	8	13	5.7	69
WINNEMUCCA	4299	870.3	1022.2	45	15	29.8	2.6	59	15	2	7+	0	31	19	68	0.81	- 0.24	0.52	8	0	8.2	6	2.1	17	26	S	10	10	7	14	5.7	56
NEW HAMPSHIRE																																
CONCORD	342	1009.8	1023.2	28	4	15.8	- 5.4	46	19	-21	2	0	31	4	58	1.79	- 1.44	0.40	13	0	15.8	17	4.9	30	40	NW	8	12	7	12	5.0	59
MT WASHINGTON OBS	6262			14	- 5	4.5	- 1.8	32	18	-46	8	0	31			4.12	- 1.32	0.57	19	0	36.8	4			134Y	NW	8	8	3	20	6.9	43
NEW JERSEY																																
ATLANTIC CITY	64	1022.4	1024.9	35	18	26.1	- 8.7	60	30	0	12+	0	28	17	68	2.77	- 0.79	2.17	9	0	0.8	1	4.5	32	36	30	4	12	4	15	5.8	47
ATLANTIC CITY U	11			39	25	32.0	- 4.0	56	21	9	12+	0	21			2.09	- 1.66	1.50	10						41	WNW	4					
NEWARK	7	1023.7	1024.7	35	20	27.8	- 4.5	51	21	1	9	0	25	16	64	1.71	- 1.62	0.95	12	0	4.6	4	4.9	31	32	29	7	12	7	12	5.5	
TRENTON U	56			35	22	28.3	- 4.8	49	21+	4	9	0	24			2.29	- 0.81	1.74	8		1.9	4			33	NW	7	11	6	14	5.6	58
NEW MEXICO																																
ALBUQUERQUE	5311	840.8	1022.0	49	25	36.8	1.8	61	28	13	1	0	28	18	51	0.01	- 0.40	0.01	1	0	T	T	2.3	36	33	NW	31	12	12	7	4.6	79
CLAYTON	4969			49	20	34.5	1.3	72	25	1	6	0	28			0.17	- 0.18	0.10	3		1.0	1						12	5	14	5.4	
RATON	6379			45	14	29.1	0.1	64	25	- 1	12	0	31			T	- 0.36	T	0		T	4						14	4	13	5.2	
ROSWELL	3617	894.3		54	25	39.1	1.2	74	31	7	9	0	25	27	71	1.50	1.02	0.80	7	0	2.9	3	2.0	33	28	NW	11	8	8	15	6.2	61
SILVER CITY	5373			51	28	39.3	- 0.2	61	25+	18	9	0	26			0.45	- 0.18	0.30	3		3.0	3						9	14	8	5.2	
NEW YORK																																
ALBANY	275	1013.9	1025.2	25	4	14.7	- 8.0	41	31+	-26	12	0	29	7	67	1.48	- 0.99	0.52	13	0	8.0	9	3.4	31	33	NW	7	8	7	16	6.2	59
BINGHAMTON	1590	962.1	1024.0	25	10	17.1	- 6.7	38	20+	-15	9	0	31	10	74	2.26	- 0.24	0.66	15	0	11.0	12	2.6	27	33	W	7+	2	9	20	7.7	44
BUFFALO	705	997.3	1024.3	27	13	19.9	- 4.6	45	29	-11	12	0	30	14	76	2.18	- 0.66	0.51	19	0	19.1	12	3.5	24	29	SW	21+	1	8	22	8.1	37

See footnotes at end of table

CLIMATOLOGICAL DATA
ENGLISH UNITS

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	No. of days: Max. 90 F. or above	No. of days: Min. 32 F. or below	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	No. of days: .01 inch or more	No. of days: With thunderstorms	Snow, Sleet: Total	Snow, Sleet: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Fastest mile: Speed	Fastest mile: Direction	Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	Ft.	Mb.	Mb.	F.	F.	F.	F.	F.		F.				F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
NEW YORK																																
J.F. KENNEDY	13	1023.4	1024.3	32	19	25.6	- 6.2	49	21	0	9	0	27	14	62	1.99	- 1.24	1.03	12	0	5.1	3	5.4	33	41	9	14	11	7	13	5.6	
NEW YORK U	132	1020.3	1023.8	33	20	26.7	- 6.5	50	21	- 1	9	0	24	13	58	2.04	- 1.27	1.30	12	0	3.6	3	4.6	33	32	NW	7					60
NEW YORK LA GUARDIA	11	1022.7	1024.7	33	21	26.8	- 6.8	49	21+	1	9	0	25	13	57	1.67	- 1.64	0.83	12	0	5.2	3	5.7	33	39	NW	7	11	8	12	5.6	
ROCHESTER	547	1004.1	1025.6	28	12	19.8	- 5.4	47	29	-11	12	0	29	13	70	1.91	- 0.49	0.58	13	0	24.2	11	3.2	25	31	SW	21+	0	10	21	8.3	39
SYRACUSE	410	1009.5	1025.1	27	10	18.5	- 5.5	41	30+	-22	9	0	31	10	66	2.08	- 1.07	0.66	16	0	18.5	15	1.5	31	33	W	4	6	4	21	7.5	36
NORTH CAROLINA																																
ASHEVILLE	2140	945.1	1023.5	45	23	34.3	- 3.3	64	29+	9	8	0	27	27	79	2.93	- 1.24	1.03	11	0	7.2	4	2.9	34	33	35	7	7	6	18	6.6	45
CAPE HATTERAS R	7	1023.0	1023.5	50	34	41.8	- 4.8	67	30	25	8	0	14	34	77	5.62	1.72	2.28	13	2	T	T	6.8	35	38	SE	14	11	2	18	6.2	58
CHARLOTTE	736	995.6	1024.2	47	29	37.9	- 4.8	67	30	14	8	0	21	28	72	4.95	1.42	1.88	13	0	4.3	3	2.3	36	26	NE	24	9	4	18	6.5	58
GREENSBORO	897	991.5	1024.3	45	26	35.6	- 4.1	66	30+	13	12+	0	26	26	72	3.74	0.34	1.59	12	0	6.0	4	2.0	35	27	NE	24	10	3	18	6.6	46
RALEIGH	434	1007.8	1024.2	49	26	37.1	- 4.5	72	30	10	12	0	25	25	65	2.88	- 0.34	0.96	12	0	3.0	2	2.2	34	29	9	13	10	6	15	6.1	51
WILMINGTON	28	1022.7	1024.0	53	31	42.2	- 5.7	70	30+	21	8	0	22	31	70	3.71	0.86	1.34	13	0	0.1	T	3.6	36	36	SE	13	10	5	16	6.1	54
NORTH DAKOTA																																
BISMARCK	1647	960.0	1023.8	19	- 5	7.1	- 2.8	45	24	-41	4	0	31	1	76	0.30	- 0.14	0.15	7	0	4.3	8	2.8	32	40	N	5	6	8	17	7.0	56
FARGO	896	988.8	1023.9	17	- 2	7.7	0.4	39	21	-33	4	0	31	1	73	0.37	- 0.16	0.18	9	0	4.0	9	1.2	[illegible]	62	E	11	[illegible]	8	18	6.8	46
WILLISTON	1899	950.2	1022.9	20	- 3	8.8	0.5	50	24+	-34	4	0	30	1	74	0.53	- 0.02	0.25	6	0	8.9	6	2.1	29	47	NW	5	5	12	14	6.7	56
OHIO																																
AKRON	1208	978.0	1024.6	32	14	23.0	- 5.3	46	31	- 8	8	0	29	16	73	2.88	0.02	0.98	14	0	16.6	13	2.6	22	32	27	4	5	8	18	7.4	
CINCINNATI OBS	761			35	20	27.6	- 6.1	54	27	- 5	8	0	23			1.72	- 1.95	0.76	10		7.6	6			31	W	4					41
CLEVELAND	777	994.6	1025.0	30	16	23.0	- 5.4	47	31	-10	8	0	27	13	67	3.27	0.60	0.83	16	0	14.5	8	3.8	[illegible]	27	W	4	4	7	20	8.0	36
COLUMBUS	812	994.2	1025.5	31	16	23.6	- 6.3	52	29	- 9	8	0	25	17	77	2.22	- 0.94	0.75	9	0	11.6	10	1.3	18	35	W	4	6	6	19	7.0	46
DAYTON	1002	987.5	1025.1	33	16	24.7	- 4.9	51	27	-11	8	0	26	15	68	1.67	- 1.51	0.79	12	0	12.1	7	[illegible]	20	32	W	4	[illegible]	3	19	7.0	42
MANSFIELD	1295			30	15	22.8	- 4.5	47	30+	-10	8	0	29	14	68	2.27	- 0.95	0.76	14	0	21.3	16	4.4	21	24	34	15	5	6	20	7.4	
TOLEDO	669	999.0	1025.2	30	15	22.1	- 4.2	48	29	-14	8	0	29	15	73	1.91	- 0.42	0.73	12	0	10.4	7	1.8	22	31	W	4	4	9	18	7.5	46
YOUNGSTOWN	1178	980.0	1024.7	28	13	20.3	- 7.0	43	29	- 9	8	0	29	15	79	3.75	0.59	1.20	14	0	14.0	10	2.7	22	25	11	13	4	9	18	7.7	
OKLAHOMA																																
OKLAHOMA CITY	1285	975.3	1023.1	45	28	36.6	- 0.4	67	28	2	7	0	19	31	83	2.19	0.88	1.13	12	1	0.4	T	1.1	8	31	N	[illegible]	5	0	16	8.2	29
TULSA	650	999.0	1024.1	45	27	36.0	- 0.2	68	26	- 1	7	0	19	27	71	3.26	1.55	0.88	11	1	0.6	T	1.0	13	33	SW	31	3	6	22	8.0	32
OREGON																																
ASTORIA	8	1015.6	1016.3	48	36	42.0	1.3	65	23	25	28+	0	11	37	84	9.57	- 2.14	1.64	23	0	3.7	4	4.3	17	35	18	9	2	4	25	6.6	
BURNS O	4151	874.4	1021.2	37	17	27.0	2.2	50	20	2	27	0	31	20	76	0.99	- 0.63	0.43	10		4.6	1	1.2	26				5	11	15	6.6	
EUGENE	359	1004.7	1018.4	48	35	41.5	2.4	64	20	26	28+	0	12	38	87	7.53	1.20	1.55	18	0	3.6	2	4.3	17	32	16	29	0	6	25	9.0	
MEACHAM	4050	876.1	1020.0	32	21	26.6	0.6	48	20	3	27	0	29	20	80	2.54	- 1.66	0.89	19		14.0	10			23	21	30+	0	4	27	9.1	
MEDFORD	1298	971.6	1020.5	45	28	36.6	1.2	61	21	17	28	0	27	32	85	1.86	- 1.28	0.41	17	0	6.4	4	1.2	17	30	13	13	1	8	22	8.1	
PENDLETON	1482	964.1	1019.2	46	29	37.3	5.1	67	20+	12	28	0	19	27	70	0.59	- 0.83	0.18	11	0	1.3	1	3.8	23	30	26	24+	0	8	23	8.5	
PORTLAND	21	1016.9	1018.0	45	34	39.3	0.9	56	21	24	27+	0	12	33	80	4.58	- 0.79	1.15	21	0	5.2	[illegible]	5.9	15	45	S	9	1	3	27	[illegible]	[illegible]
SALEM	196	1010.8	1018.1	46	33	39.7	1.2	62	20	23	28+	0	14	35	84	6.37	- 0.33	1.34	21	0	9.3	6	4.1	18	23	18	31+	1	3	27	8.8	
SEXTON SUMMIT R	3836	882.8	1018.3	39	28	33.7	- 0.4	62	22	17	28	0	24	26	81	5.41	- 0.18	1.47	15		25.5	18			43	16	9	6	5	20	7.4	
PACIFIC AREA																																
JOHNSTON	7	1010.5	1011.0	81	73	76.7	- 0.4	84	21+	69	31+	0	0	65	71	0.83	- 3.06	0.42	7	2	0.0	0	6.9	8	35	E	2	19	12	0	5.5	[illegible]
KOROR R	94	1004.7	1008.2	87	75	81.0	0.7	91	30	73	30+	1	0	74	83	8.02	- 3.71	2.37	22	0	0.0	0	5.6	6	25	NE	10	0	0	31	9.7	76
KWAJALEIN	8	1007.1	1007.9	86	76	81.0	0.9	87	14+	73	17+	0	0	73	77	5.79	2.18	3.19	17	0	0.0	0	15.8	5	29	6	5+	2	10	19	8.0	
MAJURO	10	1007.5	1007.7	85	77	81.1	0.9	87	5	74	11	0	0	74	79	5.38	- 1.60	1.40	16	0	0.0	0	11.4	7	28	E	12+	1	15	15	[illegible]	[illegible]
MARCUS ISLAND	20			76	66	71.0	- 1.1	82	9	60	30+	0	0			1.26	- 2.50	0.71	12		0.0	0			37	N	[illegible]					54
PAGO PAGO	12	1007.1	1007.3	87	75	81.0		91	23	71	21	6	0	75		4.65		0.83	18	7	0.0	0	[illegible]	7	30	NE	3	[illegible]	[illegible]	21	[illegible]	45
PONAPE R	123	1002.0	1007.4	86	76	81.1	0.6	88	25	71	27	0	0	74	80	9.88	- 1.19	2.16	25	0	0.0	0	9.2	7	23	E	8	0	4	27	9.0	29
TAGUAC GUAM R	361			83	72	77.3	- 0.9	85	26+	67	26	0	0			5.75	1.12	2.48	24		0.0	0			26	[illegible]	[illegible]	[illegible]	7	24	[illegible]	54
TRUK MOEN ISLAND	5	1007.1	1007.3	85	77	81.0	0.3	86	28+	74	31+	0	0	74	81	8.67	0.27	1.73	23	2	0.0	0	11.7	5	[illegible]	E	6	0	3	28	9.4	[illegible]
WAKE	11	1011.9	1012.2	83	72	77.3	- 0.1	86	10+	66	30	0	0	65	69	1.20	0.06	0.31	11	0	0.0	0	[illegible]	5	42	N	14	12	15	4	[illegible]	64
YAP R	62	1006.1	1008.0	85	75	79.9	- 0.6	87	27+	72	31+	0	0	75	85	10.77	2.90	[illegible]	27	[illegible]	0.0	[illegible]	[illegible]	5	28	[illegible]	9	[illegible]	1	30	[illegible]	[illegible]
PENNSYLVANIA																																
ALLENTOWN	387	1010.2	1024.8	30	13	21.7	- 7.3	45	27	- 7	2	0	28	10	61	2.54	- 0.63	1.63	11	0	3.0	7	3.6	31	41	31	7	[illegible]	8	14	[illegible]	
ERIE	731	996.6	1024.7	31	16	23.5	- 3.8	47	31	- 5	12	0	29	15	71	2.98	0.31	0.75	19	0	24.2	12	3.5	22	33	29	4	[illegible]	5	23	8.1	

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure: Station	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	No. of days: Max. 90° F. or above	No. of days: Min. 32° F. or below	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	No. of days: .01 inch or more	No. of days: With thunderstorms	Snow, Sleet: Total	Snow, Sleet: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Fastest mile: Speed	Fastest mile: Direction	Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	Ft.	Mb.	Mb.	F.	F.	F.	F.	F.		F.				F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
PENNSYLVANIA																																
HARRISBURG	338	1011.9	1025.2	32	16	24.0	-7.3	47	21	-5	2	0	27	14	66	1.32	-1.44	0.54	9	0	3.0	11	3.5	31	35	NW	7+	8	7	16	6.5	46
PHILADELPHIA	5	1023.7	1024.8	36	22	28.9	-3.4	51	21+	6	12	0	26	16	62	2.90	-0.42	2.27	10	0	1.5	4	3.9	34	35	NW	4	10	5	16	6.2	48
PITTSBURGH	1137	979.0	1025.0	31	15	23.4	-5.5	47	31	-8	8	0	27	16	72	2.83	-0.14	0.73	15	0	15.4	12	2.3	25	25	27	4	4	9	18	7.4	37
READING U	266			34	20	26.9	-5.8	50	20	1	2	0	25			1.51	-1.56	0.87	9		3.5	5			51	E	14	10	7	14	5.9	52
SCRANTON	930	989.2	1025.2	28	12	20.0	-7.7	43	21	-10	12	0	27	12	70	2.03	-0.26	0.67	11	0	6.0	10	1.7	29	33	W	7	7	7	17	6.9	52
WILLIAMSPORT	524	1005.4	1025.3	32	14	23.0	-5.8	46	27	-11	12	0	27	14	69	2.49	-0.18	1.03	11	0	2.6	7	2.3	29	30	29	7	9	9	13	6.4	
RHODE ISLAND																																
BLOCK ISLAND	110			33	21	27.2	-4.9	44	23+	-2	9	0	24			2.37	-1.47	0.98	13		8.8	4						14	5	12	5.3	
PROVIDENCE	51	1020.7	1023.1	33	16	24.5	-4.7	48	19	-5	9	0	30	10	56	3.50	-0.31	1.22	14	0	13.5	9	6.0	30	31	30	7	13	7	11	4.9	60
SOUTH CAROLINA																																
CHARLESTON	40	1021.7	1023.4	55	32	43.5	-6.3	75	30	20	17	0	18	33	74	2.25	-0.29	0.90	11	1	0.5	T	3.3	36	30Y	N	7	8	8	15	6.4	55
CHARLESTON U	9			54	37	45.5	-6.0	73	30	26	8	0	8			2.01	-0.39	0.87	9		T	T			30	NE	10					
COLUMBIA	213	1015.9	1024.2	52	30	41.1	-5.8	73	30	20	17	0	22	30	72	5.94	2.92	2.82	13	0	1.7	1	2.9	36	21	4	24+	10	1	20	6.7	54
GNVLE-SPARTANBURG	957	988.5	1024.3	49	29	39.0	-4.7	69	21	16	8	0	22	28	68	4.12	-0.16	1.46	14	0	0.9	1	2.4	1	31	N	7	8	5	18	6.6	43
SOUTH DAKOTA																																
ABERDEEN	1296	973.9	1023.8	21	0	10.4	-0.4	43	24+	-30	4	0	31	5	78	0.15	-0.51	0.09	6	0	3.1	4	0.8	28	37	16	10	8	5	18	6.5	
HURON	1282	974.3	1023.6	26	5	15.4	2.9	50	24+	-25	4	0	31	4	62	0.29	-0.19	0.15	4	0	4.5	2	1.1	24	38	NW	5	6	7	18	7.0	62
RAPID CITY	3162	905.9	1021.3	35	12	23.4	1.4	69	24	-19	6	0	29	10	60	0.43	0.07	0.19	4	0	4.0	4	3.7	35	40	NW	11+	6	8	17	6.7	59
SIOUX FALLS	1418	969.5	1023.6	27	7	16.8	1.6	48	24	-22	7	0	30	10	75	0.33	-0.29	0.24	6	0	4.6	3	1.7	27	24	19	8	6	12	13	6.4	
TENNESSEE																																
BRISTOL	1507	968.5	1024.6	43	23	33.2	-5.1	62	31	1	8	0	26	24	73	3.58	-0.11	0.95	13	0	12.1	5	0.9	1	24	10	13	6	6	19	7.1	
CHATTANOOGA	665	999.0	1024.4	46	28	37.1	-4.6	68	22	13	8	0	23	30	80	4.98	-0.63	1.36	14	0	5.6	4	1.3	32	25	N	7	8	4	19	6.9	39
KNOXVILLE	980	987.8	1023.8	46	28	37.1	-4.3	65	30+	11	8	0	19	30	79	4.13	-0.75	1.29	11	0	5.9	2	1.5	36	20	NE	24+	7	4	20	7.1	34
MEMPHIS	258	1014.2	1025.0	47	31	38.9	-2.6	69	29+	11	7	0	22	30	73	5.57	-0.50	1.70	13	0	2.0	2	1.7	4	26	N	6	5	6	20	7.6	37
NASHVILLE	590	1002.4	1025.0	43	25	34.0	-5.9	68	29	4	8	0	25	27	76	3.50	-1.99	0.89	12	0	7.2	6	0.8	1	23	NW	6	7	4	20	7.1	41
OAK RIDGE R	905			46	28	36.8	-3.1	66	21	11	8	0	20			4.47	-1.47	1.47	12		3.9	3			31Y		24	7	6	18	6.9	
TEXAS																																
ABILENE	1762	958.7	1021.4	53	35	43.9	-0.7	74	31	12	7	0	14	36	77	4.35	3.47	1.52	10	1	T	T	1.3	20	35	N	18+	5	5	21	7.6	35
AMARILLO	3604	893.3	1019.6	50	26	38.3	1.6	67	28	3	7	0	19	26	69	2.33	1.68	1.74	5	0	0.6	T	2.6	27	31	N	11	9	8	14	5.9	57
AUSTIN	597	1000.0	1022.7	56	40	47.6	-2.8	74	31	22	7	0	10	40	78	7.94	5.59	2.49	14	2	0.0	0	1.8	2	30	N	7	5	4	22	7.8	31
BROWNSVILLE	19	1020.7	1021.1	66	50	57.8	-3.6	79	30+	32	13+	0	3	52	83	3.08	1.73	1.12	12	3	0.0	0	1.8	36	35	NW	7	5	6	20	7.5	29
CORPUS CHRISTI	41	1020.3	1021.8	61	45	53.2	-4.2	76	31+	28	13+	0	5	48	86	2.11	0.48	0.76	12	1	0.0	0	2.9	5	33	SE	26+	4	4	23	7.9	32
DALLAS	481	1005.4	1023.1	52	39	45.2	-0.7	72	31	13	7	0	13	37	77	3.24	0.92	0.75	16	0	T	T	2.0	11	27	S	26	6	2	23	8.1	27
DEL RIO	1026	984.8	1021.7	59	41	49.8	-1.5	75	28	26	7	0	7	41	74	0.66	-0.23	0.26	10	1	0.0	T	1.2	5	25	32	18+	7	3	21	7.4	
EL PASO	3918	885.2	1020.1	54	31	42.4	-0.5	69	31	22	14	0	20	31	68	0.47	0.01	0.32	5	0	2.1	2	0.1	20	38	W	31	10	7	14	5.9	63
FORT WORTH	537	1002.0	1023.2	52	37	44.4	-1.1	74	25	12	7	0	12	38	83	3.60	1.56	0.99	16	0	0.4	T	0.9	10	26	20	26	5	3	23	8.1	
GALVESTON J	7			57	48	52.6	-2.3	69	31+	30	8	0	2			6.14	2.68	2.88	12		0.0	0			32	NE	7					30
HOUSTON	50	1020.3	1022.5	61	45	52.7	-0.9	80	31	28	14	0	5	44	78	8.02	4.24	3.46	12	3	0.0	0	2.7	6	28	36	7	6	1	24	7.8	35
LUBBOCK	3254	906.5	1020.3	52	29	40.7	1.5	74	31	6	7	0	20	29	72	0.94	0.26	0.51	5	0	0.2	1	1.7	29	36	2	18	9	4	18	6.8	
MIDLAND	2851	919.7	1019.9	55	33	44.3	0.3	75	31	15	7	0	16	34	74	1.07	0.27	0.59	9	0	0.8	1	1.5	24	32	34	18	7	7	17	6.8	
PORT ARTHUR	16	1022.4	1023.0	60	42	51.0	-2.6	77	30+	24	14	0	6	46	86	5.48	1.25	3.25	11	1	0.0	0	3.9	6	36	E	22	6	4	21	7.7	38
SAN ANGELO	1903	953.3	1021.2	56	37	46.3	-0.6	75	25	17	7	0	13	39	80	2.32	1.35	0.72	11	1	0.4	T	2.4	24	25	32	18+	6	5	20	7.4	
SAN ANTONIO	788	993.6	1022.2	59	41	49.8	-2.2	74	31	24	14+	0	7	42	78	8.52	6.78	3.18	16	3	0.0	T	1.7	4	33	NE	6	7	4	20	7.3	37
VICTORIA	104	1018.0	1022.0	60	44	52.1	-3.3	77	31	27	14	0	6	46	82	3.27	0.93	1.29	11	1	T	0	3.1	3	43Y	N	6	5	4	22	7.8	
WACO	501	1004.1	1022.8	53	40	46.7	-1.3	73	31	19	7	0	10	42	86	3.47	1.20	1.09	13	1	T	T	0.3	27	29	33	6	5	4	22	7.9	
WICHITA FALLS	994	985.1	1022.8	52	33	42.2	-0.6	77	25	8	7	0	18	34	79	4.48	3.36	2.02	8	1	T	T	2.8	9	38	1	6	4	2	25	8.2	
UTAH																																
MILFORD	5028	849.3		37	11	24.1	-0.5	49	25	-8	12+	0	31			0.17	-0.40	0.09	3		2.8	2						15	8	8	4.5	
SALT LAKE CITY	4220	875.7	1025.1	36	14	24.5	-2.7	48	30	0	13+	0	30	14	68	0.46	-0.89	0.26	4	1	6.8	4	3.6	18	32	W	28+	12	2	17	6.1	61
WENDOVER	4237	875.0	1025.1	34	15	24.6	-2.4	50	30	7	12	0	31	13	62	0.17	-0.15	0.09	4		0.3	T										
VERMONT																																
BURLINGTON	332	1011.2	1024.7	19	-2	8.4	-7.8	38	19	-27	11	0	31	-2	59	1.26	-0.69	0.26	11	0	18.4	11	0.8	30	32	S	30	8	7	16	6.6	59

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No. of days: Max. 90° F. or above	Temperature: No. of days: Min. 32° F. or below	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No. of days: .01 inch or more	Precipitation: No. of days: With thunderstorms	Snow, Sleet: Total	Snow, Sleet: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile: Speed	Wind: Fastest mile: Direction	Wind: Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	No. of days (sunrise to sunset): Partly cloudy, 4-7	No. of days (sunrise to sunset): Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	Ft.	Mb.	Mb.	F.	F.	F.	F.	F.		°F.				°F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
VIRGINIA																																
LYNCHBURG	916			42	22	32.0	- 5.6	63	30+	7	8	0	26			2.35	- 0.94	1.36	11		3.9	3			28	NE	13	11	3	17	6.5	48
NORFOLK	22	1023.7	1024.7	43	26	34.8	- 6.4	66	30	17	8	0	27	22	62	3.62	0.29	2.10	12	0	1.5	1	3.6	35	33	SE	14+	12	2	17	5.9	56
RICHMOND	164	1018.6	1024.9	45	23	33.9	- 4.8	70	30	7	12	0	27	22	66	2.53	- 0.93	1.70	9	0	2.3	1	1.4	1	25	NW	7	9	5	17	6.4	48
ROANOKE	1149	980.7	1024.2	42	24	33.0	- 5.1	64	29	10	8	0	25	19	58	3.33	0.21	2.71	8	0	15.4	8	3.4	33	32	29	4	9	6	16	6.5	
WALLOPS ISLAND	9			38	24	31.0		56	21	10	12	0	28			2.47		1.15	13		2.4	1			51Y	N	7	10	6	15	6.1	
WASHINGTON																																
OLYMPIA	195	1008.8	1016.4	44	33	38.3	0.2	56	20+	17	28	0	15	35	87	9.04	1.19	1.54	21	0	16.9	7	5.0	20	35	19	9	2	1	28	9.0	
QUILLAYUTE	179	1006.8	1014.4	45	35	40.2	1.6	59	23	23	27	0	14	37	91	22.59	7.32	6.32	24	2	6.8	1	4.3	14	34	S	9	3	2	26	8.8	12
SEATTLE TACOMA	400	1000.0	1016.7	46	36	40.9	2.6	59	20+	25	28	0	10	35	81	6.90	1.17	1.28	24	0	7.5	4	4.7	17	35	21	10	1	2	28	9.4	13
SPOKANE	2356	932.3	1018.3	33	22	27.8	2.5	46	19	1	28+	0	26	22	77	1.57	- 0.87	0.52	13	0	11.8	7	4.6	16	33	SW	31	3	6	22	8.3	24
STAMPEDE PASS R	3958	876.7		29	21	25.2	1.7	59	23	1	28+	0	27			13.80	1.77	1.93	26		83.2	70										
WALLA WALLA U	949			46	32	38.9	5.7	71	20	14	28	0	14			0.79	- 1.10	0.26	14		0.5	T			29	W	31	0	6	25	8.7	19
YAKIMA	1052	979.7	1019.2	40	22	30.9	3.4	62	21	4	28	0	26	23	74	1.76	0.57	0.80	11	0	11.1	5	2.8	28	32	29	24	5	7	19	7.4	
WEST INDIES																																
SAN JUAN P.R.	13	1015.2	1017.7	82	71	76.4	2.0	85	25+	62	25	0	0	66	72	2.15	- 2.55	0.67	17	0	0.0	0	7.4	6	32	E	17	6	22	3	5.0	61
SWAN ISLAND	28			82	74	77.5	- 0.8	84	4	69	29	0	0			5.61	2.17	4.21	13		0.0	0						5	15	11	6.2	
WEST VIRGINIA																																
BECKLEY	2504	932.3	1024.8	37	19	28.3	- 5.3	59	29	- 7	8	0	27	19	72	2.64	- 1.62	1.13	16	0	21.2	16	2.1	23	32	12	13	7	6	18	7.0	
CHARLESTON	939	989.2	1024.8	39	19	29.1	- 7.5	62	29	- 4	8	0	27	19	68	2.01	- 2.31	0.77	14	0	13.3	11	1.1	28	27	24	4	6	6	19	7.0	
ELKINS	1970	950.6	1024.7	39	11	25.0	- 7.5	54	22	-17	2	0	28	18	77	1.88	- 1.74	0.76	15	0	14.1	15	2.2	28	31	30	7	8	3	20	7.1	
HUNTINGTON	827	993.9	1025.3	38	21	29.4	- 7.2	62	29+	- 6	8	0	25	19	67	1.72	- 1.93	0.56	14	0	9.0	10	1.2	25	21	30	7+	6	7	18	6.8	
PARKERSBURG U	615			36	18	27.2	- 7.4	59	29	- 7	8	0	25			2.36	- 0.98	0.96	14		15.5	14			31	W	4					46
WISCONSIN																																
GREEN BAY	682	997.3	1024.4	24	8	16.4	- 0.4	39	31+	-24	7	0	31	12	79	0.94	- 0.21	0.22	10	0	9.2	5	2.3	28	27	NW	4	6	6	19	7.3	30
LA CROSSE	651	999.0	1024.8	28	11	19.3	2.8	50	20	-18	7	0	30	11	70	0.87	- 0.32	0.42	6	1	4.5	4	1.2	19	24	31	29	5	9	17	6.7	
MADISON	858	991.2	1024.2	28	11	19.6	2.1	48	20	-18	7	0	28	13	73	0.56	- 0.84	0.10	12	1	3.9	2	1.1	25	25	N	22+	8	4	19	7.2	42
MILWAUKEE	672	998.0	1024.4	29	15	21.8	1.2	48	29	-15	7	0	30	13	69	0.98	- 0.85	0.23	11	1	4.6	3	2.7	27	30	W	4	6	4	21	7.6	39
WYOMING																																
CASPER	5338	837.1	1020.7	34	13	23.2	- 0.2	48	24	-18	6	0	30	10	57	0.33	- 0.23	0.14	7	0	5.2	2	14.1	22	40	23	4	6	9	16	6.7	
CHEYENNE	6126	811.0	1019.8	41	16	28.7	3.3	61	24	-14	6	0	30	12	50	0.04	- 0.48	0.03	2	0	0.2	2	8.0	28	40	NW	11	9	9	13	5.5	68
LANDER	5563	828.7	1023.3	27	4	15.5	- 3.8	44	10	-18	3	0	31	7	70	0.17	- 0.29	0.13	3	0	2.4	14	2.0	22	40	SW	30	9	10	12	5.9	67
SHERIDAN	3964	879.1	1022.5	31	3	16.9	- 4.4	53	24	-25	6+	0	31	6	62	1.05	0.41	0.31	11	0	13.5	15	3.1	28	35	SW	30	4	7	20	7.4	55

Data from airport unless otherwise specified. U indicates Urban, R indicates Rural, sites.

Precipitation data in column headed "Greatest in 24 hours" are computed on a 24-hour basis without regard to calendar day - data may include precipitation with a measurable amount from the last day of the previous month or the first day of the following month.

Wind directions under resultant direction are in tens of degrees.

Value entered in column "Fastest Mile" is the highest observed 1-minute wind speed when the direction is in tens of degrees. These stations are not equipped with a recording anemometer from which "Fastest Mile" data can be evaluated.

A Maximum hourly average.
B Number of days maximum 70 F. or above for Alaskan Stations.
Y Peak Gust.
\+ And also on an earlier date or dates.
Ø Station pressures apply to elevations shown in the "Elevations - Station Pressure" table of the annual issue of this publication.

V Sun below horizon January 1-23, inclusive.
X Sun below horizon January 1-17, inclusive.

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No. of days: Max 32.2 °C or above	Temperature: No. of days: Min. 0 C or lower	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No. of days: 25 mm or more	Precipitation: No. of days: With thunderstorms	Snow, Sleet: Total	Snow, Sleet: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile (1.6 kilometers): Speed	Wind: Fastest mile: Direction	Wind: Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	M.	Mb.	Mb.	C.	C.	C.	C.	C.		C				C.	%	Mm	Mm.	Mm.			Mm	Mm	M.p.s.		M.p.s.							%
ALABAMA																																
BIRMINGHAM	189	1001.4	1024.5	11.1	0.6	5.8	-2.2	22.2	29	- 7.8	14	0	14	- 0.6	69	141	13	58	12	0	25	25	0.9	3	11.6	N	7	7	6	18	7.0	39
HUNTSVILLE	190	1000.7	1024.5	8.9	- 1.7	3.3	-2.7	21.1	31	-12.8	8	0	22	- 0.6	80	153	20	43	13	0	109	102	1.0	4	11.6	36	24	8	3	20	6.9	
MOBILE	64	1015.2	1023.4	16.1	4.4	10.2	-1.5	23.3	29	- 4.4	14	0	9	4.4	71	25	- 93	9	9	0	T	0	1.2	5	11.2	36	7	10	3	18	6.3	
MONTGOMERY	59	1016.9	1024.3	12.8	1.7	7.2	-1.7	22.8	30+	- 4.4	17+	0	12	1.1	70	71	- 33	24	12	1	T	T	0.9	3	7.6	SW	23+	6	6	19	7.0	33
ALASKA												B																				
ANCHORAGE	35	1010.2	1015.1	- 7.8	-13.9	-10.8	0.2	5.0	2	-23.3	19	0	31	-16.7	61	21	1	9	7	0	185	152	2.0	2	19.7	4	31	10	8	13	5.9	45
ANNETTE	34	1005.1	1009.2	2.8	- 2.8	0.1	-1.2	11.1	15	-10.6	10	0	24	- 5.0	70	281	- 8	88	18	0	640	229	1.8	8	15.6	15	22	5	8	18	7.2	
BARROW	9	1021.0	1021.7	-18.9	-27.2	-23.1	3.7	- 0.6	6	-43.9	21	0	31	-26.7	73	10	6	3	11	0	157	406	1.1	18	17.4	23	2	V	V	V		
BARTER ISLAND	12	1021.7	1023.6	-18.9	-27.2	-23.0	4.1	- 0.6	2	-40.0	21+	0	31	-26.7	72	19	8	10	7	0	213	533	2.6	26	21.5	27	31	X	X	X		
BETHEL	38	1015.2	1021.2	- 8.3	-15.0	-11.6	4.2	5.0	1	-34.4	20	0	29	-13.3	88	12	- 16	7	5	0	74	76	0.7	7	17.0	20	25	10	5	16	6.2	
COLD BAY	29	1015.2	1019.1	0.6	- 4.4	- 2.1	0.3	5.6	26+	-13.9	20	0	27	- 4.4	83	70	11	27	14	0	173	152	0.6	8	26.4	17	24	6	6	19	7.2	
FAIRBANKS	133	1004.7	1023.3	-18.9	-28.9	-23.9	0.1	0.0	27+	-43.3	17	0	31	-26.1	77	30	8	15	9	0	574	838	0.4	35	9.4	27	29	7	5	19	7.0	
JUNEAU	4	1011.9	1012.6	- 3.9	-11.1	- 7.4	-3.6	7.2	23	-22.8	31	0	31	-10.6	80	83	- 19	29	13	0	790	356	2.5	10	17.0	12	22	10	4	17	6.5	44
KING SALMON	15	1015.6	1017.7	- 8.9	-15.6	-12.2	-1.9	8.3	1	-32.2	20	0	30	-16.7	69	28	1	18	6	0	236	152	2.0	1	13.0	14	1	13	10	8	4.9	
KOTZEBUE	3	1021.0	1021.5	-12.8	-21.1	-17.0	3.9	2.8	2	-37.2	21	0	31	-20.6	75	8	- 2	3	8	0	173	457	2.2	12	21.0	10	25	5	6	20	7.5	
MC GRATH	105	1008.5	1022.2	-15.6	-25.6	-20.5	2.3	3.3	2	-46.7	20	0	30	-23.9	71	25	- 7	8	10	0	361	381	0.3	27	11.6	21	25	10	5	16	6.1	
NOME	4	1019.6	1020.3	- 8.3	-17.8	-13.1	2.3	2.2	1	-33.9	19	0	31	-17.8	67	32	6	14	9	0	175	457	1.0	17	9.4	9	24+	5	5	21	7.6	26
ST. PAUL ISLAND	7	1016.6	1017.7	1.1	- 3.3	- 1.1	2.6	4.4	25+	-11.1	19+	0	20	- 2.8	85	41	- 5	11	17	0	152	127	1.8	15	25.0	16	3	3	3	25	8.2	
SHEMYA	37	1002.7	1006.4	2.8	- 1.1	0.8	1.2	4.4	30+	- 5.6	21	0	20	- 1.1	88	45	- 19	8	21	0	135	25	5.9	17	27.7	14	9	1	4	26	8.9	
YAKUTAT	9	1008.5	1009.7	- 3.3	-12.2	- 7.7	-5.1	3.9	22	-19.4	15+	0	31	-10.6	78	205	- 70	87	14	0	856	660	2.1	9	16.5	11	16	6	6	19	7.1	
ARIZONA																																
FLAGSTAFF	2131	788.0	1022.9	4.4	-11.7	- 3.6	-1.0	11.7	15	-21.1	5	0	31	- 8.9	70	39	- 7	33	5	0	386	711	0.6	13	11.6	20	27	16	4	11	4.7	
PHOENIX	340	979.3	1018.8	18.9	3.9	11.3	1.5	23.3	14	- 0.6	6+	0	5	1.1	56	5	- 14	3	3	0	0	0	1.5	10	12.5Y	ENE	13	15	8	8	4.5	83
TUCSON	788	928.9	1017.9	18.3	4.4	11.3	1.4	23.9	14	0.0	20+	0	4	1.1	56	5	- 16	2	5	0	0	0	2.1	13	17.0	E	13	16	2	13	4.6	72
WINSLOW	1492	856.4	1030.6	- 5.0	-16.7	-10.6	-10.1	7.8	31	-22.8	8	0	31	-13.3	81	T	- 11	T	0	0	8	178	0.7	21	11.2	18	27	14	5	12	5.1	
YUMA	59	1011.5	1018.8	20.0	6.1	12.9	1.0	25.0	23	1.1	1	0	0	- 1.7	42	T	- 10	T	0	0	0	0	1.6	2	11.6	NE	23	15	9	7	4.2	91
ARKANSAS																																
FORT SMITH	136	1007.1	1024.3	9.4	- 0.6	4.2	-0.1	21.1	31	-13.9	7	0	21	- 1.1	72	71	4	26	10	0	8	T	1.2	5	10.3	NW	6	4	4	23	8.2	32
LITTLE ROCK	78	1014.6	1024.6	7.2	- 1.1	3.2	-1.6	20.0	26	-12.2	7	0	22	- 0.6	78	121	- 12	28	12	1	25	25	1.3	5	12.5	N	6	4	6	21	7.8	47
TEXARKANA	119	1010.5	1024.1	10.6	2.8	6.7	-0.6	23.9	31	- 8.9	8+	0	12	1.7	74	129	6	34	14	0	T	25	0.8	11	9.4	19	29+	5	1	25	8.0	
CALIFORNIA																																
BAKERSFIELD	145	1003.4	1021.4	13.9	3.3	8.8	0.3	23.9	23	- 0.6	5	0	1	2.8	69	12	- 17	7	3	0	0	0	0.3	4	9.4	30	27	8	7	16	6.5	
BISHOP	1252	876.1		13.3	- 6.7	3.3	0.6	21.7	24+	-12.2	29	0	30			T	- 25	T	1		T	T						12	7	12	5.0	
BLUE CANYON	1609			6.7	- 0.6	3.1	0.3	18.3	23	- 8.3	28+	0	19			297	0	81	11		886	1295			16.1	21	29	10	6	15	6.2	
EUREKA U	13			11.7	4.4	8.1	-0.4	21.1	22	0.0	11	0	1			193	23	59	15		T	T			15.2	N	25+	6	7	18	6.7	58
FRESNO	100	1009.1	1021.3	12.2	1.7	7.1	-0.7	20.6	23	- 3.3	4	0	7	3.3	81	27	- 25	10	5	1	0	0	0.4	11	9.8	NW	16	5	11	15	6.9	47
LONG BEACH	10	1018.3	1019.6	19.4	6.7	13.1	1.4	27.8	23	2.2	30+	0	0	2.8	55	13	- 37	6	5	0	0	0	0.4	31	8.0	21	27	14	8	9	4.9	
LOS ANGELES	30	1015.2	1018.9	18.9	8.9	14.1	1.6	27.8	23	5.0	30+	0	0	4.4	57	21	- 46	10	6	0	0	0	0.2	34	12.5Y	S	27	12	7	12	5.0	
LOS ANGELES U	82			20.0	9.4	14.7	1.5	28.9	23	4.4	29+	0	0			23	- 55	13	6		0	0			7.6	SW	27	13	7	11	4.8	65
MT SHASTA R	1080			5.6	- 4.4	0.6	-0.2	16.7	23	-15.6	11	0	27			213	52	65	14		1930	940										
OAKLAND	2	1020.7	1020.8	12.2	5.0	8.4	-0.5	23.3	22	0.6	7+	0	0	3.9	75	128	31	66	11	0	0	0	1.0	12	13.9	15	29	10	6	15	6.0	
RED BLUFF	104	1007.8	1020.8	11.7	0.6	6.2	-1.3	25.6	22	- 6.7	4	0	15	1.1	77	148	39	47	10	0	T	T	0.4	30	20.1	SE	29	7	7	17	7.0	50
SACRAMENTO	5	1020.0	1021.0	11.1	1.7	6.3	-1.0	17.2	25+	- 4.4	4+	0	8	2.8	84	96	15	41	9	0	0	0	0.7	17	13.4	SE	29	3	13	15	7.2	55
SANDBERG R	1377	864.5		7.8	0.6	3.9	-0.5	16.1	24+	- 7.8	28	0	18	- 7.8	50	8	- 57	8	1		84	76	1.8	7	15.6	36	16	15	4	12	5.1	
SAN DIEGO	4	1018.0	1018.9	19.4	8.9	14.0	1.2	26.7	23	5.0	30+	0	0	4.4	57	9	- 42	8	5	0	0	0	0.4	32	7.6	NW	29	14	9	8	4.5	84
SAN FRANCISCO	2	1020.0	1020.6	12.8	3.3	8.1	-1.2	21.7	22	0.0	6+	0	3	4.4	80	133	31	62	12	1	0	0	1.0	17	20.1	S	10	9	6	16	6.2	
SAN FRANCISCO U	16			12.8	6.7	9.9	-0.5	23.3	22	2.2	7	0	0			115	0	48	12		0	0			14.3	SW	29					63
SANTA CATALINA	478	962.8		15.0	9.4	12.3	0.3	23.3	21	3.3	29	0	0			13	- 54	5	5		0	0										
SANTA MARIA	72			17.2	3.3	10.5	0.4	25.0	24	- 2.2	6	0	6			15	- 57	9	6		0	0						10	7	14	5.7	
STOCKTON	7	1020.7	1021.6	10.0	1.7	5.9	-1.2	16.1	15	- 3.9	5+	0	7	2.2	81	104	39	69	6	0	0	0	1.1	17	11.6	16	29	2	9	20	7.8	
COLORADO																																
ALAMOSA	2297	772.8		- 2.8	-23.9	-13.4	-5.3	5.0	31	-32.8	7	0	31			1	- 6	1	2		33	203						14	11	6	4.4	
COLORADO SPRINGS	1873	811.0	1021.6	6.1	- 7.2	- 0.7	1.2	17.2	25	-17.8	3+	0	30	-10.0	55	3	- 5	1	5	0	76	51	1.1	5	13.4	36	20	12	7	12	5.4	
DENVER	1610	836.4	1019.7	6.7	- 9.4	- 1.3	0.7	16.7	25	-23.3	3	0	30	-10.0	57	13	- 1	12	4	0	76	102	1.1	17	13.0	NW	3	10	10	11	5.1	80
GRAND JUNCTION	1480	857.1	1029.4	- 2.8	-15.6	- 9.2	-5.9	7.2	27	-25.0	8+	0	30	-12.8	78	7	- 10	3	3	0	94	229	0.8	7	9.8	NW	31	13	7	11	5.0	69
PUEBLO	1428	857.1	1022.2	5.6	-10.0	- 2.3	-1.2	17.8	25	-22.2	7+	0	30	- 8.3	67	3	- 5	1	5	0	74	76	0.5	34	13.4	W	28	12	8	11	5.2	73

See footnotes at end of table

CLIMATOLOGICAL DATA
METRIC UNITS

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Date	Temperature: Lowest	Date	No. of days: Max 32.2 °C or above	No. of days: Min. 0 C or lower	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	No. of days: .25 mm or more	No. of days: With thunderstorms	Snow, Sleet: Total	Snow, Sleet: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Fastest mile (1.6 kilometers): Speed	Fastest mile: Direction	Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	M.	Mb.	Mb.	C.	C.	C.	C.	C.		C.				C.	%	Mm.	Mm.	Mm.			Mm.	Mm.	M.p.s.		M.p.s.							%
CONNECTICUT																																
BRIDGEPORT	2	1023.4	1024.0	0.6	- 7.8	- 3.6	-2.6	8.3	21+	-19.4	9	0	25	- 9.4	67	49	- 45	19	13	0	163	178	3.0	32	16.1	7	14	11	8	12	5.5	
HARTFORD	52	1016.6	1023.4	- 1.1	-11.1	- 6.1	-2.7	8.9	19	-23.9	12+	0	29	-13.9	56	49	- 42	14	13	0	191	432	2.0	33	16.5	NW	7	11	8	12	5.5	62
NEW HAVEN	2	1023.7		0.6	- 8.3	- 4.0	-2.7	10.0	31	-20.6	9	0	28			49	- 52	19	12		178	127			13.4	W	4	11	9	11	5.5	61
DELAWARE																																
WILMINGTON	23	1021.7	1024.7	2.2	- 6.7	- 2.2	-3.0	11.1	27+	-17.2	2	0	28	- 8.3	65	58	- 28	41	10	0	41	76	1.[illegible]	32	17.4	28	4	8	7	16	6.5	
DIST.OF COLUMBIA																																
WASH NATL AP	4	1022.7	1025.0	4.4	- 5.0	- 0.3	-3.1	14.4	30	-13.9	12	0	27	- 7.8	61	50	- 27	24	9	0	71	76	1.2	34	17.0	NE	14	7	8	16	6.6	46
FLORIDA																																
APALACHICOLA U	4			15.6	6.7	11.2	-1.6	23.9	4	- 0.6	14	0	1			46	- 34	19	7	0	T	0			13.9	N	7	9	9	13	6.0	48
DAYTONA BEACH	9	1021.7	1022.9	20.0	9.4	14.6	-0.6	27.2	4	0.6	16	0	0	8.9	74	11	- 39	8	5	2	0	0	1.7	34	11.2	26	24	7	13	11	6.1	
FORT MYERS	5	1021.7	1021.9	24.4	12.2	18.1	0.6	28.3	3+	2.8	26	0	0	12.8	76	10	- 28	6	2	0	0	0	1.6	4	11.2	27	14	11	16	4	4.6	
JACKSONVILLE	6	1022.4	1023.3	17.8	6.1	11.9	-1.4	25.6	4	- 1.7	15	0	5	6.7	75	21	- 41	10	6	0	0	0	1.6	35	14.8	NE	8	9	7	15	6.3	50
KEY WEST	1	1020.0	1020.5	24.4	19.4	22.1	1.2	27.8	7	13.3	26	0	0	16.1	72	2	- 37	1	3	0	0	0	3.4	5	12.5	E	9	13	10	8	4.7	81
LAKELAND U	65			21.1	10.6	15.8	-0.7	28.3	2	0.6	26	0	0			7	- 45	7	2		0	0						9	15	7	5.2	78
MIAMI	2	1020.7	1020.8	23.3	14.4	18.9	-0.4	26.7	7+	3.3	26	0	0	14.4	75	49	- 3	26	6	0	0	0	2.1	5	13.4	6	8	8	17	6	5.5	
ORLANDO	33	1018.6	1022.8	21.1	9.4	15.3	-0.4	27.2	4	0.0	26	0	1	10.0	76	17	- 34	15	3	3	0	0	1.6	1	11.6	28	24	8	12	11	5.6	
PENSACOLA	34	1019.3	1023.4	15.0	4.4	9.8	-2.2	22.8	3	- 3.9	14	0	9	5.0	74	31	- 76	14	9		0	0	1.3	4	16.5	SW	23	7	7	17	6.3	55
TALLAHASSEE	17	1021.0	1023.5	18.3	3.9	11.1	-1.1	26.7	4	- 5.0	26+	0	8	5.6	76	55	- 32	26	6	0	T	T	0.9	2	8.9	35	7	10	5	16	6.2	
TAMPA	6	1022.0	1022.3	21.1	9.4	15.2	-1.0	26.1	7	- 0.6	26	0	1	10.0	75	10	- 44	10	2	1	0	0	1.4	4	10.7	29	23	10	13	8	5.2	71
WEST PALM BEACH	5	1020.7	1021.3	23.3	12.8	18.2	-1.2	28.3	4	2.2	26	0	0	12.2	70	14	- 49	8	3	1	0	0	1.4	5	11.2	30	24	7	12	12	6.1	
GEORGIA																																
ATHENS	244	994.2	1024.0	9.4	- 1.1	4.2	-2.8	21.1	21	- 6.7	8	0	21	- 1.1	72	134	9	41	12	0	48	25	0.7	3	8.9	35	7	7	4	20	7.1	
ATLANTA	308	986.1	1024.0	8.9	- 1.1	4.0	-3.1	20.6	31+	- 8.3	8	0	20	- 1.1	75	103	- 9	33	12	0	18	T	0.6	2	14.3	NW	7	7	5	19	6.8	52
AUGUSTA	44	1018.6	1023.9	12.2	- 1.1	5.5	-3.2	23.3	30+	- 7.2	16	0	20	- 1.1	71	96	20	47	13	0	36	25	1.0	35	11.6	27	15	7	5	19	6.8	
COLUMBUS	117			12.8	1.1	6.8	-2.0	22.2	30+	- 5.6	17	0	16	1.1	75	45	- 58	14	9		T	T	1.0	2	8.0	30	13	9	3	19	6.8	
MACON	108	1010.5	1023.8	12.2	- 0.6	5.7	-3.8	22.2	30+	- 7.2	17	0	22	- 0.6	71	73	- 12	34	14	0	T	T	1.2	36	10.3	NW	7	8	4	19	6.9	45
ROME	194			9.4	- 2.8	3.4	-2.2	21.7	31	- 9.4	8	0	23			140	0	58	12		13	51										
SAVANNAH	14	1021.7	1023.5	13.9	1.1	7.6	-3.3	24.4	30+	- 5.6	17	0	16	2.2	75	45	- 25	17	11	0	T	T	1.0	36	11.2	NW	4	8	7	16	6.6	54
HAWAII																																
HILO	8	1010.5	1011.7	27.2	18.3	22.7	1.2	30.6	21	15.6	9+	0	0	18.3	77	121	-179	37	12	3	0	0	0.7	18	13.4	SE	20	4	11	16	6.8	36
HONOLULU	2	1010.8	1011.4	26.7	18.9	22.8	0.3	28.3	22+	15.0	10+	0	0	17.8	75	208	112	88	12	4	0	0	0.4	11	19.2	N	16	8	13	10	6.0	65
KAHULUI	15	1008.8	1011.2	25.6	17.8	21.6	-0.7	28.3	15	12.8	10	0	0	18.3	84	109	30	34	11	3	0	0	0.8	14	15.2	SW	17+	8	9	14	6.2	58
LIHUE	31	1006.4	1011.7	24.4	17.2	20.8	-0.8	27.2	20	13.3	12	0	0	17.2	82	189	49	62	12	3	0	0	0.8	23	14.3	SW	16	15	4	12	5.3	55
IDAHO																																
BOISE	865	920.1	1023.3	3.3	- 6.1	- 1.4	0.2	10.6	16	-14.4	6	0	30	- 6.7	72	11	- 23	5	6	0	84	76	1.9	14	13.4	NW	16	5	8	18	7.1	53
LEWISTON	431			5.6	- 2.2	1.6	2.3	14.4	20	- 9.4	28+	0	22			17	- 11	4	12		69	25						1	3	27	8.7	
POCATELLO	1358	866.2	1025.1	0.0	-12.2	- 6.0	-0.6	6.1	24	-22.8	29	0	31	-10.0	73	19	- 12	10	7	0	295	178	1.9	20	16.1	S	10	3	13	15	7.1	55
ILLINOIS																																
CAIRO U	96			5.0	- 3.3	0.8	-2.2	15.6	30+	-16.7	7	0	24			39	- 74	15	12		117	102			12.1	N	23	9	5	17	6.7	37
CHICAGO O HARE	201	998.6	1024.4	- 0.6	- 8.3	- 4.6	-0.2	10.6	29	-25.0	7	0	27	- 8.9	73	45	- 1	11	12	0	264	152	1.1	23	13.4	28	4	4	9	18	7.3	
CHICAGO MIDWAY	185	1001.0		0.0	- 7.8	- 4.0	-0.7	11.7	29	-23.9	7	0	26	- 8.9	70	43	- 4	10	14	1	323	127	1.1	21	12.5	W	4	5	7	19	7.4	40
MOLINE	177	1002.0	1024.7	- 1.1	-10.6	- 6.1	-0.9	11.1	29+	-27.2	1	0	30	-11.1	67	20	- 21	8	10	0	218	178	0.8	25	12.5	W	4	5	10	16	6.9	46
PEORIA	199	999.7	1024.8	- 1.1	-10.0	- 5.5	-2.0	11.1	29	-26.1	7	0	27	- 8.9	77	28	- 19	11	10	1	213	229	0.5	18	13.4	W	4	7	7	17	6.7	48
ROCKFORD	221	995.9	1024.1	- 1.1	-10.6	- 6.0	-0.4	9.4	29	-27.2	7	0	27	- 9.4	78	15	- 36	5	7	0	74	76	0.5	23	12.1	31	4	7	8	16	7.0	
SPRINGFIELD	179	1001.7	1024.8	- 0.6	- 8.9	- 4.6	-2.6	13.9	29	-25.6	7	0	27	- 8.3	75	45	- 3	13	10	1	330	330	0.8	19	12.5	S	5	9	6	16	6.4	51
INDIANA																																
EVANSVILLE	116	1010.5	1025.4	3.3	- 7.2	- 1.9	-3.2	16.1	31	-22.2	8	0	26	- 7.2	69	62	- 39	29	11	0	254	203	0.4	32	11.6	NW	6	10	4	17	6.6	43
FORT WAYNE	241	993.6	1025.0	- 2.2	-10.6	- 6.5	-3.7	8.9	29	-27.2	8	0	29	-10.0	74	52	- 16	17	11	0	226	203	0.8	22	14.3	W	4	7	7	17	7.1	48
INDIANAPOLIS	241	994.2	1024.9	0.6	- 8.3	- 3.8	-2.2	11.7	27	-24.4	1	0	25	- 8.9	69	75	- 2	33	10	0	432	254	0.3	16	11.2	NW	15+	8	6	17	6.8	39
SOUTH BEND	236	994.9	1024.3	- 1.7	- 9.4	- 5.4	-1.8	8.9	29	-23.3	1	0	26	- 8.9	77	52	- 4	20	15	0	320	229	1.0	19	11.2	28	4	4	6	21	7.7	
IOWA																																
BURLINGTON	211			0.0	-10.0	- 4.9	-0.7	14.4	27	-25.0	7	0	29	- 8.3	75	10	- 31		6	0	142		0.6	27	10.3	33	23+	10	7	14	6.2	
DES MOINES	286	988.2	1024.8	- 0.6	-10.0	- 5.4	1.3	12.8	29+	-25.6	7	0	26	- 8.9	79	20	- 13	11	7	2	216	203	0.7	28	11.6	NW	22	12	4	15	6.0	51
DUBUQUE	322	983.1		- 2.8	-11.1	- 7.2	-0.1	7.2	31+	-28.3	7	0	31			30	- 16	13	9		145	152						6	8	17	7.0	

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Date	Temperature: Lowest	Date	No of days: Max 32.2 °C or above	No of days: Min 0 C or lower	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Greatest in 24 hours	No of days: 25 mm or more	No of days: With thunderstorms	Snow Sleet: Total	Snow Sleet: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Fastest mile (1.6 kilometers): Speed	Fastest mile: Direction	Fastest mile: Date	No of days (sunrise to sunset): Clear, 0-3	Partly cloudy, 4-7	Cloudy 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	M.	Mb.	Mb.	C.	C.	C	C	C.		C				C	%	Mm	Mm	Mm			Mm.	Mm	M.p.s		M.p.s							%
IOWA																																
SIOUX CITY	334	982.4	1024.4	-2.8	-12.2	-7.4	-0.1	9.4	24+	-28.3	7	0	29	-11.7	76	8	-12	5	8	0	86	51	0.6	31	13.9	S	6	13	7	11	5.3	64
WATERLOO	265	990.9	1024.3	-2.8	-12.8	-7.8	0.1	8.3	29+	-28.9	7	0	31	-12.2	70	19	-11	8	9	1	157	102	0.5	25	11.6	34	22+	7	7	17	6.5	
KANSAS																																
CONCORDIA	448	968.5	1023.7	2.8	-8.9	-3.2	-0.7	20.0	28	-24.4	7	0	30	-7.2	78	4	-13	3	3	0	51	76	0.6	23	16.5	S	8	11	6	14	5.6	59
DODGE CITY	787	928.2	1022.0	6.7	-6.7	0.1	0.6	22.8	25	-19.4	7+	0	26	-7.2	65	4	-11	3	3	0	5	25	0.5	24	14.8	S	8	7	8	16	6.4	64
GOODLAND	1113	889.9	1021.0	7.2	-8.3	-0.4	2.1	20.6	25	-22.8	6	0	30	-7.8	67	2	-8	1	3	0	36	51	2.0	26	14.8	33	17	15	6	10	4.6	
TOPEKA	267	991.5	1024.8	2.8	-8.9	-3.0	-1.2	18.3	28	-22.8	7	0	28	-7.2	76	23	-3	12	6	1	119	102	0.4	31	14.8	N	29	6	11	14	6.3	52
WICHITA	403	973.9	1023.5	5.6	-5.0	0.3	0.3	20.6	28	-19.4	7	0	25	-5.0	70	4	-17	1	7	0	15	25	0.3	15	16.5	S	8	6	6	19	7.3	39
KENTUCKY																																
COVINGTON	265	992.2	1025.1	1.7	-7.2	-2.9	-2.7	12.8	30+	-23.3	8	0	24	-8.3	69	45	-45	18	11	0	221	152	0.4	22	11.6	30	4	8	5	18	7.0	
LEXINGTON	294	988.2	1025.2	3.3	-5.6	-1.3	-2.7	14.4	28	-19.4	8	0	24	-6.1	71	37	-89	11	11	0	307	254	0.8	18	9.4	27	4	8	4	19	6.9	
LOUISVILLE	145	1006.8	1025.1	3.3	-5.0	-0.9	-2.6	15.6	31	-18.9	1	0	26	-5.6	73	54	-50	22	9	0	351	178	0.1	7	11.2	W	4	8	4	19	7.1	39
LOUISIANA																																
ALEXANDRIA	28	1019.3	1023.6	12.8	1.7	7.2	-2.9	22.8	31+	-6.1	14+	0	13	3.9	82	155	20	89	10	1	0	0	0.8	36	11.2	18	22	6	4	21	7.5	
BATON ROUGE	20	1020.7	1023.4	15.6	3.9	9.8	-1.8	24.4	30	-3.9	14	0	9	5.0	79	91	-30	53	10	2	T	0	1.3	6	10.7	32	12	7	3	21	7.0	
LAKE CHARLES	3	1021.7	1022.7	15.0	6.1	10.4	-1.6	24.4	31	-3.3	14	0	6	7.2	85	99	-14	46	7	1	0	0	1.7	6	10.7	1	6	6	4	21	7.5	
NEW ORLEANS	1	1022.4	1023.1	16.7	5.6	10.9	-1.7	24.4	6	-2.8	15+	0	6	6.1	74	14	-84	4	8	0	0	0	1.4	3	11.2	25	23	9	3	19	6.6	
SHREVEPORT	77	1013.9	1023.4	11.7	3.3	7.4	-1.2	24.4	31	-7.8	8	0	13	3.3	80	212	90	72	15	1	25	25	0.9	9	10.3	30	13+	4	3	24	8.2	31
MAINE																																
CARIBOU	190	995.6		-8.9	-20.0	-14.4	-2.4	1.1	20+	-30.6	3	0	31			59	5	15	13		851	889						9	8	14	5.9	
PORTLAND	14	1019.6	1022.0	-2.2	-15.0	-8.6	-2.9	6.7	20+	-28.9	11	0	30	-15.0	59	76	-35	25	11	0	508	610	1.9	31	13.9	W	5	15	4	12	4.6	65
MARYLAND																																
BALTIMORE	45	1019.0	1024.9	3.3	-6.1	-1.6	-3.1	12.8	27+	-17.8	2	0	28	-8.3	62	87	0	65	9	0	64	51	1.6	31	15.6	NW	4	12	4	15	6.1	52
MASSACHUSETTS																																
BLUE HILL OBS R	192			-0.6	-9.4	-5.2	-2.4	9.4	19	-22.8	9	0	31			102	-12	35	13		589	508			26.4	NW	7					58
BOSTON	5	1021.7	1022.6	0.6	-7.8	-3.6	-2.4	10.0	19	-20.0	9+	0	28	-11.1	57	98	-2	32	13	0	450	330	3.5	31	16.1	NW	8	12	7	12	5.0	63
NANTUCKET	13	1021.7	1021.9	2.2	-6.1	-1.7	-2.3	7.8	14	-16.7	9	0	27	-6.7	71	62	-45	16	14	0	109	51	3.0	33	21.0	NW	8	13	4	14	5.3	54
PITTSFIELD	357			-2.8	-13.9	-8.6	-2.9	6.1	20+	-28.9	9	0	30			47	-28	17	14		269	305										
WORCESTER	301	984.1	1022.7	-2.8	-11.7	-7.1	-2.7	6.7	19	-25.0	9	0	31	-13.3	63	76	-18	16	12	0	472	559	3.2	30	17.9	28	7	12	7	12	5.3	
MICHIGAN																																
ALPENA	210	997.6	1024.2	-3.3	-12.2	-7.6	-0.8	8.9	18	-29.4	8	0	30	-11.1	74	30	-19	12	12	0	345	203	0.3	23	12.1	NE	15	2	5	24	8.3	29
DETROIT	189			-1.1	-7.8	-4.6	-1.8	8.9	29	-17.8	1	0	29	-8.9	73	47	-5	15	11	0	290		0.8	25	14.3	29	4					
DETROIT M WAYNE CO	193	999.0	1024.2	-2.2	-10.0	-6.2	-2.9	6.7	29	-22.2	8	0	29	-9.4	76	58	9	20	14	0	300	254	0.5	26	15.6	W	4	6	7	18	7.3	44
DETROIT WILLOW RUN	217	994.9	1024.5	-1.7	-9.4	-5.6	-2.6	6.1	29	-21.1	8	0	29	-10.0	70	50	0	14	12	0	246	254	0.8	24	13.9	30	4	5	8	18	7.4	
FLINT	235	994.9	1024.0	-1.7	-10.0	-6.1	-1.9	6.7	29	-22.2	8	0	28	-11.1	68	39	-4	12	14	0	358	279	0.8	23	12.1	1	15	4	6	21	7.5	
GRAND RAPIDS	239	993.6	1024.0	-1.7	-10.6	-6.1	-1.7	7.2	29	-26.1	1	0	29	-10.0	72	39	-9	19	14	0	300	203	0.3	20	13.0	NW	4	5	3	23	7.9	35
HOUGHTON LAKE	350	980.0	1024.2	-3.3	-12.2	-8.0		8.3	18	-29.4	8	0	31	-11.1	77	26		10	14	0	229	178	0.5	22	9.4	2	14+	4	4	23	7.7	
LANSING	256	990.9	1024.2	-1.7	-11.7	-6.6	-2.3	8.3	29	-22.8	8	0	29	-9.4	77	37	-13	14	14	0	274	229	1.0	22	14.8	W	4	3	9	19	7.7	49
MARQUETTE U	206			-3.9	-11.7	-7.9	-0.9	6.1	19	-25.6	7	0	31			31	-17	12	10		295	203			13.4	S	25	3	3	25	8.4	37
MUSKEGON	191	999.7	1023.8	-2.2	-8.3	-5.1	-1.8	6.7	29	-18.9	1	0	26	-10.0	69	47	-6	13	15	0	572	381	0.5	16	11.2	29	4	5	1	25	8.3	
SAULT STE MARIE	220	996.3	1024.4	-6.7	-16.1	-11.4	-2.4	3.9	18	-33.3	8	0	31	-14.4	76	36	-17	12	13	0	376	508	1.4	8	14.8	NW	6	6	5	20	7.4	38
MINNESOTA																																
DULUTH	435	968.8	1023.7	-7.2	-17.8	-12.7	0.2	6.7	20	-36.1	6	0	31	-16.7	69	20	-10	6	11	0	274	203	0.4	25	15.2	NE	27	4	6	21	7.9	40
INTERNATIONAL FALLS	359	978.0	1024.4	-8.9	-22.2	-15.7	0.4	7.2	21	-43.3	6	0	31	-20.0	68	20	-2	5	12	0	257	432	0.6	18	12.5	27	29	10	6	15	6.0	
MINNEAPOLIS	254	992.2	1024.4	-5.0	-15.0	-9.8	1.1	5.0	20	-29.4	7+	0	30	-13.3	72	18	0	8	9	0	269	178	0.5	24	13.4	S	8	6	5	20	7.2	43
ROCHESTER	395	973.6	1024.1	-5.0	-14.4	-9.7	0.6	7.2	21+	-30.0	7	0	31	-12.8	76	20	-4	11	7	1	119	76	1.6	23	14.3	30	5	7	8	16	6.6	
ST CLOUD	315	983.4	1023.7	-6.1	-17.2	-11.8	0.3	6.1	21	-32.8	6	0	31		71	22	4	7	10		229	127						6	4	21	7.2	
MISSISSIPPI																																
JACKSON	94	1011.9	1024.1	12.2	0.6	6.3	-2.5	23.3	31+	-8.9	8	0	16	2.8	84	116	-16	43	13	0	T	T	0.5	5	17.0	N	23	9	1	21	7.2	43
MERIDIAN	88	1012.9	1024.4	13.3	0.6	7.0	-1.9	24.4	30+	-7.8	8	0	14	1.7	78	94	-25	24	11	0	T	T	0.8	36	12.5	34	23	6	3	22	7.5	
MISSOURI																																
COLUMBIA	237	994.6	1024.2	3.3	-6.7	-1.6	-0.7	18.3	27+	-23.9	7	0	24	-5.6	75	45	2	31	10	2	117	76	0.6	22	10.7	NW	13+	5	6	20	7.4	43
KANSAS CITY	226	996.3	1024.7	3.3	-7.2	-2.0	-1.8	18.3	26	-21.7	7	0	25	-5.0	80	7	-29	5	6	0	71	76	0.5	23	10.7	NW	29	6	10	15	6.7	41

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Date	Temperature: Lowest	Date	No. of days: Max 32.2 °C or above	No. of days: Min 0 C or lower	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	No. of days: .25 mm. or more	No. of days: With thunderstorms	Snow, Sleet: Total	Snow, Sleet: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Fastest mile (1.6 kilometers): Speed	Fastest mile: Direction	Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	M.	Mb.	Mb.	C.	C.	C.	C.	C.		C.				C.	%	Mm.	Mm.	Mm.			Mm.	Mm.	M.p.s.		M.p.s							%
MISSOURI																																
ST JOSEPH	247			2.2	- 8.9	- 3.2	-0.5	16.1	29	-25.6	7	0	28	- 7.2	80	7	- 24	4	4	0		102	0.3	29	13.4	33	29	12	6	13	5.5	
ST LOUIS	163	1003.7	1025.2	3.3	- 6.7	- 1.9	-1.8	18.3	29	-21.7	7+	0	24	- 5.6	77	47	- 3	28	9	1	175	152	0.6	24	11.6	S	26+	5	9	17	7.0	42
SPRINGFIELD	386	977.0	1024.1	6.1	- 4.4	0.7	-0.2	18.9	26	-21.7	7	0	21	- 3.9	75	78	28	39	11	0	25	51	1.0	17	12.1	N	23	4	6	21	7.8	31
MONTANA																																
BILLINGS	1087	891.6	1020.5	0.0	-10.0	- 4.8	0.1	14.4	24	-26.7	2	0	25	-12.2	58	31	17	9	9	0	335	203	4.2	25	16.1	SW	2	5	8	18	7.3	40
GLASGOW	696	935.3		- 6.1	-17.2	-11.6	0.8	12.8	24	-30.6	6	0	31	-16.7	59	3	- 9	2	3		69	76						6	5	20	7.3	
GREAT FALLS	1116	887.6	1020.2	0.6	-11.7	- 5.6	-0.1	16.1	24	-27.8	6+	0	24	-12.8	59	33	17	9	7	0	325	127	4.9	22	19.2	SW	4	3	5	23	7.6	48
HAVRE	787	924.1		- 5.6	-17.2	-11.2	-1.1	17.2	24	-31.7	6	0	28	-14.4	73	7	- 6	5	5		122	102	1.3	23	18.8	NW	4	3	6	22	7.8	47
HELENA	1167	881.8	1023.6	- 2.8	-15.0	- 9.1	-1.6	10.6	24	-30.6	2	0	31	-13.9	70	15	3	5	10	0	221	254	2.0	26	18.3	S	10	5	8	18	7.5	50
KALISPELL	904	912.3		- 1.7	-11.1	- 6.4	0.3	10.0	24	-30.0	2	0	30			26	- 9	10	18	0	358	279			16.5	2	1	0	3	28	9.0	
MILES CITY	801	924.1	1022.1	- 3.9	-15.6	- 9.8	-1.2	10.6	24	-30.6	29	0	30	-14.4	72	21	10		11	0	191		0.6	30								
MISSOULA	972	906.2	1022.8	- 1.7	-11.1	- 6.6	0.6	6.7	24	-22.2	7	0	30	-10.0	77	22	- 1	8	12	0	368	305	0.6	11	15.2	SW	24	0	6	25	8.6	24
NEBRASKA																																
GRAND ISLAND	561	954.6	1023.8	1.7	-10.6	- 4.5	0.7	17.8	25	-26.7	7+	0	31	- 8.9	74	3	- 13	3	4	0	28	25	1.0	28	12.5	36	29+	12	4	15	5.6	
LINCOLN U	351			1.1	- 8.9	- 3.9	-0.1	14.4	25+	-23.9	7	0	25			10	- 14	7	6		109	76			14.3	S	8	11	8	12	5.3	61
NORFOLK	471			- 1.1	-12.2	- 6.8	0.2	12.8	21	-31.7	7	0	31			5	- 15	4	3		61	102						13	5	13	5.5	
NORTH PLATTE	846	920.8	1023.1	2.2	-13.3	- 5.4	-1.0	16.1	25+	-28.9	7	0	31	-11.1	69	3	- 8	3	2	0	41	51	0.9	35	12.5	N	28	8	8	15	5.7	70
OMAHA	298	987.1	1024.3	0.0	-10.6	- 5.2	0.2	12.8	28	-26.7	7	0	28	-10.0	71	12	- 8	9	6	0	117	127	0.5	35	14.3	N	22+	12	7	12	5.3	61
SCOTTSBLUFF	1206	881.1	1022.3	3.3	-11.7	- 4.4	-0.7	16.1	24	-30.0	2	0	29	- 8.9	73	4	- 4	2	4	0	53	76	1.3	33	14.8	28	4	11	7	13	5.5	
VALENTINE	789			1.1	-13.9	- 6.2	0.4	15.0	24	-33.3	7	0	30			5	- 5	2	7		150	127			14.8	SW	10	9	6	16	6.3	66
NEVADA																																
ELKO	1539	846.6	1022.7	5.0	-10.6	- 2.8	2.4	11.7	22	-23.9	29	0	30	- 9.4	65	29	0	20	8	0	409	279	0.5	23	11.2	17	10	11	10	10	5.3	
ELY	1906	810.0	1022.9	3.3	-13.3	- 4.9	0.2	10.6	25+	-24.4	12	0	31	-12.2	61	4	- 16	2	5	1	61	76	3.4	19	16.5	S	27	12	6	13	5.2	84
LAS VEGAS	659	943.1	1021.2	13.9	0.0	6.8	0.6	20.0	22	- 4.4	8	0	19	- 6.1	43	T	- 13	T	1	0	0	0	1.4	25	13.9	SW	31	17	5	9	4.0	83
RENO	1342	867.9	1021.3	8.3	- 8.3	- 0.2	0.7	13.9	22	-18.3	7	0	30	-12.8	42	28	- 2	18	4	0	315	229	1.1	20	35.8	SW	10	10	8	13	5.7	69
WINNEMUCCA	1310	870.3	1022.2	7.2	- 9.4	- 1.2	1.4	15.0	15	-16.7	7+	0	31	- 7.2	68	21	- 6	13	8	0	208	152	0.9	17	11.6	S	10	10	7	14	5.7	56
NEW HAMPSHIRE																																
CONCORD	104	1009.8	1023.2	- 2.2	-15.6	- 9.0	-3.0	7.8	19	-29.4	2	0	31	-15.6	58	45	- 37	10	13	0	401	432	2.2	30	17.9	NW	8	12	7	12	5.0	59
MT WASHINGTON OBS	1909			-10.0	-20.6	-15.3	-1.0	0.0	18	-43.3	8	0	31			105	- 34	14	19	0	935	102			59.9Y	NW	8	8	3	20	6.9	43
NEW JERSEY																																
ATLANTIC CITY	20	1022.4	1024.9	1.7	- 7.8	- 3.3	-4.8	15.6	30	-17.8	12+	0	28	- 8.3	68	70	- 20	55	9	0	20	25	2.0	32	16.1	30	4	12	4	15	5.8	47
ATLANTIC CITY U	3			3.9	- 3.9	0.0	-2.2	13.3	21	-12.8	12+	0	21			53	- 42	38	10						18.3	WNW	4					
NEWARK	2	1023.7	1024.7	1.7	- 6.7	- 2.3	-2.5	10.6	21	-17.2	9	0	25	- 8.9	64	43	- 41	24	12	0	117	102	2.2	31	14.3	29	7	12	7	12	5.5	
TRENTON U	17			1.7	- 5.6	- 2.1	-2.7	9.4	21+	-15.6	9	0	24			58	- 21	44	8		48	102			14.8	NW	7	11	6	14	5.6	58
NEW MEXICO																																
ALBUQUERQUE	1619	840.8	1022.0	9.4	- 3.9	2.7	1.0	16.1	28	-10.6	1	0	28	- 7.8	51	T	- 10	T	1	0	T	T	1.0	36	14.8	NW	31	12	12	7	4.6	79
CLAYTON	1515			9.4	- 6.7	1.4	0.7	22.2	25	-17.2	6	0	28			4	- 5	3	3		25	25						12	5	14	5.4	
RATON	1944			7.2	-10.0	- 1.6	0.1	17.8	25	-18.3	12	0	31			T	- 9	T	0		T	102						14	4	13	5.2	
ROSWELL	1102	894.3		12.2	- 3.9	3.9	0.7	23.3	31	-13.9	9	0	25	- 2.8	71	38	26	20	7	0	74	76	0.9	33	12.5	NW	11	8	8	15	6.2	61
SILVER CITY	1638			10.6	- 2.2	4.1	-0.1	16.1	25+	- 7.8	9	0	26			11	- 5	8	3		76	76						9	14	8	5.2	
NEW YORK																																
ALBANY	84	1013.9	1025.2	- 3.9	-15.6	- 9.6	-4.4	5.0	31+	-32.2	12	0	29	-13.9	67	38	- 25	13	13	0	203	229	1.5	31	14.8	NW	7	8	7	16	6.2	59
BINGHAMTON	485	962.1	1024.0	- 3.9	-12.2	- 8.3	-3.7	3.3	20+	-26.1	9	0	31	-12.2	74	57	- 6	17	15	0	279	305	1.2	27	14.8	W	7+	2	9	20	7.7	44
BUFFALO	215	997.3	1024.3	- 2.8	-10.6	- 6.7	-2.6	7.2	29	-23.9	12	0	30	-10.0	76	55	- 17	13	19	0	485	305	1.6	24	13.0	SW	21+	1	8	22	8.1	37
J.F. KENNEDY	4	1023.4	1024.3	0.0	- 7.2	- 3.6	-3.4	9.4	21	-17.8	9	0	27	-10.0	62	51	- 31	26	12	0	130	76	2.4	33	18.3	9	14	11	7	13	5.6	
NEW YORK U	40	1020.3	1023.8	0.6	- 6.7	- 2.9	-3.6	10.0	21	-18.3	9	0	24	-10.6	58	52	- 32	33	12	0	91	76	2.1	33	14.3	NW	7					60
NEW YORK LA GUARDIA	3	1022.7	1024.7	0.6	- 6.1	- 2.9	-3.8	9.4	21+	-17.2	9	0	25	-10.6	57	42	- 42	21	12	0	132	76	2.5	33	17.4	NW	7	11	8	12	5.6	
ROCHESTER	167	1004.1	1025.6	- 2.2	-11.1	- 6.8	-3.0	8.3	29	-23.9	12	0	29	-10.6	70	49	- 12	15	13	0	615	279	1.4	25	13.9	SW	21+	0	10	21	8.3	39
SYRACUSE	125	1009.5	1025.1	- 2.8	-12.2	- 7.5	-3.1	5.0	30+	-30.0	9	0	31	-12.2	66	53	- 27	17	16	0	470	381	0.7	31	14.8	W	4	6	4	21	7.5	36
NORTH CAROLINA																																
ASHEVILLE	652	945.1	1023.5	7.2	- 5.0	1.3	-1.8	17.8	29+	-12.8	8	0	27	- 2.8	79	74	- 31	26	11	0	183	102	1.3	34	14.8	35	7	7	6	18	6.6	45
CAPE HATTERAS R	2	1023.0	1023.5	10.0	1.1	5.4	-2.7	19.4	30	- 3.9	8	0	14	1.1	77	143	44	58	13	2	T	T	3.9	35	17.0	SE	14	11	2	18	6.2	58
CHARLOTTE	224	995.6	1024.2	8.3	- 1.7	3.3	-2.7	19.4	30	-10.0	8	0	21	- 2.2	72	126	36	48	13	0	109	76	1.0	36	11.6	NE	24	9	4	18	6.5	58
GREENSBORO	273	991.5	1024.3	7.2	- 3.3	2.0	-2.3	18.9	30+	-10.6	12+	0	26	- 3.3	72	95	9	40	12	0	152	102	0.9	35	12.1	NE	24	10	3	18	6.6	46
RALEIGH	132	1007.8	1024.2	9.4	- 3.3	2.8	-2.5	22.2	30	-12.2	12	0	25	- 3.9	65	73	- 9	24	12	0	76	51	1.0	34	13.0	9	13	10	6	15	6.1	51

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure: Station ⊙	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	No of days: Max 32.2 °C or above	No of days: Min 0 C or lower	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	No of days: 25 mm or more	No of days: With thunderstorms	Snow, Sleet: Total	Snow, Sleet: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Fastest mile (1.6 kilometers): Speed	Fastest mile: Direction	Fastest mile: Date	No of days (sunrise to sunset): Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	M.	Mb.	Mb	C	C.	C	C	C		C				C	%	Mm	Mm	Mm			Mm	Mm	M p s		M.p.s							%
NORTH CAROLINA																																
WILMINGTON	9	1022.7	1024.0	11.7	- 0.6	5.7	-3.2	21.1	30+	- 6.1	8	0	22	- 0.6	70	94	22	34	13	0	T	T	1.6	36	16.1	SE	13	10	5	16	6.1	54
NORTH DAKOTA																																
BISMARCK	502	960.0	1023.8	- 7.2	-20.6	-13.8	-1.6	7.2	24	-40.6	4	0	31	-17.2	76	8	- 4	4	7	0	109	203	1.3	32	17.9	N	5	6	8	17	7.0	56
FARGO	273	988.8	1023.9	- 8.3	-18.9	-13.5	0.2	3.9	21	-36.1	4	0	31	-17.2	73	9	- 4	5	9	0	102	229	0.5	20	27.7	SE	11	5	8	18	6.8	46
WILLISTON	579	950.2	1022.9	- 6.7	-19.4	-12.9	0.3	10.0	24+	-36.7	4	0	30	-17.2	74	13	- 1	6	6	0	226	152	0.9	29	21.0	NW	5	5	12	14	6.7	66
OHIO																																
AKRON	368	978.0	1024.6	0.0	-10.0	- 5.0	-2.9	7.8	31	-22.2	8	0	29	- 8.9	73	73	1	25	14	0	422	330	1.2	22	14.3	29	4	5	8	18	7.4	
CINCINNATI OBS	232			1.7	- 6.7	- 2.4	-3.4	12.2	27	-20.6	8	0	23			44	- 50	19	10		193	152			13.9	W	4					41
CLEVELAND	237	994.6	1025.0	- 1.1	- 8.9	- 5.0	-3.0	8.3	31	-23.3	8	0	27	-10.6	67	83	15	21	16	0	368	203	1.7	20	12.1	W	4	4	7	20	8.0	36
COLUMBUS	247	994.2	1025.5	- 0.6	- 8.9	- 4.7	-3.5	11.1	29	-22.8	8	0	25	- 8.3	77	56	- 24	19	9	0	295	254	0.6	18	15.6	NW	4	6	6	19	7.0	46
DAYTON	305	987.5	1025.1	0.6	- 8.9	- 4.1	-2.7	10.6	27	-23.9	8	0	26	- 9.4	68	42	- 38	20	12	0	307	178	0.9	20	14.3	W	4	9	3	19	7.0	42
MANSFIELD	395			- 1.1	- 9.4	- 5.1	-2.5	8.3	30+	-23.3	8	0	29	-10.0	68	58	- 24	19	14	0	541	406	2.0	21	10.7	34	15	5	6	20	7.4	
TOLEDO	204	999.0	1025.2	- 1.1	- 9.4	- 5.5	-2.3	8.9	29	-25.6	8	0	29	- 9.4	73	49	- 11	19	12	0	264	178	0.8	22	13.9	W	4	4	9	18	7.5	46
YOUNGSTOWN	359	980.0	1024.7	- 2.2	-10.6	- 6.5	-3.9	6.1	29	-22.8	8	0	29	- 9.4	79	95	15	30	14	0	356	254	1.2	22	11.2	11	13	4	9	18	7.7	
OKLAHOMA																																
OKLAHOMA CITY	392	975.3	1023.1	7.2	- 2.2	2.6	-0.2	19.4	28	-16.7	7	0	19	- 0.6	83	56	22	29	12	1	10	T	0.5	8	13.9	N	6	5	0	26	8.2	29
TULSA	198	999.0	1024.1	7.2	- 2.8	2.2	-0.1	20.0	26	-18.3	7	0	19	- 2.8	71	83	39	22	11	1	15	T	0.4	13	14.8	SW	31	3	6	22	8.0	32
OREGON																																
ASTORIA	2	1015.6	1016.3	8.9	2.2	5.6	0.7	15.6	23	- 3.9	28+	0	11	2.8	84	243	- 54	42	23	0	94	102	1.9	17	15.6	18	9	2	4	25	8.6	
BURNS U	1265	874.4	1021.2	2.8	- 8.3	- 2.8	1.2	10.0	20	-16.7	27	0	31	- 6.7	76	25	- 16	11	10		117	25	0.5	26				5	11	15	6.6	
EUGENE	109	1004.7	1018.4	8.9	1.7	5.3	1.3	17.8	20	- 3.3	28+	0	12	3.3	87	191	30	39	18	0	91	51	1.9	17	14.3	16	29	0	6	25	9.0	
MEACHAM	1234	876.1	1020.0	0.0	- 6.1	- 3.0	0.3	8.9	20	-16.1	27	0	29	- 6.7	80	65	- 42	23	19		356	254			10.3	21	30+	0	4	27	9.1	
MEDFORD	396	971.6	1020.5	7.2	- 2.2	2.6	0.7	16.1	21	- 8.3	28	0	27	0.0	85	47	- 33	10	17	0	163	102	0.5	17	13.4	13	13	1	8	22	8.1	
PENDLETON	452	964.1	1019.2	7.8	- 1.7	2.9	2.8	19.4	20+	-11.1	28	0	19	- 2.8	70	15	- 21	5	11	0	33	25	1.7	23	13.4	26	24+	0	8	23	8.5	
PORTLAND	6	1016.9	1018.0	7.2	1.1	4.1	0.5	13.3	21	- 4.4	27+	0	12	0.6	80	116	- 20	29	21	0	132	127	2.6	15	20.1	S	9	1	3	27	8.9	28
SALEM	60	1010.8	1018.1	7.8	0.6	4.3	0.7	16.7	20	- 5.0	28+	0	14	1.7	84	162	- 8	34	21	0	236	152	1.8	18	10.3	18	31+	1	3	27	8.8	
SEXTON SUMMIT R	1169	882.8	1018.3	3.9	- 2.2	0.9	-0.2	16.7	22	- 8.3	28	0	24	- 3.3	81	137	- 5	37	15		648	457			19.2	16	9	6	5	20	7.4	
PACIFIC AREA																																
JOHNSTON	2	1010.5	1011.0	27.2	22.8	24.8	-0.2	28.9	21+	20.6	31+	0	0	18.3	71	21	- 78	11	7	2	0	0	3.1	8	16.1	E	2	19	12	0	3.5	80
KOROR R	29	1004.7	1008.2	30.6	23.9	27.2	0.4	32.8	30	22.8	30+	1	0	23.3	83	204	- 94	60	22	0	0	0	2.5	6	11.6	NE	10	0	0	31	9.7	76
KWAJALEIN	2	1007.1	1007.9	30.0	24.4	27.2	0.5	30.6	14+	22.8	17+	0	0	22.8	77	147	55	81	17	0	0	0	7.1	5	13.0	6	5+	2	10	19	8.0	
MAJURO	3	1007.5	1007.7	29.4	25.0	27.3	0.5	30.6	5	23.3	11	0	0	23.3	79	137	- 41	36	16	0	0	0	5.1	7	12.5	E	12+	1	15	15	7.3	60
MARCUS ISLAND	6			24.4	18.9	21.7	-0.6	27.8	9	15.6	30+	0	0			32	- 64	18	12		0	0			16.5	N	6					54
PAGO PAGO	4	1007.1	1007.3	30.6	23.9	27.2		32.8	23	21.7	21	6	0	23.9		118		21	18	7	0	0	1.7	7	13.4	NE	3	2	8	21	8.3	45
PONAPE R	37	1002.0	1007.4	30.0	24.4	27.3	0.3	31.1	25	21.7	27	0	0	23.3	80	251	- 30	55	25	0	0	0	4.1	7	10.3	E	8	0	4	27	9.0	29
TAGUAC GUAM R	110			28.3	22.2	25.2	-0.5	29.4	26+	19.4	26	0	0			146	28	63	24		0	0			11.6	NE	29	0	7	24	8.5	54
TRUK MOEN ISLAND	2	1007.1	1007.3	29.4	25.0	27.2	0.2	30.0	28+	23.3	31+	0	0	23.3	81	220	7	44	23	2	0	0	5.2	5	15.6	E	6	0	3	28	9.4	58
WAKE	3	1011.9	1012.2	28.3	22.2	25.2	-0.1	30.0	10+	18.9	30	0	0	18.3	69	30	2	8	11	0	0	0	4.0	5	18.8	N	14	12	15	4	4.5	64
YAP R	19	1006.1	1008.0	29.4	23.9	26.6	-0.3	30.6	27+	22.2	31+	0	0	23.9	85	274	74	53	27	0	0	0	3.6	5	12.5	NE	9	0	1	30	9.6	56
PENNSYLVANIA																																
ALLENTOWN	118	1010.2	1024.8	- 1.1	-10.6	- 5.7	-4.1	7.2	27	-21.7	2	0	28	-12.2	61	65	- 16	41	11	0	76	178	1.6	31	18.3	31	7	9	8	14	5.9	
ERIE	223	996.6	1024.7	- 0.6	- 8.9	- 4.7	-2.1	8.3	31	-20.6	12	0	29	- 9.4	71	76	8	19	19	0	615	305	1.6	22	14.8	29	4	3	5	23	8.1	
HARRISBURG	103	1011.9	1025.2	0.0	- 8.9	- 4.4	-4.1	8.3	21	-20.6	2	0	27	-10.0	66	34	- 37	14	9	0	76	279	1.6	31	15.6	NW	7+	8	7	16	6.5	46
PHILADELPHIA	2	1023.7	1024.8	2.2	- 5.6	- 1.7	-1.9	10.6	21+	-14.4	12	0	26	- 8.9	62	74	- 11	58	10	0	38	102	1.7	34	15.6	NW	4	10	5	16	6.2	48
PITTSBURGH	347	979.0	1025.0	- 0.6	- 9.4	- 4.8	-3.1	8.3	31	-22.2	8	0	27	- 8.9	72	72	- 4	19	15	0	391	305	1.0	25	11.2	27	4	4	9	18	7.4	37
READING U	81			1.1	- 6.7	- 2.8	-3.2	10.0	20	-17.2	2	0	25			38	- 40	22	9		89	127			22.8	E	14	10	7	14	5.9	52
SCRANTON	283	989.2	1025.2	- 2.2	-11.1	- 6.7	-4.3	6.1	21	-23.3	12	0	27	-11.1	70	52	- 7	17	11	0	152	254	0.8	29	14.8	W	7	7	7	17	6.9	52
WILLIAMSPORT	160	1005.4	1025.3	0.0	-10.0	- 5.0	-3.2	7.8	27	-23.9	12	0	27	-10.0	69	63	- 5	26	11	0	66	178	1.0	29	13.4	29	7	9	9	13	6.4	
RHODE ISLAND																																
BLOCK ISLAND	34			0.6	- 6.1	- 2.7	-2.7	6.7	23+	-18.9	9	0	24			60	- 37	25	13		224	102						14	5	12	5.3	
PROVIDENCE	16	1020.7	1023.1	0.6	- 8.9	- 4.2	-2.6	8.9	19	-20.6	9	0	30	-12.2	56	89	- 8	31	14	0	343	229	2.7	30	13.9	30	7	13	7	11	4.9	60
SOUTH CAROLINA																																
CHARLESTON	12	1021.7	1023.4	12.8	0.0	6.4	-3.5	23.9	30	- 6.7	17	0	18	0.6	74	57	- 7	23	11	1	13	T	1.5	36	13.4Y	N	7	8	8	15	6.4	55
CHARLESTON U	3			12.2	2.8	7.5	-3.3	22.8	30	- 3.3	8	0	8			51	- 10	22	9		T	T			13.4	NE	10					
COLUMBIA	65	1015.9	1024.2	11.1	- 1.1	5.1	-3.2	22.8	30	- 6.7	17	0	22	- 1.1	72	151	74	72	13	0	43	25	1.3	36	9.4	4	24+	10	1	20	6.7	54

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

JANUARY 1968

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	No. of days: Max 32.2 °C or above	No. of days: Min. 0 C or lower	Average dew point	Average relative humidity	Precipitation: Total	Departure from normal	Greatest in 24 hours	No. of days: 25 mm. or more	No. of days: With thunderstorms	Snow, Sleet: Total	Snow, Sleet: Maximum depth on ground	Wind: Resultant speed	Resultant direction	Fastest mile (1.6 kilometers): Speed	Direction	Date	No. of days (sunrise to sunset): Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	M.	Mb.	Mb.	C.	C.	C.	C.	C.		C.				C.	%	Mm.	Mm.	Mm.			Mm.	Mm.	M.p.s.		M.p.s.							%
SOUTH CAROLINA																																
GNVLE-SPARTANBURG	292	988.5	1024.3	9.4	- 1.7	3.9	-2.6	20.6	21	- 8.9	8	0	22	- 2.2	68	105	- 4	37	14	0	23	25	1.1	1	13.9	N	7	8	5	18	6.6	43
SOUTH DAKOTA																																
ABERDEEN	395	973.9	1023.8	- 6.1	-17.8	-12.0	-0.2	6.1	24+	-34.4	4	0	31	-15.0	78	4	- 13	2	6	0	79	102	0.4	28	16.5	16	10	8	5	18	6.5	
HURON	391	974.3	1023.6	- 3.3	-15.0	- 9.2	1.6	10.0	24+	-31.7	4	0	31	-15.6	62	7	- 5	4	4	0	114	51	0.5	24	17.0	NW	5	6	7	18	7.0	62
RAPID CITY	964	905.9	1021.3	1.7	-11.1	- 4.8	0.8	20.6	24	-28.3	6	0	29	-12.2	60	11	2	5	4	0	102	102	1.7	35	17.9	NW	11+	6	8	17	6.7	59
SIOUX FALLS	432	969.5	1023.6	- 2.8	-13.9	- 8.4	0.9	8.9	24	-30.0	7	0	30	-12.2	75	8	- 7	6	6	0	117	76	0.8	27	10.7	19	8	6	12	13	6.4	
TENNESSEE																																
BRISTOL	459	968.5	1024.6	6.1	- 5.0	0.7	-2.8	16.7	31	-17.2	8	0	26	- 4.4	73	91	- 3	24	13	0	307	127	0.4	1	10.7	10	13	6	6	19	7.1	
CHATTANOOGA	203	999.0	1024.4	7.8	- 2.2	2.8	-2.6	20.0	22	-10.6	8	0	23	- 1.1	80	126	- 16	35	14	0	142	102	0.6	32	11.2	N	7	8	4	19	6.9	39
KNOXVILLE	299	987.8	1023.8	7.8	- 2.2	2.8	-2.4	18.3	30+	-11.7	8	0	19	- 1.1	79	105	- 19	33	11	0	150	51	0.7	36	8.9	NE	24+	7	4	20	7.1	34
MEMPHIS	79	1014.2	1025.0	8.3	- 0.6	3.8	-1.4	20.6	29+	-11.7	7	0	22	- 1.1	73	141	- 13	43	13	0	51	51	0.8	4	11.6	N	6	5	6	20	7.6	37
NASHVILLE	180	1002.4	1025.0	6.1	- 3.9	1.1	-3.3	20.0	29	-15.6	8	0	25	- 2.8	76	89	- 51	23	12	0	183	152	0.4	1	10.3	NW	6	7	4	20	7.1	41
OAK RIDGE R	276			7.8	- 2.2	2.7	-1.7	18.9	21	-11.7	8	0	20			114	- 37	37	12		99	76			13.9Y		24	7	6	18	6.9	
TEXAS																																
ABILENE	537	958.7	1021.4	11.7	1.7	6.6	-0.4	23.3	31	-11.1	7	0	14	2.2	77	110	88	39	10	1	T	T	0.6	20	15.6	N	18+	5	5	21	7.6	35
AMARILLO	1098	893.3	1019.6	10.0	- 3.3	3.5	0.9	19.4	28	-16.1	7	0	19	- 3.3	69	59	43	44	5	0	15	T	1.2	27	13.9	N	11	9	8	14	5.9	57
AUSTIN	182	1000.0	1022.7	13.3	4.4	8.7	-1.6	23.3	31	- 5.6	7	0	10	4.4	78	202	142	63	14	2	0	0	0.8	2	13.4	N	7	5	4	22	7.8	31
BROWNSVILLE	6	1020.7	1021.1	18.9	10.0	14.3	-2.0	26.1	30+	0.0	13+	0	3	11.1	83	78	44	28	12	3	0	0	0.8	36	15.6	NW	7	5	6	20	7.5	29
CORPUS CHRISTI	12	1020.3	1021.8	16.1	7.2	11.8	-2.3	24.4	31+	- 2.2	13+	0	5	8.9	86	54	12	19	12	1	0	0	1.3	5	14.8	SE	26+	4	4	23	7.9	32
DALLAS	147	1005.4	1023.1	11.1	3.9	7.3	-0.4	22.2	31	-10.6	7	0	13	2.8	77	82	23	19	16	0	T	T	0.9	11	12.1	S	26	6	2	23	8.1	27
DEL RIO	313	984.8	1021.7	15.0	5.0	9.9	-0.8	23.9	28	- 3.3	7	0	7	5.0	74	17	- 6	7	10	1	0	T	0.5	5	11.2	32	18+	7	3	21	7.4	
EL PASO	1194	885.2	1020.1	12.8	- 0.6	5.8	-0.3	20.6	31	- 5.6	14	0	20	- 0.6	68	12	0	8	5	0	53	51	0.0	20	17.0	W	31	10	7	14	5.9	63
FORT WORTH	164	1002.0	1023.2	11.1	2.8	6.9	-0.6	23.3	25	-11.1	7	0	12	3.3	83	91	40	25	16	0	10	T	0.4	10	11.6	20	26	5	3	23	8.1	
GALVESTON U	2			13.9	8.9	11.4	-1.3	20.6	31+	- 1.1	8	0	2			156	68	73	12		0	0			14.3	NE	7					30
HOUSTON	15	1020.3	1022.5	16.1	7.2	11.5	-0.5	26.7	31	- 2.2	14	0	5	6.7	78	204	108	88	12	3	0	0	1.2	6	12.5	36	7	6	1	24	7.8	35
LUBBOCK	992	906.5	1020.3	11.1	- 1.7	4.8	0.8	23.3	31	-14.4	7	0	20	- 1.7	72	24	7	13	5	0	5	25	0.8	29	16.1	2	18	9	4	18	6.8	
MIDLAND	869	919.7	1019.9	12.8	0.6	6.8	0.2	23.9	31	- 9.4	7	0	16	1.1	74	27	7	15	9	0	20	25	0.7	24	14.3	34	18	7	7	17	6.8	
PORT ARTHUR	5	1022.4	1023.0	15.6	5.6	10.6	-1.4	25.0	30+	- 4.4	14	0	6	7.8	86	139	32	83	11	1	0	0	1.7	6	16.1	E	22	6	4	21	7.7	38
SAN ANGELO	580	953.3	1021.2	13.3	2.8	7.9	-0.3	23.9	25	- 8.3	7	0	13	3.9	80	59	34	18	11	1	10	T	1.1	24	11.2	32	18+	6	5	20	7.4	
SAN ANTONIO	240	993.6	1022.2	15.0	5.0	9.9	-1.2	23.3	31	- 4.4	14+	0	7	5.6	78	216	172	81	16	3	0	T	0.8	4	14.8	NE	6	7	4	20	7.3	37
VICTORIA	32	1018.0	1022.0	15.6	6.7	11.2	-1.8	25.0	31	- 2.8	14	0	6	7.8	82	83	24	33	11	1	T	0	1.4	3	19.2Y	N	6	5	4	22	7.8	
WACO	153	1004.1	1022.8	11.7	4.4	8.2	-0.7	22.8	31	- 7.2	7	0	10	5.6	86	88	30	28	13	1	T	T	0.1	27	13.0	33	6	5	4	22	7.9	
WICHITA FALLS	303	985.1	1022.8	11.1	0.6	5.7	-0.3	25.0	25	-13.3	7	0	18	1.1	79	114	85	51	8	1	T	T	1.3	9	17.0	1	6	4	2	25	8.2	
UTAH																																
MILFORD	1533	849.3		2.8	-11.7	- 4.4	-0.3	9.4	25	-22.2	12+	0	31			4	- 10	2	3		71	51						15	8	8	4.5	
SALT LAKE CITY	1286	875.7	1025.1	2.2	-10.0	- 4.2	-1.5	8.9	30	-17.8	13+	0	30	-10.0	68	12	- 23	7	4	1	173	102	1.6	18	14.3	W	28+	12	2	17	6.1	61
WENDOVER	1291	875.0	1025.1	1.1	- 9.4	- 4.1	-1.3	10.0	30	-13.9	12	0	31	-10.6	62	4	- 4	2	4		8	T										
VERMONT																																
BURLINGTON	101	1011.2	1024.7	- 7.2	-18.9	-13.1	-4.3	3.3	19	-32.8	11	0	31	-18.9	59	32	- 18	7	11	0	467	279	0.4	30	14.3	S	30	8	7	16	6.6	59
VIRGINIA																																
LYNCHBURG	279			5.6	- 5.6	0.0	-3.1	17.2	30+	-13.9	8	0	26			60	- 24	35	11		99	76			12.5	NE	13	11	3	17	6.5	48
NORFOLK	7	1023.7	1024.7	6.1	- 3.3	1.6	-3.6	18.9	30	- 8.3	8	0	27	- 5.6	62	92	7	53	12	0	38	25	1.6	35	14.8	SE	14+	12	2	17	5.9	56
RICHMOND	50	1018.6	1024.9	7.2	- 5.0	1.1	-2.7	21.1	30	-13.9	12	0	27	- 5.6	66	64	- 24	43	9	0	58	25	0.6	1	11.2	NW	7	9	5	17	6.4	48
ROANOKE	350	980.7	1024.2	5.6	- 4.4	0.6	-2.8	17.8	29	-12.2	8	0	25	- 7.2	58	85	5	69	8	0	391	203	1.5	33	14.3	29	4	9	6	16	6.5	
WALLOPS ISLAND	3			3.3	- 4.4	- 0.6		13.3	21	-12.2	12	0	28			63		29	13		61	25			22.8Y	N	7	10	6	15	6.1	
WASHINGTON																																
OLYMPIA	59	1008.8	1016.4	6.7	0.6	3.5	0.1	13.3	20+	- 8.3	28	0	15	1.7	87	230	30	39	21	0	429	178	2.2	20	15.6	19	9	2	1	28	9.0	
QUILLAYUTE	55	1006.8	1014.4	7.2	1.7	4.6	0.9	15.0	23	- 5.0	27	0	14	2.8	91	574	186	211	24	2	173	25	1.9	14	15.2	S	9	3	2	26	8.8	12
SEATTLE TACOMA	122	1000.0	1016.7	7.8	2.2	4.9	1.4	15.0	20+	- 3.9	28	0	10	1.7	81	175	30	33	24	0	191	102	2.1	17	15.6	21	10	1	2	28	9.4	13
SPOKANE	718	932.3	1018.3	0.6	- 5.6	- 2.3	1.4	7.8	19	-17.2	28+	0	26	- 5.6	77	40	- 22	13	13	0	300	178	2.1	16	14.8	SW	31	3	6	22	8.3	24
STAMPEDE PASS R	1206	876.7		- 1.7	- 6.1	- 3.8	0.9	15.0	23	-17.2	28+	0	27			351	45	49	26		2113	1778										
WALLA WALLA U	289			7.8	0.0	3.8	3.2	21.7	20	-10.0	28	0	14			20	- 28	7	14		13	T			13.0	W	31	0	6	25	8.7	19
YAKIMA	321	979.7	1019.2	4.4	- 5.6	- 0.6	1.9	16.7	21	-15.6	28	0	26	- 5.0	74	45	14	20	11	0	282	127	1.3	28	14.3	29	24	5	7	19	7.4	
WEST INDIES																																
SAN JUAN P.R.	4	1015.2	1017.7	27.8	21.7	24.7	1.1	29.4	25+	16.7	25	0	0	18.9	72	55	- 65	17	17	0	0	0	3.3	6	14.3	E	17	6	22	3	5.0	61

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	No. of days: Max 32.2 °C or above	No. of days: Min. 0 C or lower	Average dew point	Average relative humidity	Precipitation: Total	Departure from normal	Greatest in 24 hours	No. of days: 25 mm or more	No. of days: With thunderstorms	Snow, Sleet: Total	Snow, Sleet: Maximum depth on ground	Wind: Resultant speed	Resultant direction	Fastest mile (1.6 kilometers): Speed	Direction	Date	No. of days (sunrise to sunset): Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	M.	Mb.	Mb.	C.	C.	C.	C	C.		C.				C.	%	Mm.	Mm.	Mm.			Mm	Mm.	M.p.s.		M.p.s.							%
WEST INDIES																																
SWAN ISLAND	9			27.8	23.3	25.3	-0.4	28.9	4	20.6	29	0	0			142	55	107	13		0	0						5	15	11	6.2	
WEST VIRGINIA																																
BECKLEY	763	932.3	1024.8	2.8	- 7.2	- 2.1	-2.9	15.0	29	-21.7	8	0	27	- 7.2	72	67	- 41	29	16	0	538	406	0.9	23	14.3	12	13	7	6	18	7.0	
CHARLESTON	286	989.2	1024.8	3.9	- 7.2	- 1.6	-4.2	16.7	29	-20.0	8	0	27	- 7.2	68	51	- 59	20	14	0	338	279	0.5	28	12.1	24	4	6	6	19	7.0	
ELKINS	600	950.6	1024.7	3.9	-11.7	- 3.9	-4.2	12.2	22	-27.2	2	0	28	- 7.8	77	48	- 44	19	15	0	358	381	1.0	28	13.9	30	7	8	3	20	7.1	
HUNTINGTON	252	993.9	1025.3	3.3	- 6.1	- 1.4	-4.0	16.7	29+	-21.1	8	0	25	- 7.2	67	44	- 49	14	14	0	229	254	0.5	25	9.4	30	7+	6	7	18	6.8	
PARKERSBURG U	187			2.2	- 7.8	- 2.7	-4.1	15.0	29	-21.7	8	0	25			60	- 25	24	14		394	356			13.9	W	4					46
WISCONSIN																																
GREEN BAY	208	997.3	1024.4	- 4.4	-13.3	- 8.7	-0.2	3.9	31+	-31.1	7	0	31	-11.1	79	24	- 5	6	10	0	234	127	1.0	28	12.1	NW	4	6	6	19	7.3	30
LA CROSSE	198	999.0	1024.8	- 2.2	-11.7	- 7.1	1.6	10.0	20	-27.8	7	0	30	-11.7	70	22	- 8	11	6	1	114	102	0.5	19	10.7	31	29	5	9	17	6.7	
MADISON	262	991.2	1024.2	- 2.2	-11.7	- 6.9	1.2	8.9	20	-27.8	7	0	28	-10.6	73	14	- 21	3	12	1	99	51	0.5	25	11.2	N	22+	8	4	19	7.2	42
MILWAUKEE	205	998.0	1024.4	- 1.7	- 9.4	- 5.7	0.7	8.9	29	-26.1	7	0	30	-10.6	69	25	- 22	6	11	1	117	76	1.2	27	13.4	W	4	6	4	21	7.6	39
WYOMING																																
CASPER	1627	837.1	1020.7	1.1	-10.6	- 4.9	-0.1	8.9	24	-27.8	6	0	30	-12.2	57	8	- 6	4	7	0	132	51	6.3	22	17.9	23	4	6	9	16	6.7	
CHEYENNE	1867	811.0	1019.8	5.0	- 8.9	- 1.8	1.8	16.1	24	-25.6	6	0	30	-11.1	50	1	- 12	1	2	0	5	51	3.6	28	17.9	NW	11	9	9	13	5.5	68
LANDER	1696	828.7	1023.3	- 2.8	-15.6	- 9.2	-2.1	6.7	10	-27.8	3	0	31	-13.9	70	4	- 7	3	3	0	61	356	0.9	22	17.9	SW	30	9	10	12	5.9	67
SHERIDAN	1208	879.1	1022.5	- 0.6	-16.1	- 8.4	-2.4	11.7	24	-31.7	6+	0	31	-14.4	62	27	10	8	11	0	343	381	1.4	28	15.6	SW	30	4	7	20	7.4	55

Data from airport unless otherwise specified. U indicates Urban, R indicates Rural, sites.

Precipitation data in column headed "Greatest in 24 hours" are computed on a 24-hour basis without regard to calendar day - data may include precipitation with a measurable amount from the last day of the previous month or the first day of the following month.

Wind directions under resultant direction are in tens of degrees.

Value entered in column "Fastest Mile" is the highest observed 1-minute wind speed when the direction is in tens of degrees. These stations are not equipped with a recording anemometer from which "Fastest Mile" data can be evaluated.

A Maximum hourly average.
B Number of days maximum 21.1°C. or above for Alaskan Stations.
Y Peak Gust.
\+ And also on an earlier date or dates.
Ø Station pressures apply to elevations shown in the "Elevations - Station Pressure" table of the annual issue of this publication.

Data in this table are obtained by conversion from data in the English Units table.

V Sun below horizon January 1-23, inclusive.
X Sun below horizon January 1-17, inclusive.

HEATING DEGREE DAYS

(Base 65°F.)

State and station	Current season: This month	Current season: Period July through this month	Normals July through this month
ALABAMA			
BIRMINGHAM	[illegible]	1595	[illegible]
HUNTSVILLE	829	2189	1922
MOBILE	448	[illegible]	1007
MONTGOMERY	[illegible]	1467	[illegible]
ALASKA			
ANCHORAGE	[illegible]	5954	[illegible]
ANNETTE	[illegible]	3763	3930
BARROW	[illegible]	11146	11028
BARTER ISLAND	[illegible]	10968	[illegible]
BETHEL	[illegible]	[illegible]	7570
COLD BAY	1133	5165	5389
FAIRBANKS	[illegible]	8258	8794
JUNEAU	[illegible]	5325	[illegible]
KING SALMON	[illegible]	6607	6552
KOTZEBUE	[illegible]	6417	[illegible]
MC GRATH	2167	8180	8680
NOME	[illegible]	7773	7918
ST. PAUL ISLAND	[illegible]	[illegible]	[illegible]
SHEMYA	[illegible]	5167	[illegible]
YAKUTAT	1445	5698	[illegible]
ARIZONA			
FLAGSTAFF	[illegible]	3955	[illegible]
PHOENIX	[illegible]	974	[illegible]
TUCSON	[illegible]	[illegible]	[illegible]
WINSLOW	[illegible]	[illegible]	[illegible]
YUMA	[illegible]	718	[illegible]
ARKANSAS			
FORT SMITH	[illegible]	[illegible]	[illegible]
LITTLE ROCK	840	[illegible]	[illegible]
TEXARKANA	546	1627	[illegible]
CALIFORNIA			
BAKERSFIELD	[illegible]	[illegible]	[illegible]
BISHOP	[illegible]	2431	2537
BLUE CANYON	[illegible]	2580	2761
EUREKA U	565	2440	2573
FRESNO	619	1573	1561
LONG BEACH	[illegible]	631	871
LOS ANGELES	236	620	[illegible]
LOS ANGELES U	[illegible]	526	708
MT SHASTA R	[illegible]	3131	3169
OAKLAND	546	1388	1592
RED BLUFF	671	[illegible]	1531
SACRAMENTO	663	[illegible]	1647
SANDBERG	[illegible]	[illegible]	2161
SAN DIEGO	239	572	745
SAN FRANCISCO	564	1536	1638
SAN FRANCISCO U	465	1492	1648
SANTA CATALINA	337	907	872
SANTA MARIA	[illegible]	[illegible]	[illegible]
STOCKTON	691	[illegible]	1658
COLORADO			
ALAMOSA	1768	5523	5043
COLORADO SPRINGS	1057	3631	3607
DENVER	1086	3518	3546
GRAND JUNCTION	[illegible]	4036	3451
PUEBLO	[illegible]	[illegible]	[illegible]
CONNECTICUT			
BRIDGEPORT	[illegible]	[illegible]	[illegible]
HARTFORD	[illegible]	3671	3516
NEW HAVEN	1239	3335	[illegible]
DELAWARE			
WILMINGTON	1139	[illegible]	2816
DIST.OF COLUMBIA			
WASH NATL AP	[illegible]	2672	2474
FLORIDA			
APALACHICOLA U	391	631	835
DAYTONA BEACH	227	413	534
FORT MYERS	67	[illegible]	279
JACKSONVILLE	[illegible]	693	798
KEY WEST	[illegible]	6	68
LAKELAND U	[illegible]	[illegible]	416
MIAMI	56	81	139
ORLANDO	191	[illegible]	[illegible]
PENSACOLA	473	1017	967
TALLAHASSEE	399	[illegible]	961
TAMPA	[illegible]	557	433
WEST PALM BEACH	74	112	158
GEORGIA			
ATHENS	784	1988	[illegible]
ATLANTA	792	2057	1824
AUGUSTA	[illegible]	[illegible]	[illegible]
COLUMBUS	639	[illegible]	1515
MACON	696	1731	1375
ROME	825	[illegible]	[illegible]
SAVANNAH	[illegible]	1261	1167
IDAHO			
BOISE	1092	3444	[illegible]
LEWISTON	926	2997	[illegible]
POCATELLO	[illegible]	4309	[illegible]
ILLINOIS			
CAIRO U	[illegible]	2506	2360
CHICAGO O'HARE	1274	[illegible]	3748
CHICAGO MIDWAY	[illegible]	3600	[illegible]
MOLINE	1354	3955	3712
PEORIA	1323	3794	[illegible]
ROCKFORD	1349	4074	3920
SPRINGFIELD	1271	3576	3217
INDIANA			
EVANSVILLE	1128	3004	[illegible]
FORT WAYNE	1382	4033	[illegible]
INDIANAPOLIS	1232	3379	[illegible]
SOUTH BEND	1317	3869	[illegible]
IOWA			
BURLINGTON	[illegible]	[illegible]	[illegible]
DES MOINES	1317	3860	3937
DUBUQUE	1415	4318	[illegible]
SIOUX CITY	1430	[illegible]	[illegible]
WATERLOO	1450	[illegible]	[illegible]
KANSAS			
CONCORDIA	1196	[illegible]	[illegible]
DODGE CITY	1015	[illegible]	[illegible]
GOODLAND	[illegible]	[illegible]	[illegible]
TOPEKA	1184	[illegible]	[illegible]
WICHITA	998	[illegible]	[illegible]
KENTUCKY			
COVINGTON	1176	[illegible]	[illegible]
LEXINGTON	[illegible]	[illegible]	[illegible]
LOUISVILLE	1069	2844	[illegible]
LOUISIANA			
ALEXANDRIA	615	[illegible]	[illegible]
BATON ROUGE	468	1117	1025
LAKE CHARLES	439	961	[illegible]
NEW ORLEANS	407	935	[illegible]
SHREVEPORT	[illegible]	1435	[illegible]
MAINE			
CARIBOU	1823	5275	[illegible]
PORTLAND	1496	[illegible]	[illegible]
MARYLAND			
BALTIMORE	[illegible]	[illegible]	[illegible]
MASSACHUSETTS			
BLUE HILL OBS R	1309	[illegible]	[illegible]
BOSTON	1214	3337	[illegible]
NANTUCKET	1111	[illegible]	[illegible]
PITTSFIELD	1495	4419	[illegible]
WORCESTER	1414	[illegible]	[illegible]
MICHIGAN			
ALPENA	1441	4750	[illegible]
DETROIT	1274	3558	3454
DETROIT W WAYNE C	[illegible]	3967	3620
DETROIT WILLOW RUN	1325	[illegible]	[illegible]
FLINT	1354	4134	[illegible]
GRAND RAPIDS	1356	4086	3885
HOUGHTON LAKE	1468	4802	4574
LANSING	1385	4249	3835
MARQUETTE	1459	4716	4522
MUSKEGON	[illegible]	[illegible]	[illegible]
SAULT STE MARIE	1655	[illegible]	4903
MINNESOTA			
DULUTH	[illegible]	5568	5599
INTERNATIONAL FALLS	1899	[illegible]	6126
MINNEAPOLIS	1567	4770	4846
ROCHESTER	1556	4859	[illegible]
ST CLOUD	[illegible]	5084	[illegible]
MISSISSIPPI			
JACKSON	662	1667	1396
MERIDIAN	626	1639	1481
MISSOURI			
COLUMBIA	1106	[illegible]	[illegible]
KANSAS CITY	1125	2949	[illegible]
ST JOSEPH	1195	3298	3270
ST LOUIS	1121	3076	[illegible]
SPRINGFIELD	[illegible]	[illegible]	[illegible]
MONTANA			
BILLINGS	1285	3982	4022
GLASGOW	1664	4945	[illegible]
GREAT FALLS	[illegible]	4113	4321
HAVRE	1647	4717	4998
HELENA	1525	4571	4690
KALISPELL	1379	4480	[illegible]
MILES CITY	1570	4601	4460
MISSOULA	1383	4421	4804
NEBRASKA			
GRAND ISLAND	1272	3761	[illegible]
LINCOLN U	1239	3548	3411
NORFOLK	1395	4177	4038
NORTH PLATTE	1321	[illegible]	[illegible]
OMAHA	1307	3776	[illegible]
SCOTTSBLUFF	1265	4145	3832
VALENTINE	1365	4347	4253
NEVADA			
ELKO	1168	3669	4264
ELY	1293	4322	[illegible]
LAS VEGAS	[illegible]	1616	1770
RENO	1025	3340	3724
WINNEMUCCA	1083	3566	[illegible]
NEW HAMPSHIRE			
CONCORD	[illegible]	4361	[illegible]
MT WASHINGTON OBS	1876	7729	[illegible]
NEW JERSEY			
ATLANTIC CITY	[illegible]	3423	2655
ATLANTIC CITY U	1016	2633	2502
NEWARK	1148	2992	2856
TRENTON U	1130	2994	[illegible]
NEW MEXICO			
ALBUQUERQUE	870	[illegible]	2681
CLAYTON	[illegible]	3058	2966
RATON	1108	3772	[illegible]
ROSWELL	[illegible]	2444	2439
SILVER CITY	[illegible]	2335	2234
NEW YORK			
ALBANY	1557	4169	[illegible]
BINGHAMTON	1477	4292	4030
BUFFALO	1393	3834	[illegible]
NEW YORK U	1179	[illegible]	2691
J.F. KENNEDY	1214	[illegible]	2810
NEW YORK LA GUARDIA	1181	2974	[illegible]
ROCHESTER	[illegible]	3878	3687
SYRACUSE	1438	3865	3749
NORTH CAROLINA			
ASHEVILLE	947	2838	2670
CAPE HATTERAS R	708	1613	1452
CHARLOTTE	835	2133	[illegible]
GREENSBORO	[illegible]	2320	[illegible]
RALEIGH	855	2202	[illegible]
WILMINGTON	[illegible]	1557	1432
NORTH DAKOTA			
BISMARCK	[illegible]	5379	5115
FARGO	1773	5307	5323
WILLISTON	1741	[illegible]	5329
OHIO			
AKRON	[illegible]	3639	3420
CINCINNATI OBS	1153	3168	2805
CLEVELAND	1295	3541	3397
COLUMBUS	1276	3661	3278
DAYTON	1241	[illegible]	3232
MANSFIELD	[illegible]	3758	3589
TOLEDO	1324	3982	3669
YOUNGSTOWN	1378	4050	3601
OKLAHOMA			
OKLAHOMA CITY	[illegible]	[illegible]	[illegible]
TULSA	[illegible]	2392	[illegible]
OREGON			
ASTORIA	[illegible]	[illegible]	2854
BURNS	1173	3868	[illegible]
EUGENE	722	[illegible]	[illegible]
MEACHAM	1186	4034	4294
MEDFORD	873	2718	2917
PENDLETON	[illegible]	2757	3073
PORTLAND	[illegible]	2443	2659
SALEM	778	2416	[illegible]
SEXTON SUMMIT	963	3264	3274
PENNSYLVANIA			
ALLENTOWN	1336	3758	[illegible]
ERIE	1280	3665	[illegible]
HARRISBURG	[illegible]	[illegible]	[illegible]
PHILADELPHIA	1112	2912	2950
PITTSBURGH	1284	3615	3397
PITTSBURGH U	1176	3307	3076
READING U	1177	3130	2848
SCRANTON	1388	3843	3607
WILLIAMSPORT	[illegible]	[illegible]	3407
RHODE ISLAND			
BLOCK ISLAND	1166	3146	2917
PROVIDENCE	1246	3410	[illegible]
SOUTH CAROLINA			
CHARLESTON	657	1485	1299
CHARLESTON U	599	1158	1112
COLUMBIA	[illegible]	1877	1576
GNVLE-SPARTANBURG	799	2066	1878
SOUTH DAKOTA			
ABERDEEN	[illegible]	4981	4941
HURON	1533	4528	4768
RAPID CITY	1285	4141	4082
SIOUX FALLS	[illegible]	4539	4551
TENNESSEE			
BRISTOL	979	[illegible]	2516
CHATTANOOGA	857	2228	2049
KNOXVILLE	860	2396	2147
MEMPHIS	[illegible]	2063	[illegible]
NASHVILLE	[illegible]	2532	2193
OAK RIDGE R	[illegible]	2439	2312
TEXAS			
ABILENE	648	1758	1693
AMARILLO	820	2484	2467
AUSTIN	538	1255	[illegible]
BROWNSVILLE	262	[illegible]	420
CORPUS CHRISTI	373	752	631
DALLAS	603	1488	1508
DEL RIO	466	[illegible]	1081
EL PASO	691	1871	1831
FORT WORTH	631	1554	1539
GALVESTON U	[illegible]	717	758
HOUSTON	390	[illegible]	[illegible]
LUBBOCK	[illegible]	2288	2249
MIDLAND	634	1770	1711
PORT ARTHUR	435	924	[illegible]
SAN ANGELO	577	[illegible]	[illegible]
SAN ANTONIO	477	1126	1026
VICTORIA	414	[illegible]	770
WACO	560	1288	1305
WICHITA FALLS	[illegible]	1846	1810
UTAH			
MILFORD	1260	3829	3802
SALT LAKE CITY	1246	3571	3603
WENDOVER	1245	3546	[illegible]
VERMONT			
BURLINGTON	1751	4688	4592
VIRGINIA			
LYNCHBURG	1018	2877	2485
NORFOLK	[illegible]	2385	1980
RICHMOND	[illegible]	[illegible]	[illegible]
ROANOKE	984	2781	2488
WALLOPS ISLAND	1049	2826	
WASHINGTON			
OLYMPIA	820	2774	2982
QUILLAYUTE	761	2886	[illegible]
SEATTLE TACOMA	737	2349	2882
SPOKANE	1149	3766	3887
STAMPEDE PASS R	1227	4719	5131
WALLA WALLA U	[illegible]	2546	[illegible]
YAKIMA	1049	3266	3636
WEST VIRGINIA			
BECKLEY	1133	3514	[illegible]
CHARLESTON	1104	3041	2653
ELKINS	1233	[illegible]	[illegible]
HUNTINGTON	1095	3072	2641
PARKERSBURG U	1164	3130	2777
WISCONSIN			
GREEN BAY	1506	4774	4487
LA CROSSE	1411	[illegible]	4388
MADISON	1401	4540	4446
MILWAUKEE	1333	[illegible]	4239
WYOMING			
CASPER	1289	4468	[illegible]
CHEYENNE	1117	[illegible]	[illegible]
LANDER	1531	[illegible]	4520
SHERIDAN	1487	[illegible]	4317

Data from airport unless otherwise specified.
U indicates Urban, R indicates Rural, sites.

STORM SUMMARY

STATE	TORNADOES					HAILSTORMS				WINDSTORMS				LIGHTNING				‡ HEAVY SNOWSTORMS AND BLIZZARDS				# ICE STORMS				∅ ALL OTHER			
								†DAMAGE				†DAMAGE				†DAMAGE				†DAMAGE				†DAMAGE				†DAMAGE	
	NUMBER	DAYS	DEATHS	INJURIES	†DAMAGE	DEATHS	INJURIES	PROPERTY	CROPS	DEATHS	INJURIES	PROPERTY	CROPS	DEATHS	INJURIES	PROPERTY	CROPS	DEATHS	INJURIES	PROPERTY	CROPS	DEATHS	INJURIES	PROPERTY	CROPS	DEATHS	INJURIES	PROPERTY	CROPS
Alabama	1	1	0	0	5																								
Alaska *																													
Arizona *																													
Arkansas																		0	0	3	0	6	many	6	0				
California																		0	0	4	0					0	0	5	0
Colorado *																													
Connecticut										0	0	5	0									0	0	5	0				
Delaware *																													
Florida	2	2	0	0	4																								
Georgia																						0	0	5	0	0	2	?	0
Hawaii																										0	0	°6	C
Idaho *																													
Illinois *																													
Indiana *																													
Iowa *																													
Kansas *																													
Kentucky																						0	?	?	0				
Louisiana										0	0	3	0									0	?	°6	C	2	2	4	0
Maine										0	0	4	0					2	0	4	0	0	0	3	0				
Maryland *																													
Massachusetts										0	0	4	0					4	0	6	0	0	0	4	0				
Michigan *																													
Minnesota														0	0	4	0												
Mississippi																		0	0	6	0					0	0	?	0
Missouri *																													
Montana *																													
Nebraska *																													
Nevada *																													
New Hampshire										0	0	4	0					0	0	4	0	0	0	3	0				
New Jersey *																													
New Mexico *																													
New York																								4					
North Carolina																						?	?	6	0				
North Dakota																		0	2	?	0					1	0	0	0
Ohio																		?	?	?						0	0	5	
Oklahoma																						0	0	?	0				
Oregon *																													
Pacific Area *																													
Pennsylvania										0	0	4	0																
Puerto Rico *																													
Rhode Island																		0	0	4	0	0	0	5	0				
South Carolina																						?	?	6	2				
South Dakota *																													
Tennessee																		0	0	5	0	0	0	?	0				
Texas	2	1	0	0	4																					8	0	6	4
Utah *																													
Vermont *																													
U. S. Virgin Is.*																													
Virginia																		0	0	5	0								
Washington N																													
West Virginia																		0	0	4	0								
Wisconsin *																													
Wyoming *																													

° Includes crop damage
C Crop damage
N No report received by printing deadline

* No occurrence of storms or unusual weather phenomena.
‡ Includes heavy sleet storm.
# Freezing drizzle and freezing rain, commonly known as glaze.
∅ For breakdown of "All Others", and for detailed listing of other storms, see the U. S. Weather Bureau monthly publication STORM DATA.

† Storm damages are placed in categories varying from 1 to 9 as follows:
1 Less than $50
2 $50 to $500
3 $500 to $5,000
4 $5,000 to $50,000
5 $50,000 to $500,000
6 $500,000 to $5,000,000
7 $5,000,000 to $50,000,000
8 $50,000,000 to $500,000,000
9 $500,000,000 to $5,000,000,000

GENERAL SUMMARY OF RIVER AND FLOOD CONDITIONS

JANUARY 1968

Elmer R. Nelson, Office of Hydrology

The most significant flooding in continental United States during January occurred in Texas in the river drainages west of the Colorado River. The heaviest damage and loss of life was in the San Antonio area where damages totalled about $3 million. There were four known deaths from drowning. Major flooding occurred on the lower Frio, lower Nueces, and Atascosa Rivers.

A flash flood was reported in Hawaii on Jan. 5 in the Pearl Harbor area, Oahu. About 30 residents of the Hoolaulea Street area, near the Pearl City Shopping Center were evacuated as Waimano stream rose suddenly out of its banks. Waimalu stream near Aiea flooded a school. Eight families were evacuated. On the Ewa side of Pearl City, the rapid current of Waiawa stream, destroyed a frame house. Roads and highways in the Pearl Harbor area were clogged with mud and debris. At least 30 homes and a supermarket were damaged. The damage to property and crops was estimated at 2 1/2 million dollars.

ST. LAWRENCE DRAINAGE

Lake Erie.--Minor flooding occurred in the Lake Erie drainage during January. The St. Marys River at Decatur, Ind., crested 3.6 feet above flood stage on the 30th. The St. Joseph River at Montpelier, Ohio, crested 2.5 feet above flood stage on the 31st. The Maumee River at Ft. Wayne, Ind., and downstream to Grand Rapids, Ohio, went out of its banks on the 30th and crested 1 to 3.3 feet above flood stage on the 30th and 31st. Stages and crests were affected by ice jam formations and ice breakup.

The Sandusky River at Fremont, Ohio, rose rapidly to above flood stage on the 29th. Only a trace to 4 inches of snow remained over the Sandusky drainage when the rain began on the 27th. The rain continued for 4 days and averaged 1.4 inches over the basin. Historically, all winter floods at Fremont have geen associated with ice. On this occasion the ice averaged only 8 inches thick. The initial rise in the river was due to an ice jam less than one-half mile downstream from the river gage. The ice jam yielded to the pressure of the stored water after a few hours resulting in a sudden drop of the river at the gage. The stage fluctuated for the next 24 hours though never quite reaching the initial crest of 11.7 feet on the 30th. The flooding at Fremont resulted in the closure of several streets, flooded basements, and the flooding of a section of the sugar plant. It was necessary to remove some small electric motors to dry areas at the sugar plant but production was not interrupted. Upstream at Tiffin and Upper Sandusky, Ohio, crests ranged from 0.3 to 0.9 foot above flood stage on the 31st. The stream receded within its banks on the same date.

Lake Ontario.--The flooding on Canaseraga Creek at Groveland, N. Y., on the 30th was due to an ice jam. No damage resulted from the overflow of 2.5 feet as this area has been flooded much of the winter.

Heavy thawing during the latter 2 weeks of January and ice jams produced flooding in scattered areas in southwestern New York. Tannery Creek in East Aurora, N. Y., flooded nearby streets and some cellars. Similar conditions occurred in Silver Creek at the confluence of Walnut and Silver Creeks. Sunset Bay at the mouth of the Cattaraugus Creek experienced flooding from an ice jam. Fifty families were evacuated.

ATLANTIC SLOPE DRAINAGE

Heavy rain on the 14th in central and southern New Jersey caused light flooding on the Millstone River at Blackwells Mills, N. J., and on Assunpink Creek in Trenton, N. J., on the 14th and 15th. The rainfall which totaled 1.74 inches at Trenton, N. J., was the second largest 24-hour rainfall in 20 years. This was also the coldest January since 1961 at Trenton. Flooded roads and intersections were reported from Camden, Glassboro, Cherry Hill, Lindenwold, and Gloucester, N. J. Ice jams developed on Rancocas Creek and on the lower Raritan Basin at New Brunswick, N. J. Water was reported on some roads around New Brunswick due to an ice jam above the bridge.

Heavy precipitation (2.5 inches) and snowmelt on the 13th over the upper Rappahannock River resulted in near bankfull stage at Remington, Va., on the 13th and 14th. The runoff was appreciably halted as the latter half of the storm developed into solid precipitation. No damage resulted.

Minor flooding was in progress on the Neuse River at Neuse and Smithfield, N. C., during the beginning of the month. This overflow was due to heavy precipitation towards the end of December. There were rather frequent intervals of precipitation over the river basins in eastern North Carolina during the first half of the month. The most significant precipitation occurred during the afternoon of the 13th. It was mostly in the form of snow over the upper Roanoke with some accumulations in excess of 1 foot. Elsewhere it was mostly rain with amounts of 1 to 1 1/2 inches. This plus snowmelt produced quite substantial rises. The Cape Fear River rose to around bankfull stage in the upper reaches to 10 feet in flood in the lower basin. The Neuse River rose 2 to 5 feet over its banks. The Tar River rose to bankfull stage to a couple of feet above flood stage. No flooding occurred on the Dan and upper Roanoke Rivers in Virginia, although a rise of 9 feet took place in the midreaches above Kerr Dam. A slow rise to near bankfull stage resulted in the lower portion because of upstream reservoir discharge. This was one of the most severe winter storms in years. Communications were seriously disrupted in most areas and quite a few lines to the automatic type river gages were destroyed. Minor flood damage resulted in the lower Cape Fear River Basin.

The overflow of streams in South Carolina during January was due to precipitation during the first half of the month which was almost a daily occurrence. The heaviest precipitation occurred from the 7th to the 13th with amounts of 1 1/2 to over 3 inches over the central portion. The headwaters of the Yadkin Basin at the higher elevations were blanketed with snow, sleet, and ice all month. The snow cover reached depths of 15 inches by midmonth, with a water equivalent of almost 4 inches. The monthly total of frozen precipitation at Blowing Rock, N. C., was 21.5 inches and at Glendale Springs, N. C., 17.5 inches. Moderate overflow of 3 to 4 feet occurred along the Great Pee Dee River between the 11th and 28th. These were the highest crests since March 1966. Light flooding was in progress at Peedee, S. C., in the beginning of the month. The prolonged flood on the Lumber River at Lumberton, N. C., which began on Dec. 12 was aggravated by the almost continuous daily rains during the first 2 months of January. Excessive overflow began on Jan. 11 and continued rising to the 16th when it crested 4.5 feet above flood stage. This was the highest stage recorded at this station since it was established in November 1966. The crest of 12.5 feet was 4.5 feet below the record of August 1928. Overflow continued

into February. There were two periods of flooding on the Rocky River at Norwood, N. C. The first occurred on the 10-12th and the second on the 14-15th. Crests exceeded flood stage by 5 to 10 feet. Minor flooding occurred along the Little Pee Dee River in the Galivants Ferry, S. C., area from the 15th through the 27th; along the Lynches at Effingham, S. C., on the 17-18th; and along the North Fork Edisto at Orangeburg, S. C., on the 15th through the 17th. Much inconvenience and probably some damage resulted in low inhabited areas of the Lumber Basin in the Lumberton, N. C., area. Evacuation of several low areas were necessary. Flooding in the Santee Basin in January was confined to the Saluda and Broad Rivers. The Saluda River at Chappells, S. C., crested nearly 3 feet above flood stage and the Broad River at Blair, S. C., crested nearly 7 feet above flood stage on the 11th. Rises approaching but not reaching flood stage occurred on the Congaree River at Columbia and on the Wateree at Camden, S. C. These rises caused considerable flooding in the lowlands below Columbia and Camden, S. C.

Light to moderate damage resulted from the flooding on the Savannah River at Millhaven and Clyo, Ga., during December. This overflow was due to a combination of heavy rainfall and to release of excess water from Clark Hill Reservoir. At Clyo, Ga., flooding continued from Dec. 12 to Feb. 9, a period of 59 days.

EAST GULF OF MEXICO DRAINAGE

Minor flooding occurred on the Apalachicola River at Blountstown, Fla., on the 5-7th and again on the 12-14th. Weather conditions were very wet and abnormally cold during the first 2 weeks of January. The rains were mostly moderate in amount with the heaviest rains (1 to 3 inches) occurring on the 10-11th. No damage resulted from the light overflow.

Minor flooding occurred on the Oostanaula River at Resaca and Rome, Ga., between the 11th and 14th. There was no flooding of urban areas and damage to farmlands and public roads was estimated under $100,000. This flooding was due to 2 to 3 inches of rain on the 9th, preceded by light to moderate rains for several days.

The lower Tombigbee River in Alabama was above flood stage in the beginning of the month and continued above flood stage throughout most of the month. Rains, averaging near 3 inches, occurred over the Warrior and Tombigbee Basins on the 9th and 10th. The crests on the Warrior and upper Tombigbee River from the 11th to the 18th were higher than in December. Crests on the lower Tombigbee were slightly lower than in December. Preliminary estimates indicate that damages from flooding during January totalled $408,000.

Heavy rain (10-15 inches) during December produced flooding along the entire length of the Pearl River in Mississippi and Louisiana. Some stations reported 5 inches of rainfall during a 24-hour period. Flooding began on Dec. 16 at Jackson, Miss., and continued through the end of January at Pearl River, La. Crests during January ranged from 10 feet above flood stage at Jackson to nearly 2 feet above flood stage at Pearl River. The U. S. Corps of Engineers estimated the flood damages during December and January at $417,000.

MISSISSIPPI SYSTEM

Upper Mississippi Basin.--Continued cold temperatures during the first 3 weeks of January created heavy ice conditions on the Illinois River which resulted in erratic stage fluctuations. The Illinois River went out of its banks at Meredosia, Ill., on Dec. 10 and continued in flood through January. Upstream, flooding continued until Jan. 5 at Havana, Ill. The heavy field of ice at the mouth of the Illinois River broke during the evening of the 22d. The Corps of Engineers began flushing ice through at Alton Dam 26 on that date. The Kankakee River at Momence, Ill., rose to 2 feet above flood stage on the 6th and continued in flood until the 9th. The Sangamon River at Riverton, Ill., continued in flood from Dec. 4 to Jan. 2. Heavy rain towards the end of the month caused the Sangamon River to rise above flood stage at Riverton, Ill., on the 28th and at Monticello, Ill., on the 30th. It was still rising at the end of the month. The Kaskaskia River at Carlyle Dam, Ill., continued in flood from Dec. 14 to Jan. 31. It crested on Dec. 23, nearly 3 feet above flood stage. Heavy rain on Jan. 29 caused the Kaskaskia to rise above flood stage at Shelbyville and Vandalia, Ill., on the 31st. The Big Muddy River at Murphysboro, Ill., continued in flood from Dec. 16 to Jan. 5, cresting nearly 12 feet above flood stage on Dec. 27. It rose above flood stage again on Jan. 31.

Ohio Basin.--Below normal temperatures during the month of January resulted in heavy ice formations on the Allegheny River from Lock 7, Kittanning, Pa., upstream to Foxburg, Pa. An ice gorge developed at East Brady, Pa., and backwater from this gorge caused the river level to fluctuate at Parker, Pa., from half to near bankfull stage from the 8th to the 30th. Mild temperatures accompanied by rain showers and snowmelt on the 29th, 30th, and 31st, produced sufficient runoff to aggravate the ice conditions and cause serious backwater flooding at East Brady, Pa., Parker, Pa., and Foxburg, Pa. Flood stage was exceeded by 4 feet at Parker. Fourteen families were evacuated at Foxburg and many cottages in the Foxburg, Parker, and East Brady areas were damaged due to high water and heavy ice. Schools were closed due to backwater covering the highways and the main highway bridge at East Brady, Pa. Route 68 was closed until highway engineers could determine possible damage from the ice. Water rose 20 feet at East Brady and came within 4 feet of reaching floor level of the highway bridge over the Allegheny River. Power failure was reported at East Brady when lines were destroyed. The ice movement on the Allegheny River posed a threat to navigation but no damages resulted due to advanced warnings to navigation interests. The serious ice condition on French Creek above Meadville, Pa., at Saegerstown, Pa., and Cambridge Springs, Pa., dissipated with little or no damaging effect. Several highways in the Cochranton, Pa., and Mill Village, Pa., areas were closed for short periods due to backwater from ice. A mobile radio unit supplied by the State Civil Defense Office at Butler, Pa., was on duty around the clock at East Brady to notify downstream communities of the ice breakup.

Minor flooding occurred on the Hocking River at Athens, Ohio, on Jan. 31 and Feb. 1. The snow on the ground which averaged about 20 inches, with a water equivalent of 1 1/2 to 2 inches, on January 15 had nearly all melted by the time significant rainfall occurred on the 29th and 30th. The rainfall was heaviest north of the Ohio River and averaged about 0.7 to 0.8 inch in the Hocking River Basin and near 1 inch in the Muskingum River Basin. Amounts south of the Ohio River were generally less than 1/4 inch. Only small rises occurred in the Kanawha River Basin. Little or no damage resulted from the flooding at Athens, Ohio.

Minor flooding occurred along the Scioto River in Ohio from Jan. 30 to Feb. 4. Crest stages ranged from 1 to 2 feet above flood stage. This overflow was due to rainfall averaging 1.1 inches on the 27-30th.

The flooding along the Scioto River resulted in temporary closing of sections of highways.

The lower Wabash River at and below Montezuma, Ind., was above flood stage and falling in the beginning of the month. By the 4th, it had receded within its banks at all points. During the last week or 10 days of January, heavy snowmelt produced rising stages again in the Wabash Basin. Heavy rainfall on the morning of the 29th produced crests ranging from more than 2 feet above flood stage at Wabash, Ind., to more than 8 feet above flood stage at Lafayette, Ind., during the first week of February. Flooding was relatively minor. There was little if any crop damage. Some summer cottages along the river were surrounded by high water.

Minor flooding occurred on the Saline River at Harrisburg, Ill., on Jan. 30 to Feb. 6. No significant damage resulted from the overflow.

There were two periods of minor flooding on South Chickamauga Creek near Chickamauga, Tenn., during January. The first occurred on the 6-8th and the second on the 10-13th. Heavy rains (2 to 3 inches) over the Elk and Duck River Basins during the afternoon of the 9th and 10th produced some overflow on the Elk River at Fayetteville, Tenn., on the 10-13th. No damage was reported.

Minor flooding occurred along the main stem of the Ohio River at Wellsburg, W. Va., on Jan. 31 and Feb. 1. Damage, if any, was minor.

White Basin.--The Cache River at Patterson, Ark., rose above flood stage on Dec. 9 and continued in flood until Jan. 11. It crested 2.3 feet above flood stage on Dec. 19. The lower White River at Clarendon, Ark., went out of its banks on Dec. 25 and continued in flood until Jan. 16. It crested nearly 1 foot above flood stage on the 7th, 8th, and 11th. Minor flooding occurred downstream at St. Charles, Ark., on Jan. 6-17. This flooding was due to rainfall during December. This overflow was prolonged by a continuation of the intermittent rains during the first 2 weeks of January. The heaviest rains occurred over the flat delta country of east and southeast Arkansas which culminated in one of the worst ice storms in the history of east-central and southeast Arkansas. Preliminary estimates of flood damage were placed at near $250,000.

Arkansas Basin.--The minor flooding which began on the Illinois River at Tahlequah, Okla., on Jan. 31 continued into February. This flooding was due to heavy rain on the 28-30th. Precipitation on the 28th averaged about 1.5 inches. Due to the season of the year, damages were nominal.

Red Basin.--Minor flooding occurred on the Blue River at Blue, Okla., on the 29th. There were two periods of flooding on Clear Boggy Creek at Caney, Okla., during January. The first, occurred on the 19th-22d and the second, on the 29th-Feb. 1. The Kiamichi Creek at Belzoni, Okla., was out of its banks on the 30th and 31st. The Sulphur River at Hagansport, Tex., was above flood stage on the 5-6th, 23d-25th and on Jan. 29 to Feb. 4. Crests ranged from 2 feet above flood stage on the 5th to 6 feet above flood stage on the 23d and 31st.

Lower Mississippi Basin.--The St. Francis River at Fisk, Mo., was in flood from Dec. 16 to Jan. 4. It crested on Dec. 27, 4.5 feet above flood stage. Downstream at St. Francis, Ark., the stream continued in flood from Dec. 20 to Jan. 8. It crested nearly 3 feet above flood stage on Dec. 30-31.

Minor flooding occurred on the Tallahatchie and Yazoo Rivers in Mississippi during the middle decade of the month. The Big Black River at Bovina, Miss., continued in flood from Dec. 18 to Jan. 6. It crested nearly 11 feet above flood stage on Dec. 23-24. This rise was due to 3 to 8 inches of rain on Dec. 15-18. The Big Black River rose above flood stage again on Jan. 10 and continued in flood to the 28th. It crested on the 16th near the level of the first crest in December. Moderate to heavy damage resulted to farm-, pasture-, timberlands, and to farm roads.

WEST GULF OF MEXICO DRAINAGE

The Calcasieu River at Hineston, La., rose above flood stage on the 9th and continued in flood until the 16th. It crested on the 12th, 2.8 feet above flood stage. Downstream at Kinder and Old Town Bay, La., the river was out of its banks between the 14th and 16th. Crests occurred on the 14th and 15th and ranged from nearly 2 feet above flood stage at Kinder to slightly above flood stage at Old Town Bay. This flooding was due to moderately heavy rainfall during the first decade of the month. Runoff was heavy as it followed one of the wettest Decembers on record.

Minor flooding continued on the Sabine River at Mineola, Tex., from Dec. 15 to Jan. 14. Crests ranged from 3 feet above flood stage on Dec. 19 to 2 feet above flood stage on Jan. 7. This overflow was due to 2 to 4 inches of rainfall on Dec. 13-17. Additional rain of 2 inches near the end of December prolonged the flooding. Upstream at Edgewood, Tex., the river was out of its banks on the 8-11th. Lake Fork Creek at Quitman, Tex., was in light flood on the 5-9th. Heavy rains toward the end of the month caused the upper Sabine River at Edgewood, Tex., to rise above bankfull stage on the 30th. It crested 1 foot above flood stage on Feb. 3 and continued in flood until Feb. 11.

Moderate precipitation during the first decade of January produced flooding on the Neches, lower Trinity, and San Jacinto Rivers in Texas. Flooding was confined to the Trinity near its mouth, the upper Neches near Alto, Tex., and to the San Jacinto at Lake Houston, Tex. The heavy rainfall over the San Jacinto Basin resulted in Lake Houston flowing over the top of the spillway (44.5 feet) from the 11th into February. The highest level reached during January was 45.53 feet on the 22d.

Slight flooding occurred on the Trinity at Trinidad, Tex., on the 30th. Chambers Creek, near Corsicana, Tex., crested nearly 3.5 feet over its banks on the 23d. Richland Creek had 1 foot of overflow on the 23d. Both creeks were bankfull on the 31st. The rises on Chambers and Richland Creeks were due to a high runoff resulting from long periods of light to moderate rain. The total monthly rainfall averaged 4.5 to 6 inches over these creeks. No significant damage resulted from these overflows.

Heavy rainfall on the 18th, 19th, and 20th caused flooding on the San Antonio, Guadalupe, Lavaca, and Navidad Rivers in Texas. The most serious flooding occurred in the San Antonio area where drainage facilities are inadequate during periods of intense rainfall. The heaviest reported damage was in the San Antonio area where many dwellings, commercial and industrial properties located in low-lying areas were flooded. There was heavy damage to stocks, goods, and merchandise in these areas. Estimates of damage have totalled about $3 million. There were four known deaths due to this flooding.

Heavy rains on the 18th to the 21st caused flash flooding on the extreme upper Nueces and upper Frio Rivers in Texas. Tributaries with low water crossings were closed on the 18th, 20th, and 21st. The rainfall totals for the four days ranged from 2 to 4 inches

over the upper Nueces, upper Frio, and upper San Miguel Creek drainage areas to 10 to 11 inches in western parts of the Atascosa River drainage. Flooding began on the lower Atascosa and lower Frio Rivers on the 19th. By the 20th, the high water had reached the Nueces near Three Rivers, Tex. The additional heavy rains of 2 to 4 inches on the 20th and 21st produced major flooding on the lower Frio, the Atascosa, and the lower Nueces Rivers. The Atascosa River at Whitsett, Tex., crested 14 feet above flood stage on the 21st. The lower Frio River crested 8.2 feet above flood stage at Tilden, Tex., on the 20th and nearly 18 feet above flood stage at Calliham, Tex., on the 21st. The lower Nueces River near Three Rivers, Tex., crested nearly 16 feet above flood stage on the 22d. Below the Wesley Seale Dam, the Nueces at Calallen, Tex., crested 3.4 feet above flood stage on the 25th. One fatality was reported on the Atascosa River near Poteet, Tex., on the 20th where a car was washed into the river. Preliminary estimates of flood damage were placed at $210,000.

COLORADO BASIN

Moderate to heavy rains along and under the Mogollon Rim in Arizona on the 27th and 28th, combined with snowmelt caused minor flooding on Tonto River above Roosevelt Lake on the 27-29th. Significant rises occurred on most streams below the Mogollon Rim. Ice jams on the little Colorado River below Winslow and Holbrook, Ariz., caused some flooding of homes in the north part of Winslow on the 29th-31st.

PACIFIC SLOPE DRAINAGE

Several periods of precipitation during January over the Sacramento Basin in California brought moderate rises to the Sacramento River during the month. Two to three feet of overflow occurred at Tisdale and Colusa Weirs on the 15-18th and on the 30th and 31st.

Heavy rain on the 26th to the 31st caused the Russian River to rise to flood stage on the 30th. The Napa River reached a crest of 18.7 feet at Oak Knoll Bridge near Napa, Calif., in the early morning of the 30th. Flood stage at that point is 18 feet. Precipitation during January averaged about 12 inches in the Russian Basin and about 10 inches in the Napa Basin. Most of this precipitation occurred during three rainy periods, namely from the 8th to the 10th, 13th to the 16th and 26th to the 31st.

Heavy rainfall (3 to 5 inches) on the 13th and 14th in northern California caused flooding on the Van Duzen Fork at Bridgeville and on the Eel River at Fernbridge. Crests ranged from 0.8 to 1.5 feet above flood stage. No damage resulted from the flooding.

The South Fork of the Coquille River at Myrtle Point, Oreg., rose 4 feet above flood stage on the 15th. It receded within its banks on the 16th. Damage, if any, was minor. This overflow was due to heavy rain near the middle of the month. Despite high freezing levels, the lack of a heavy snowpack held runoff to a moderately low level.

Heavy rain and snowmelt on the 19th and 20th caused flooding along streams in Grays Harbor and Puget Sound Drainage in western Washington. On the Olympic Peninsula, the Wishkah headworks station reported a 2-day total rainfall of 11.72 inches and Quillayute, 10.28 inches in the same period. In the western Cascades, 3-day rainfall totals ranged from 4 to 7 inches. Several families and some livestock were evacuated in the Snohomish Basin. Temporary repairs of breaks in the Snohomish dikes which occurred in the December flood held and there was no general overflow despite a crest of 5.1 feet above flood stage. Preliminary estimates of flood damage by the Corps of Engineers were placed at $610,000.

FLOOD STAGE DATA

(All dates in January unless otherwise specified)

River and station	Flood stage	Above flood stages -dates From–	Above flood stages -dates To–	Crest * Stage	Crest * Date
ST. LAWRENCE DRAINAGE	Ft.			Ft.	
Lake Erie					
St. Marys: Decatur, Ind.	15	29	31	18.6	30
St. Joseph: Montpelier, Ohio	10	30	31	12.5	31
Maumee: Ft. Wayne, Ind.	15	30	31	17.7	30
Defiance, Ohio	10	30	31	13.2	30
Napoleon, Ohio	10	30	31	11.1	30
Grand Rapids, Ohio	15	30	31	16.3	31
Sandusky: Upper Sandusky, Ohio	13	30	31	13.9	31
Tiffin, Ohio	8	30	31	8.3	31
Fremont, Ohio	10	29	31	11.7	30
Lake Ontario					
Canaseraga Creek: Groveland, N.Y.	11	30	30	13.5	30
ATLANTIC SLOPE DRAINAGE					
Millstone: Blackwells Mills, N.J.	7	14	15	7.3	15
Assunpink Creek: Trenton, N. J.	5	14	15	5.4	14
Tar: Tarboro, N. C.	19	17	20	21.1	19
Greenville, N. C.	13	16	23	14.8	20-21
Neuse: Neuse, N. C.	14	11	18	15.7	17
Smithfield, N. C.	13	Dec. 29 14	2 20	14.5 18.0	1 16
Goldsboro, N. C.	14	1 15	5 26	14.1 18.0	4 22
Kinston, N. C.	14	18	28	15.7	25
Cape Fear: Fayetteville, N. C.	35	15	16	36.8	15
Wm. O. Huske L&D, N.C.	42	14	19	52.0	16
Lock No. 2, Elizabethtown, N. C.	20	Dec. 30 12 14	2 14 20	21.7 20.7 28.4	Dec. 31 13 17
Rocky: Norwood, N. C.	15	10 14	12 15	E22.5 E22.5	11 14
Lumber: Lumberton, N. C.	8	Dec. 12	1/	10.0 12.5	8 16
Lynches: Effingham, S. C.	14	17	18	14.3	18
Little Pee Dee: Galivants Ferry, S. C.	9	15	27	9.6	20
Pee Dee: Cheraw, S. C.	30	11 14	13 16	33.1 32.6	12 15
Peedee, S. C.	19	Dec. 31 11	4 28	19.3 23.0	2 19
Saluda: Chappells, S. C.	14	10	13	16.8	11
Broad: Blair, S. C.	14	11	14	20.7	11
North Fork Edisto: Orangeburg, S. C.	8	15	17	8.3	16
Savannah: Millhaven(nr), Ga.	15	Dec. 30 11 14	9 11 30	#15.7 #15.4 #16.8	8 11 17
Clyo, Ga.	11	Dec. 12	Feb. 9	#14.9	21
EAST GULF OF MEXICO DRAINAGE					
Apalachicola: Blountstown, Fla.	15	5 12	7 14	15.5 15.2	6 12
Oostanaula: Resaca, Ga.	22	12	14	23.6	13
Rome, Ga.	25	11	11	25.0	11
Old Town Creek: Tupelo, Miss.	21	10	10	21.9	10
East Fork: Fulton, Miss.	16	5	12	17.6	11
Noxubee: Macon, Miss.	26	11	15	28.5	11
Black Warrior: Oliver L&D, Tuscaloosa, Ala.	47	11	13	54.0	11
Warrior, Ala.	30	11	17	37.7	15
Tombigbee: Aberdeen, Miss.	34	7	16	41.9	11
Columbus, Miss.	29	11	17	35.6	12
Gainesville, Ala.	36	Dec. 20 10	2 24	48.1 48.7	Dec. 26 18
Demopolis L&D, Ala.	18	Dec. 17 10	6 26	59.3 58.8	Dec. 29 18
Jackson L&D, Ala.	43	Dec. 15	30	53.5 52.6	3 23
Pearl: Edinburg, Miss.	20	10	16	23.6	13
EAST GULF OF MEXICO DRAINAGE	Ft.			Ft	
Pearl: Jackson, Miss.	18	Dec. 16 26	24 1/	31.25 30.0	Dec. 24 14
Monticello, Miss.	19	Dec. 24 10	3 23	21.55 21.9	Dec. 31 12
Bogalusa, La.	15	Dec. 17	31	19.1	4
Pearl River, La.	12	Dec. 20	31	13.4 13.9	Dec. 22 6
MISSISSIPPI SYSTEM					
Upper Mississippi Basin					
Kankakee: Momence, Ill.	4	6	9	6.0	6
Sangamon: Monticello, Ill.	13	30	1/		
Riverton, Ill.	13	Dec. 4 28	2 1/	20.3	Dec. 14
Illinois: Havana, Ill.	14	Dec. 22	[illegible]	15.2 15.3	Dec. 28 2
Beardstown, Ill.	14	Dec. 15	4	16.6	Dec. 29
Meredosia, Ill.	10	Dec. 10	1/	14.9	Dec. 29
Kaskaskia: Shelbyville, Ill.	13	31	1/		
Vandalia, Ill.	18	31	1/		
Carlyle Dam, Ill.	21	Dec. 14	31	23.8	Dec. 23
Big Muddy: Murphysboro, Ill.	16	Dec. 16 31	5 1/	27.6	Dec. 27
Ohio Basin					
Allegheny: Parker, Pa.	20	30	31	24.2	30
Lock 5, Freeport, Pa.	21	31	31	21.4	31
Hocking: Athens, Ohio	17	31	Feb. 1	17.1	Feb. 1
Scioto: La Rue, Ohio	11	30	31	E12.0	31
Prospect, Ohio	10	31	Feb. 2	11.1	Feb. 1
Circleville, Ohio	14	31	Feb. 3	15.6	Feb. 1
Piketon, Ohio	16	31	Feb. 4	17.7 17.9	31 Feb. [illegible]
Embarrass: Ste. Marie, Ill.	18	31	Feb. 8	20.1	Feb. [illegible]
Lawrenceville, Ill.	11	Dec. 11 30	2 Feb. 11	20.[illegible] 18.05	Dec. [illegible] Feb. 11
Eagle Creek: Zionsville, Ind.	T 7	30	30	7.4	30
Eel: Bowling Green, Ind.	17	31	1/		
White: Anderson, Ind.	10	30	Feb. 3	12.3	Feb. 2
Centerton, Ind.	603	31	Feb. [illegible]	607.6	Feb. [illegible]
Spencer, Ind.	14	31	Feb. 7	21.1	Feb. 4
Elliston, Ind.	18	31	Feb. 9	25.8	Feb. 5
Skillet Fork: Wayne City, Ill.	15	30	Feb. 5	17.[illegible]	30
Little Wabash: Wilcox, Ill.	16	30	Feb. 9	#21.3	Feb. [illegible]
Carmi, Ill.	27	Dec. 18 Feb. 2	7 Feb. 13	#[illegible] #[illegible]	Dec. 29 Feb. 7-8
Wabash: Wabash, Ind.	12	30	Feb. 6	14.4 16.5	[illegible] Feb. [illegible]
Lafayette, Ind.	11	29	Feb. 14	19.6 22.2	31 Feb. 3
Covington, Ind.	16	30	Feb. 13	26.2	Feb. 4
Montezuma, Ind.	14	Dec. 22 29	1 Feb. 16	24.8 28.3	Dec. 22 Feb. [illegible]
Clinton, Ind.	18	31	Feb. 11	27.4	Feb. [illegible]
Terre Haute, Ind.	14	Dec. 22 [illegible]	1 Feb. 15	20.3 23.0	Dec. [illegible] Feb. [illegible]
Hutsonville, Ill.	T20	Dec. 23 30	2 Feb. 15	#23.3 #26.2	Dec. 28 Feb. [illegible]
Vincennes, Ind.	16	Dec. 24 31	4 Feb. 17	#21.[illegible] #24.3	Dec. [illegible] Feb. [illegible]
Mt. Carmel, Ill.	17	Dec. 25	3	#21.9	Dec. [illegible]
New Harmony, Ind.	15	Dec. 26 Feb. 3	2 Feb. 16	#16.7 #19.1	Dec. [illegible] Feb. [illegible]
Saline: Harrisburg, Ill.	13	30	Feb. 6		
South Chickamauga Creek: Chickamauga(nr), Tenn.	[illegible]	6 10	8 1[illegible]	11.1 11.2	 11
Elk: Fayetteville, Tenn.	659	10	13	661.2	11

FLOOD STAGE DATA

(All dates in January unless otherwise specified) JANUARY 1968

River and station	Flood stage	Above flood stages -dates		Crest *	
		From–	To–	Stage	Date
MISSISSIPPI SYSTEM	*Ft.*			*Ft.*	
Tennessee: Whitesburg, Ala.	11	Dec. 31	17	17.6	12
Florence, Ala	18	10	15	21.0	10
Savannah, Tenn	380	11	16	382.5	13
Gilbertsville, Ky.	320	11	18	322.55	14
Ohio: Wellsburg, W. Va.	30	31	Feb. 1	30.9	31
White Basin					
Cache: Patterson, Ark.	7	Dec. 9	13	9.3	19
White: Clarendon, Ark.	26	Dec. 25	16	26.9	7,8,11
St. Charles, Ark.	25	6	17	25.3	10-13
Arkansas Basin					
Illinois: Tahlequah, Okla.	11	31	Feb. U	15.35	Feb. 3
Red Basin					
Blue: Blue, Okla.	21	29	29	21.1	29
Clear Boggy Creek: Caney, Okla.	19	19 29	22 Feb. 1	21.5 20.9	20 30
Kiamichi Creek: Belzoni, Okla.	28	30	31	28.7	31
Sulphur: Hagansport, Tex.	38	5 23 29	6 25 Feb. 4	40.2 43.7 43.7	5 23 31
Lower Mississippi Basin					
St. Francis: Fisk, Mo.	20	Dec. 16	4	24.5	Dec. 27
St. Francis, Ark.	18	Dec. 20	8	20.8	Dec.30-31
Coldwater: Sarah, Miss.	18	10	10	19.95	10
Tallahatchie: Swan Lake, Miss.	26	10	19	27.3	13
Yazoo: Yazoo City, Miss.	29	10	19	30.5	10
Big Black: Pickens, Miss.	16	[illegible]	20	19.8	12
Bovina, Miss.	28	Dec. 18 10	6 28	38.7 38.6	Dec.23-24 15
WEST GULF OF MEXICO DRAINAGE					
Calcasieu: Hineston, La.	12	9	16	14.8	12
Kinder, La.	16	14	15	17.85	14
Old Town Bay, La.	4	15	16	4.2	15
Lake Fork Creek: Quitman, Tex.	14	5	9	14.7	9
Sabine: Edgewood, Tex.	12	8 30	11 Feb. 11	 13.1	 Feb. 3
Mineola, Tex.	14	Dec. 15	14	17.0 15.9	Dec. 19 7
Neches: Alto(nr), Tex.	16	10	12	16.35	11
Trinity: Trinidad, Tex.	28	30	30	29.9	30
Liberty, Tex.	24	11	14	25.3	12
Moss Bluff, Tex.	4	8	1/	6.85	18

River and station	Flood stage	Above flood stages -dates		Crest *	
		From–	To–	Stage	Date
WEST GULF OF MEXICO DRAINAGE	*Ft.*			*Ft.*	
San Jacinto: Lake Houston, Tex.	44.5	11	1/	45.5	22
Little: Cameron, Tex.	30	21	24	36.6	22
Navasota: Bryan(nr), Tex.	12	27	27	13.4	27
Navidad: Ganado, Tex.	21	20	25	30.1	23
Lavaca: Edna, Tex.	21	22	24	22.7	23
San Antonio: Falls City, Tex.	12	20	24	22.8	21
Goliad, Tex.	35	23	27	41.75	24
Guadalupe: Gonzales, Tex.	20	20	23	32.2	22
Victoria, Tex.	21	21	29	29.7	25
Atascosa: Whitsett, Tex.	20	19	24	33.9	21
Frio: Derby, Tex.	6	22	23	7.0	23
Tilden, Tex.	12	19	24	20.2	20
Calliham, Tex.	12	19	24	29.9	21
Nueces: Three Rivers(nr), Tex.	25	20	26	40.7	22
Calallen, Tex.	7	23	31	10.4	25
PACIFIC SLOPE DRAINAGE					
Van Duzen Fork: Bridgeville, Calif.	15	15	15	15.8	15
Eel: Fernbridge, Calif.	17	15	15	18.5	15
Napa: Napa, Calif.	18	30	30	18.7	30
Russian: Guerneville, Calif.	32	30	30	32.0	30
Sacramento: Colusa Weir, Calif.	62	15 30	17 31	64.7 63.6	16 31
Tisdale Weir, Calif.	46	16 30	18 31	47.8 47.9	16 31
Coquille: Myrtle Point, Oreg.	35	15	16	39.0	15
Wynoochee: Montesano, Wash.	19	19	19	20.2	19
Satsop: Satsop, Wash.	34	19	20	36.4	19
Snoqualmie: Carnation, Wash.	54	21	22	56.7	21
Skykomish: Goldbar, Wash.	15	20	21	16.4	20
Snohomish: Snohomish, Wash.	25	20	22	30.1	21
Skagit: Concrete, Wash.	29	21	21	29.1	21
Mt. Vernon, Wash.	21	21	22	22.2	21
Nooksack: Deming, Wash.	12	20	21	12.3	20

* Provisional
\# Highest stage observed
E Estimated
T Tentative
1/ Continued at end of month
U Unknown - no readings available from Feb. 3 to Feb. 9 due to gage inoperative

RAWINSONDE DATA

Average monthly values

ALBANY, N. Y. — 1014 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	86	-11.5	-15.0	30	1.5
1000	31	192	-10.7	-15.2	31	2.2
950	31	587	-9.7	-15.1	29	4.0
900	31	1,007	-8.8	-16.3	30	7.0
850	31	1,451	-8.2	-17.3	30	9.5
800	31	1,922	-8.3	-17.4	30	11.4
750	31	2,418	-9.6	-18.7	29	13.3
700	31	2,954	-11.0	-19.5	29	15.6
650	31	3,516	-13.8	-22.6	28	17.8
600	31	4,127	-16.7	-25.9	29	20.1
550	31	4,772	-20.2	-30.9	28	22.6
500	31	5,477	-24.5	-34.9	28	25.4
450	31	6,233	-29.4	-39.6	28	27.8
400	31	7,069	-35.2	-45.0	28	31.0
350	31	7,987	-42.1	-49.4	29	30.3
300	31	9,015	-48.9		29	29.4
250	31	10,193	-55.8		29	28.5
200	31	11,605	-56.7		29	27.2
175	31	12,456	-54.8		28	25.5
150	31	13,441	-55.1		28	22.7
125	31	14,601	-56.7		28	19.0
100	31	16,012	-57.3		28	15.8
80	31	17,421	-58.0		29	10.0
70	31	18,261	-57.9		29	8.9
60	31	19,236	-57.5		30	5.8
50	31	20,391	-56.1		29	3.8
40	31	21,813	-55.0		33	2.3
30	30	23,656	-54.3		04	1.5
25	30	24,825	-54.0		11	1.7
20	29	26,265	-53.4		13	2.5
15	24	28,114	-52.6		10	5.1
10	16	30,719	-50.0		26	1.0
7	6	33,074	-46.9			
5						
4						

ALBUQUERQUE, N. MEX. — 641 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1,619	-2.5	-8.4	02	1.8
1000	31	219				
950	31	634				
900	31	1,073				
850	31	1,532				
800	31	2,016	.3	-9.6	32	1.8
750	31	2,533	-1.0	-12.0	29	3.2
700	31	3,082	-3.0	-14.6	29	5.1
650	31	3,662	-6.3	-18.0	29	7.3
600	31	4,288	-10.1	-22.3	28	8.9
550	31	4,949	-14.1	-25.8	28	9.7
500	31	5,671	-19.0	-30.6	27	10.4
450	31	6,441	-24.5	-36.0	27	11.0
400	31	7,295	-30.8	-41.7	27	10.5
350	31	8,229	-38.0	-47.6	27	12.3
300	31	9,273	-46.0		27	14.4
250	31	10,463	-54.4		27	16.5
200	31	11,872	-59.7		27	20.7
175	31	12,706	-60.3		27	20.5
150	31	13,668	-60.2		27	20.2
125	31	14,800	-62.5		27	18.3
100	30	16,166	-65.4		27	16.2
80	29	17,528	-64.5		27	11.7
70	29	18,345	-63.6		26	9.7
60	29	19,293	-62.1		27	6.8
50	29	20,422	-61.1		26	4.2
40	29	21,811	-59.6		27	3.2
30	28	23,616	-58.6		28	.3
25	28	24,764	-57.2		26	1.8
20	26	26,176	-55.6		26	3.9
15	21	28,017	-54.9		31	1.5
10	7	30,595	-52.7			

AMARILLO, TEXAS — 894 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1,095	-1.3	-4.4	29	1.6
1000	31	[illegible]				
950	31	603				
900	31	1,042				
850	31	1,498	2.6	-5.8	27	4.0
800	31	[illegible]	2.6	-7.6	26	5.5
750	31	2,510	1.0	-10.0	26	7.7
700	31	3,063	-2.0	-12.7	27	8.8
650	31	3,649	-5.0	-16.8	27	9.1
600	31	4,275	-8.8	-21.3	27	9.3
550	31	[illegible]	-13.1	-25.8	28	9.4
500	31	5,664	-18.1	-30.4	27	10.5
450	31	6,438	-23.9	-35.5	27	11.3
400	31	7,292	-30.4	-41.6	27	12.9
350	31	8,228	-37.4	-47.1	26	15.2
300	31	9,275	-45.3		26	21.1
250	31	10,469	-53.8		26	24.6
200	31	11,880	-60.0		26	27.3
175	31	12,713	[illegible]		26	28.5
150	31	13,675	-60.1		26	26.2
125	31	14,807	-62.0		26	23.6
100	30	16,179	-64.0		26	20.3
80	30	17,544	-64.3		26	16.0
70	28	18,362	-63.8		26	14.1
60	27	19,308	-62.7		26	11.2
50	25	20,439	-61.0		26	7.8
40	25	21,628	-59.9		25	5.4
30	23	23,633	-58.2		26	4.6
25	21	24,781	-57.4		26	3.0
20	21	26,195	-56.1		25	5.2
15	15	28,041	-54.0		24	7.2

* ANCHORAGE, ALASKA — 101[illegible] MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	45	-10.9	-17.2	01	[illegible]
1000	31	123			[illegible]	2.9
950	31	[illegible]	-8.8	-16.8	02	[illegible]
900	31	938	[illegible]	-16.1	[illegible]	[illegible]
850	31	1,380	-10.1	-18.8	01	4.7
800	31	1,845	-12.2	-20.7	02	3.4
750	31	2,339	-14.9	-23.0	02	2.9
700	31	2,855	-17.6	-25.9	36	4.1
650	31	3,407	-20.4	-29.0	35	4.8
600	31	[illegible]	-23.7	-31.9	34	[illegible]
550	31	4,625	-27.7	-35.6	34	7.3
500	31	5,305	-32.3	-39.0	33	8.9
450	31	6,038	-37.2	-42.4	32	9.5
400	31	6,845	-42.7	[illegible]	32	11.4
350	31	7,736	-48.2		32	11.1
300	31	8,740	-52.7		32	13.1
250	31	9,909	-55.6		31	14.6
200	31	11,328	-55.6		31	14.8
175	31	12,181	-54.2		30	[illegible]
150	31	13,169	-54.2		30	13.1
125	31	14,336	-54.9		30	14.1
100	31	15,758	-56.0		31	14.0
80	30	17,177	-56.5		31	14.7
70	30	18,023	-56.6		31	[illegible]
60	[illegible]	[illegible]	-57.3		31	[illegible]
50	29	20,168	-57.2		31	[illegible]
40	29	21,580	-56.9		32	[illegible]
30	28	23,405	-56.5		32	[illegible]
25	27	24,565	-55.7		32	[illegible]
20	22	25,993	-55.1		32	[illegible]
15	19	27,852	-54.5		30	[illegible]
10	8	30,536	-57.3			

* [illegible], ALASKA — [illegible] MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	37	-.5	-5.6	08	1.6
1000	30	84			[illegible]	[illegible]
950	30	492	-3.2	-8.6	12	1.9
900	30	[illegible]	[illegible]	[illegible]	15	[illegible]
850	30	1,365	-7.8	-13.4	19	1.8
800	30	1,835	[illegible]	[illegible]	21	[illegible]
750	30	2,327	-13.1	-18.6	22	3.7
700	30	2,853	[illegible]	[illegible]	[illegible]	[illegible]
650	30	3,405	-19.2	-25.3	25	4.7
600	30	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
550	30	4,627	-26.5	-34.4	27	[illegible]
500	30	5,315	-30.8	-39.1	27	[illegible]
450	30	6,051	-35.8	-41.5	27	11.1
400	30	6,865	-41.2	-44.4	27	[illegible]
350	30	7,761	-46.8		28	14.5
300	30	8,770	-52.3		30	13.8
250	30	9,939	-55.4		30	15.2
200	30	11,362	-55.0		30	18.0
175	29	[illegible]	-54.7		30	17.5
150	29	13,198	-55.0		30	17.2
125	29	14,359	-56.1		30	17.1
100	29	[illegible]	-57.9		[illegible]	[illegible]
80	29	17,176	-58.8		30	17.0
70	29	18,013	-59.0		29	18.1
60	29	18,978	-59.6		30	16.5
50	[illegible]	[illegible]	-59.4		30	[illegible]
40	28	[illegible]	-59.7		31	15.7
30	24	23,354	-58.3		31	14.7
25	[illegible]	24,504	-58.2		31	12.6
20	23	[illegible]	-57.6		[illegible]	[illegible]
15	23	27,731	-56.2		31	13.1
10	22	[illegible]	-55.4		[illegible]	14.4
7	17	32,545	-53.6		31	14.7
5	13	[illegible]	[illegible]			
4	7	36,273	-50.0			

ATHENS, GEORGIA — 994 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	246	.6	-2.1	36	1.5
1000	31	195				
950	31	615	3.6	-2.3	35	1.9
900	31	1,053	4.5	-4.4	28	2.5
850	31	1,518	3.9	-6.5	28	[illegible]
800	31	2,011	2.7	-7.3	27	[illegible]
750	31	2,529	.7	-10.5	27	8.3
700	31	3,084	-1.8	-13.7	27	10.5
650	31	3,666	-4.8	-17.9	27	13.3
600	31	4,297	-8.6	-21.5	27	15.2
550	31	4,960	-12.7	-24.9	27	16.7
500	31	5,688	-17.5	-28.1	27	18.3
450	31	6,461	-22.9	-32.0	27	19.8
400	31	7,323	-29.3	-37.4	27	22.2
350	31	8,263	-36.2	-42.5	27	24.5
300	31	9,316	-43.8		27	27.5
250	31	10,518	-52.3		27	31.2
200	31	11,937	-58.5		27	35.8
175	31	12,774	-60.0		27	35.9
150	31	13,735	-60.4		27	33.0
125	31	14,865	-62.9		27	28.7
100	31	16,228	-66.3		27	23.0
80	29	17,575	-66.2		27	[illegible]
70	28	18,383	-65.4		27	12.9
60	28	19,323	-64.4		28	9.1
50	28	20,442	-62.4		28	[illegible]
40	28	21,826	-60.4		30	3.7
30	28	23,630	-57.4		33	1.6
25	25	[illegible]	-55.8		01	1.1
20	24	26,204	-54.3		04	1.6
15	22	28,056	-52.6		06	1.7
10	17	30,713	-47.8		25	[illegible]

* BARROW, ALASKA — 1021 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	6	-23.3	-25.3	17	1.1
1000	31	162	-20.4	-23.8	23	1.2
950	31	547	-17.6	-20.8	26	1.8
900	31	949	-17.2	-21.0	27	2.3
850	31	1,377	-17.6	-22.4	28	2.2
800	31	1,830	-19.1	-24.0	29	3.4
750	31	[illegible]	-20.9	-26.0	[illegible]	[illegible]
700	31	[illegible]	-23.3	-26.6	30	[illegible]
650	31	3,359	-26.2	-31.0	29	[illegible]
600	31	3,932	-29.6	-34.3	29	7.3
550	31	4,551	-33.2	-36.8	30	[illegible]
500	31	[illegible]	-37.1	-39.9	30	10.2
450	30	5,933	-41.4	-41.2	30	11.4
400	30	6,726	-46.1		31	12.8
350	30	7,605	-51.1		30	14.7
300	30	8,598	-55.2		30	14.6
250	30	9,758	-56.5		30	14.0
200	30	11,176	-55.8		30	14.4
175	29	12,020	-55.0		30	14.8
150	29	13,005	-55.3		31	13.7
125	27	[illegible]	-56.3		31	13.9
100	25	15,585	-56.7		32	14.4
80	25	16,998	-57.1		32	15.4
70	25	17,842	-57.3		32	15.2
60	25	18,830	-57.1		33	15.8
50	25	19,984	-56.7		33	15.4
40	25	21,413	-56.0		34	[illegible]
30	24	[illegible]	-55.2		35	16.2
25	24	24,420	-55.1		35	[illegible]
20	21	[illegible]	-54.2		36	17.4
15	15	27,846	-53.2		35	16.5
10	6	30,608	-52.4			

BARTER IS., ALASKA — 1021 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	[illegible]	15	-22.5	-24.6	25	[illegible]
1000	29	169	-19.2	-23.0	27	3.5
950	29	549	-17.6	-21.3	28	[illegible]
900	29	[illegible]	-17.6	-21.4	28	[illegible]
850	29	1,384	-18.5	-22.7	28	[illegible]
800	29	1,835	-20.3	[illegible]	29	[illegible]
750	29	[illegible]	-22.1	-27.5	30	[illegible]
700	29	2,810	-24.2	-29.6	31	6.7
650	29	3,347	-26.7	-32.5	31	7.5
600	29	3,929	-29.5	-34.6	31	[illegible]
550	29	4,530	-33.1	-37.6	31	10.4
500	29	5,211	-36.8	-39.1	31	11.4
450	29	5,926	-41.5	-40.7	31	11.7
400	29	6,725	-46.5		31	[illegible]
350	29	7,602	-51.5		31	15.5
300	29	8,592	-55.3		30	14.7
250	28	9,761	-56.8		31	14.8
200	28	[illegible]	-55.9		31	13.7
175	28	12,018	-56.0		31	14.0
150	24	13,003	-55.9		31	16.0
125	24	14,160	-56.7		31	[illegible]
100	24	15,573	-57.2		31	16.0
80	23	17,007	-57.2		31	16.1
70	23	17,851	-57.0		32	17.6
60	23	18,826	-56.9		32	17.6
50	23	19,980	-56.8		32	17.9
40	22	21,392	-56.4		33	17.4
30	21	23,252	-55.5		33	20.1
25	21	24,413	-55.4		33	[illegible]
20	18	25,926	-53.1		34	21.3
15	13	27,814	-51.6		1	19.6
10	9	30,465	-49.3			

BETHEL, ALASKA — 1016 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	[illegible]	-11.7	-13.5	03	.7
1000	31	161			03	[illegible]
950	31	[illegible]	[illegible]	-14.9	03	3.1
900	31	[illegible]	-9.1	-16.2	01	3.3
850	31	1,418	-10.2	-19.0	34	[illegible]
800	31	1,884	-11.5	[illegible]	31	[illegible]
750	31	2,378	[illegible]	-21.7	31	3.7
700	31	[illegible]	-15.9	-23.3	30	[illegible]
650	31	3,454	-19.1	-27.4	30	[illegible]
600	31	4,045	-22.3	-30.8	30	7.4
550	31	4,679	-25.9	-34.6	29	[illegible]
500	31	5,368	-30.1	-38.0	[illegible]	[illegible]
450	31	6,105	-35.1	-42.2	[illegible]	[illegible]
400	31	6,922	-40.8	-45.3	27	9.8
350	31	7,818	-47.1		27	11.1
300	30	8,836	-53.1		[illegible]	[illegible]
250	30	[illegible]	-57.3		29	[illegible]
200	30	[illegible]	-56.8		28	[illegible]
175	30	12,255	-55.3		[illegible]	[illegible]
150	30	13,240	-54.6		[illegible]	[illegible]
125	30	14,407	-54.4		28	[illegible]
100	[illegible]	15,834	-54.7		[illegible]	[illegible]
80	30	[illegible]	-55.1		29	[illegible]
70	[illegible]	18,111	-55.4		29	[illegible]
60	[illegible]	[illegible]	-55.7		30	[illegible]
50	30	20,254	-55.5		31	[illegible]
40	[illegible]	[illegible]	-55.5		31	[illegible]
30	[illegible]	23,504	-55.6		32	[illegible]
25	27	24,679	-55.7		33	[illegible]
20	23	26,137	-55.3		33	[illegible]
15	18	28,058	-55.7		34	[illegible]
10	[illegible]	30,668	[illegible]			

* BISMARCK, N. DAK. — [illegible] MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	[illegible]	-15.8	-18.7	32	1.7
1000	31	[illegible]				
950	31	581			[illegible]	[illegible]
900	31	[illegible]	[illegible]	-15.3	31	6.1
850	31	1,440	-6.9	-15.5	[illegible]	[illegible]
800	31	[illegible]	[illegible]	-16.6	31	[illegible]
750	31	[illegible]	-8.3	-18.5	[illegible]	12.7
700	31	2,950	-10.6	-20.0	30	14.4
650	31	[illegible]	-13.6	-22.4	29	[illegible]
600	31	4,122	-17.3	-25.4	29	18.0
550	31	[illegible]	-21.0	[illegible]	29	18.5
500	31	5,467	-25.5	-34.6	[illegible]	22.1
450	31	[illegible]	-30.7	-38.2	29	24.0
400	31	7,051	-36.6	-42.0	[illegible]	[illegible]
350	31	7,963	-43.3	-44.9	29	[illegible]
300	31	8,984	-50.2		28	[illegible]
250	31	[illegible]	-56.3		28	[illegible]
200	31	[illegible]	-58.3		28	26.9
175	31	[illegible]	-56.6		[illegible]	[illegible]
150	31	13,365	-56.6		28	23.2
125	31	14,534	-57.3		27	[illegible]
100	30	[illegible]	-57.9		27	[illegible]
80	29	[illegible]	-58.2		27	15.1
70	[illegible]	[illegible]	-58.4		27	14.2
60	[illegible]	19,172	-58.3		[illegible]	12.7
50	[illegible]	20,321	-57.3		27	12.1
40	27	21,743	-57.5		27	[illegible]
30	27	23,561	-57.1		26	[illegible]
25	[illegible]	24,698	-57.5		26	[illegible]
20	22	26,086	-57.4		25	[illegible]
15	19	27,962	-56.2		21	[illegible]
10	10	30,566	-56.2			

BOISE, IDAHO — [illegible] MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	867	-3.6	-7.6	14	2.6
1000	31	[illegible]				
950	31	613				
900	31	1,044	-1.3	-7.6	14	3.6
850	31	1,501	-1.1	-9.4	17	3.4
800	31	1,983	-2.5	-11.9	23	3.9
750	31	2,493	-4.8	-13.9	26	6.5
700	31	3,034	-7.9	-15.5	26	8.5
650	31	3,604	-11.3	-17.6	26	11.0
600	31	4,217	-14.6	-22.4	26	12.8
550	31	4,869	-18.7	-27.3	27	15.0
500	31	5,576	-23.4	-32.3	27	16.5
450	31	6,336	-28.9	-37.1	27	17.6
400	30	7,180	-34.7	-41.5	27	18.4
350	30	8,099	-41.6	[illegible]	27	19.6
300	30	9,128	-48.8		28	20.8
250	30	10,308	-55.7		28	21.7
200	30	11,713	-60.2		28	19.7
175	30	12,545	-59.8		28	19.7
150	30	13,513	-58.2		28	18.9
125	30	14,659	-59.0		28	17.3
100	30	16,055	[illegible]		28	[illegible]
80	30	17,442	-60.9		28	13.2
70	28	18,281	-60.4		28	10.7
60	27	19,251	-59.6		29	[illegible]
50	27	20,392	-59.0		29	[illegible]
40	24	21,815	-58.4		28	[illegible]
30	[illegible]	23,627	-58.1		29	2.7
25	19	24,813	-57.3		11	[illegible]
20	18	26,236	-56.9		13	1.1
15	13	[illegible]	-56.6		23	[illegible]
10						
7						
5						

BOOTHVILLE, LA. — [illegible] MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	[illegible]	9.7	8.1	03	[illegible]
1000	31	[illegible]	[illegible]	[illegible]	07	2.4
950	31	[illegible]	9.6	4.9	16	1.4
900	31	1,062	[illegible]	[illegible]	[illegible]	3.1
850	31	1,535	[illegible]	-2.4	27	[illegible]
800	31	2,033	6.5	-7.5	26	[illegible]
750	31	[illegible]	4.7	-10.5	[illegible]	7.1
700	31	3,121	1.7	-12.5	[illegible]	[illegible]
650	31	[illegible]	-2.0	-15.1	[illegible]	10.8
600	31	4,347	-5.9	[illegible]	[illegible]	13.2
550	31	[illegible]	[illegible]	-23.6	[illegible]	15.4
500	31	5,752	-14.5	-29.5	26	[illegible]
450	31	6,540	-20.4	-34.3	26	[illegible]
400	31	7,404	-26.4	[illegible]	[illegible]	[illegible]
350	31	8,356	-33.6	[illegible]	26	24.3
300	31	[illegible]	[illegible]	-50.9	26	[illegible]
250	31	10,029	-50.7		26	30.1
200	31	12,056	-58.2		26	32.4
175	31	12,891	-60.6		26	33.7
150	31	13,847	-62.1		[illegible]	[illegible]
125	31	[illegible]	-65.3		[illegible]	27.1
100	31	16,312	-69.0		[illegible]	22.3
80	[illegible]	[illegible]	-69.5		26	14.5
70	[illegible]	18,430	-68.2		26	[illegible]
60	28	19,359	-66.2		[illegible]	[illegible]
50	28	20,471	-63.6		[illegible]	1.7
40	[illegible]	21,848	-61.0		[illegible]	[illegible]
30	[illegible]	[illegible]	-57.8		03	[illegible]
25	28	24,807	-56.4		[illegible]	1.3
20	27	26,222	-54.4		02	1.9
15	26	[illegible]	-52.3		32	[illegible]
10	[illegible]	30,733	[illegible]		28	[illegible]

* BROWNSVILLE, TEXAS — [illegible] MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	7	11.7	[illegible]	33	1.5
1000	[illegible]	171	12.4	10.0	[illegible]	[illegible]
950	31	603	12.6	9.1	13	[illegible]
900	31	1,058	11.6	7.1	17	4.1
850	31	1,536	10.2	3.2	19	5.9
800	31	2,040	[illegible]	-1.0	21	6.0
750	31	2,573	7.2	-6.7	22	5.9
700	31	3,138	4.3	-11.1	24	[illegible]
650	31	3,736	.4	-15.6	25	7.8
600	31	4,376	-3.8	-20.0	25	[illegible]
550	31	5,047	[illegible]	-24.2	25	10.5
500	31	5,791	-13.2	-28.9	25	[illegible]
450	31	6,576	-18.8	-34.1	25	13.5
400	31	7,453	-25.4	-39.6	25	16.2
350	31	[illegible]	-32.6	-40.0	[illegible]	18.3
300	31	9,477	-40.9	-51.5	26	[illegible]
250	31	10,691	-50.4		[illegible]	23.9
200	31	12,116	-59.1		25	[illegible]
175	31	[illegible]	-61.4		[illegible]	28.0
150	30	13,900	-66.8		[illegible]	26.2
125	[illegible]	15,006	-66.5		25	[illegible]
100	24	16,335	-70.3		25	18.6
80	22	17,656	-70.6		25	12.7
70	21	18,446	[illegible]		25	[illegible]
60	21	19,370	-67.4		[illegible]	[illegible]
50	[illegible]	20,475	-64.6		23	1.1
40	[illegible]	21,849	-61.4		32	[illegible]
30	19	[illegible]	-58.1		33	[illegible]
25	[illegible]	24,862	-56.2		30	.7
20	19	[illegible]	-54.4		[illegible]	[illegible]
15	[illegible]	28,089	-51.3		28	[illegible]
10	[illegible]	[illegible]	[illegible]		[illegible]	9.7
7	[illegible]	33,121	[illegible]		[illegible]	14.8
5	[illegible]	[illegible]	-37.7			

[illegible] — [illegible] MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	[illegible]	-7.5	[illegible]	[illegible]	[illegible]
1000	[illegible]	193			[illegible]	[illegible]
950	31	596	-7.7	[illegible]	26	[illegible]
900	[illegible]	1,014	[illegible]	-13.2	[illegible]	[illegible]
850	31	1,460	[illegible]	-14.0	[illegible]	[illegible]
800	31	1,931	[illegible]	-15.0	24	[illegible]
750	31	2,436	-9.3	-17.5	26	[illegible]
700	31	2,965	-11.1	-19.8	[illegible]	[illegible]
650	31	[illegible]	-13.5	[illegible]	[illegible]	[illegible]
600	31	[illegible]	-16.6	-24.1	28	[illegible]
550	31	4,786	-20.4	-29.1	28	[illegible]
500	31	5,489	-24.6	[illegible]	[illegible]	[illegible]
450	31	6,245	-29.4	-37.2	28	[illegible]
400	[illegible]	[illegible]	-35.2	[illegible]	28	[illegible]
350	31	8,000	[illegible]	[illegible]	28	[illegible]
300	31	9,028	[illegible]		28	[illegible]
250	31	10,205	-55.7		[illegible]	[illegible]
200	31	11,617	[illegible]		[illegible]	[illegible]
175	31	[illegible]	-56.0		[illegible]	[illegible]
150	31	[illegible]	-55.7		[illegible]	[illegible]
125	31	14,605	-57.0		[illegible]	[illegible]
100	31	16,012	-56.4		[illegible]	[illegible]
80	31	[illegible]	-56.5		[illegible]	[illegible]
70	31	[illegible]	[illegible]		[illegible]	[illegible]
60	[illegible]	[illegible]	-57.8		30	[illegible]
50	[illegible]	[illegible]	-57.3		31	[illegible]
40	29	[illegible]	-56.4		[illegible]	[illegible]
30	29	[illegible]	[illegible]		[illegible]	[illegible]
25	[illegible]	24,793	-54.8		[illegible]	[illegible]
20	[illegible]	[illegible]	-54.3		[illegible]	[illegible]
15	29	[illegible]	-52.4		[illegible]	[illegible]
10	18	30,709	[illegible]			
7	[illegible]	[illegible]	-46.0			

[illegible], S. C. — [illegible] MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	[illegible]	3.5	.7	[illegible]	[illegible]
1000	[illegible]	[illegible]	5.2	[illegible]	[illegible]	[illegible]
950	31	606	[illegible]	[illegible]	[illegible]	[illegible]
900	31	1,044	[illegible]	[illegible]	29	[illegible]
850	31	[illegible]	[illegible]	[illegible]	27	[illegible]
800	31	[illegible]	1.8	-8.2	27	[illegible]
750	31	2,517	-.1	-10.1	26	[illegible]
700	31	[illegible]	[illegible]	-13.3	[illegible]	[illegible]
650	[illegible]	3,651	-5.3	[illegible]	27	[illegible]
600	31	4,279	-8.9	[illegible]	27	[illegible]
550	[illegible]	4,945	-13.1	-22.4	27	[illegible]
500	31	[illegible]	-17.8	[illegible]	[illegible]	[illegible]
450	31	6,443	-23.1	-33.8	27	[illegible]
400	31	7,302	-29.1	[illegible]	[illegible]	27.4
350	31	8,243	-36.1	-44.3	27	[illegible]
300	31	[illegible]	-43.7		27	[illegible]
250	[illegible]	[illegible]	-52.6		27	[illegible]
200	[illegible]	11,913	-58.9		27	[illegible]
175	[illegible]	12,749	-59.1		27	[illegible]
150	[illegible]	13,711	-59.6		[illegible]	29.1
125	[illegible]	[illegible]	-61.7		27	[illegible]
100	[illegible]	[illegible]	-63.9		27	21.7
80	[illegible]	17,584	-64.7		27	[illegible]
70	[illegible]	[illegible]	-63.8		26	[illegible]
60	[illegible]	19,347	-62.6		[illegible]	[illegible]
50	[illegible]	20,479	-61.6		[illegible]	[illegible]
40	[illegible]	[illegible]	[illegible]		30	[illegible]
30	[illegible]	23,697	[illegible]		[illegible]	[illegible]
25	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]
20	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]
15	[illegible]	[illegible]	-52.2		31	[illegible]
10	14	[illegible]	-47.9		[illegible]	[illegible]
7	[illegible]	[illegible]	-45.4			

See reference note at end of table

RAWINSONDE DATA

Average monthly values

JANUARY 1968

*** CARIBOU, MAINE 995 MB**

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	191	-16.3	-22.1	31	3.3
1000	31	154				
950	31	544	-15.2	-18.7	31	7.8
900	31	951	-13.8	-18.6	31	10.9
850	31	1,386	-13.3	-18.5	31	11.4
800	31	1,849	-12.7	-18.9	30	12.0
750	31	2,343	-13.8	-20.8	30	13.3
700	31	2,863	-15.7	-22.9	29	14.2
650	31	3,421	-18.2	-25.7	29	15.8
600	31	4,014	-21.1	-28.2	28	17.9
550	31	4,649	-25.1	-31.2	28	19.0
500	31	5,338	-29.3	-35.0	28	21.6
450	31	6,082	-34.5	-39.7	28	23.7
400	31	6,899	-40.1	-43.3	27	26.6
350	31	7,799	-45.4		28	29.9
300	31	8,616	-50.3		27	32.3
250	31	9,495	-53.8		28	30.7
200	30	11,429	-52.8		28	27.3
175	29	12,290	-51.9		28	27.6
150	29	13,289	-51.9		28	24.1
125	29	14,467	-53.0		28	20.3
100	26	15,4[illegible]4	-53.9		28	17.1
80	24	17,339	-53.4		27	12.5
70	24	18,196	-54.0		27	9.5
60	24	19,286	-53.8		28	8.3
50	24	20,359	-53.5		28	6.5
40	24	21,797	-52.5		27	1.6
30	24	23,654	-52.5		12	2.7
25	23	24,629	-52.4		12	3.9
20	22	26,272	-51.5		11	6.4
15	[illegible]	28,137	-51.4		10	11.0
10	17	30,769	-51.6		09	10.2
7	16	33,[illegible]	-49.0		08	6.9
5	7	35,403	-44.7			
4						
3						

CHARLESTON, S. C. 1022 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	13	2.1	-.1	35	1.7
1000	31	187	6.1	1.4	36	2.3
950	31	612	7.1	.8	32	2.4
900	31	1,053	6.6	.1	26	5.3
850	31	1,522	5.3	-3.7	26	8.3
800	31	2,016	4.1	-7.2	26	8.7
750	31	2,541	2.0	-10.8	26	9.6
700	31	3,094	-.8	-12.7	27	11.9
650	31	3,685	-4.0	-17.0	27	13.4
600	31	4,311	-7.7	-20.5	27	15.3
550	31	4,982	-11.8	-24.3	27	17.9
500	31	5,707	-16.5	-28.7	27	19.5
450	31	6,486	-21.9	-33.0	27	21.8
400	31	7,350	-28.3	-40.0	27	23.4
350	31	8,294	-35.4	-44.5	27	26.0
300	31	9,350	-43.1	-47.6	27	28.4
250	30	10,557	-51.6		27	32.0
200	30	11,980	-58.0		27	36.6
175	30	12,818	-59.4		27	37.2
150	30	13,782	-60.6		27	35.1
125	30	14,910	-63.2		27	30.9
100	30	16,272	-66.3		27	24.7
80	29	17,618	-67.2		27	19.6
70	29	18,425	-65.6		27	15.0
60	28	19,365	-64.2		28	10.2
50	28	20,485	-61.7		27	6.1
40	27	21,876	-58.8		30	3.9
30	27	23,694	-56.1		36	2.3
25	26	24,858	-54.6		05	2.7
20	23	26,291	-53.0		01	2.2
15	20	28,163	-50.5		04	1.4
10	11	30,830	-47.6			

*** COLD BAY, ALASKA 1015 MB**

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	30	-2.1	-4.6	12	.7
1000	31	151			16	1.5
950	31	556	-2.9	-7.1	33	.1
900	31	986	-4.4	-11.6	34	1.9
850	31	1,435	-5.8	-14.4	33	4.1
800	31	1,909	-7.8	-18.1	32	5.4
750	31	2,405	-9.9	-20.3	32	6.8
700	31	2,939	-12.5	-24.2	32	8.0
650	31	3,496	-15.3	-27.3	32	6.3
600	31	4,103	-18.6	-30.7	31	6.0
550	31	4,740	-22.4	-33.8	30	5.9
500	31	5,440	-27.2	-37.9	26	6.1
450	31	6,185	-32.5	-41.5	25	6.5
400	31	7,012	-38.4	-44.5	25	9.8
350	31	7,917	-45.0	-46.9	29	10.5
300	30	8,930	-51.4		28	12.0
250	30	10,101	-56.4		28	16.6
200	29	11,510	-57.4		28	14.7
175	29	12,360	-54.4		27	14.5
150	28	13,341	-53.1		27	14.0
125	28	14,516	-53.3		28	13.2
100	28	15,951	-54.4		27	10.6
80	28	17,377	-55.1		28	10.3
70	28	18,228	-55.4		29	9.2
60	28	19,210	-55.5		30	9.5
50	28	20,372	-55.4		31	10.2
40	28	21,794	-55.8		32	10.5
30	28	23,625	-55.2		33	11.9
25	28	24,788	-55.7		34	11.3
20	28	26,208	-55.8		34	10.9
15	26	28,021	-55.8		35	13.6
10	25	30,611	-54.5		33	9.1
7	18	32,916	-55.1		29	9.9
5	9	35,138	-59.7			
4	6	36,510	-63.8			
3	5	38,291	-64.9			

COLUMBIA, MO. 995 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	238	-4.1	-7.0	18	.7
1000	31	195				
950	31	600	-2.4	-7.2	24	3.9
900	31	1,031	-.5	-8.0	27	6.0
850	31	1,488	-1.1	-8.9	27	6.3
800	31	1,971	-1.8	-11.6	28	7.9
750	31	2,481	-3.1	-13.7	28	9.8
700	31	3,028	-5.3	-15.7	28	11.2
650	31	3,602	-8.0	-19.5	27	12.3
600	31	4,225	-11.5	-22.8	27	14.7
550	31	4,882	-15.6	-27.3	27	15.6
500	31	5,600	-20.3	-32.3	27	16.8
450	31	6,364	-25.9	-37.0	27	18.8
400	31	7,214	-32.3	-42.4	27	20.2
350	31	8,143	-39.3	-48.2	27	22.8
300	31	9,182	-46.9		27	22.8
250	31	10,370	-54.6		27	24.4
200	31	11,778	-59.6		27	26.3
175	31	12,613	-58.9		27	26.7
150	31	13,582	-58.9		27	22.8
125	31	14,722	-60.6		27	20.2
100	31	16,106	-62.2		27	17.9
80	30	17,485	-62.1		27	12.8
70	30	18,310	-61.7		27	10.6
60	30	19,265	-60.9		27	9.1
50	29	20,403	-59.7		26	6.8
40	29	21,801	-58.6		31	3.1
30	26	23,611	-57.3		30	1.5
25	24	24,770	-56.8		27	1.2
20	20	26,184	-56.1		23	1.4
15	14	28,014	-55.4		23	4.3
10	6	30,551	-53.9			

DAYTON, OHIO 988 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	297	-6.0	-9.0	25	.7
1000	31	199				
950	31	603	-4.7	-10.0	25	4.1
900	31	1,029	-3.4	-12.2	27	5.8
850	31	1,482	-3.2	-13.5	27	7.4
800	31	1,961	-3.9	-13.7	27	9.4
750	31	2,468	-4.9	-15.5	27	11.5
700	31	3,011	-6.6	-16.5	27	12.6
650	31	3,584	-9.2	-18.7	28	14.9
600	31	4,203	-12.6	-22.3	27	15.9
550	31	4,857	-16.5	-26.5	27	17.7
500	31	5,573	-21.3	-31.0	27	19.5
450	31	6,339	-26.7	-35.9	27	21.8
400	31	7,182	-33.2	-41.7	27	23.6
350	31	8,106	-40.3	-45.7	27	27.3
300	31	9,141	-47.8		27	29.9
250	31	10,324	-55.2		27	32.7
200	31	11,730	-58.8		27	34.8
175	31	12,569	-58.0		27	31.1
150	31	13,541	-58.0		27	27.9
125	31	14,685	-59.7		27	24.8
100	31	16,074	-61.6		27	21.4
80	31	17,458	-61.2		27	16.1
70	31	18,287	-60.9		27	13.6
60	29	19,242	-60.1		28	10.3
50	29	20,383	-58.9		28	7.4
40	27	21,785	-57.6		29	3.8
30	26	23,606	-56.7		31	1.0
25	25	24,763	-56.5		07	.6
20	24	26,186	-55.4		08	3.3
15	19	28,024	-54.4		08	3.0
10	11	30,640	-51.2			

DEL RIO, TEXAS 985 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	314	7.2	4.6	04	.2
1000	31	186				
950	31	610	7.5	4.1	17	1.0
900	31	1,054	7.0	1.9	23	1.7
850	31	1,525	7.6	.1	23	3.0
800	31	2,024	6.5	-4.4	24	4.4
750	31	2,549	4.1	-7.5	26	5.6
700	31	[illegible]	1.1	-10.2	25	7.9
650	31	[illegible]	-2.4	-11.5	25	10.7
600	31	[illegible]	-6.2	-15.7	25	13.9
550	31	[illegible]	-10.7	-23.1	25	14.6
500	31	5,738	-15.4	-27.7	25	17.5
450	31	6,519	-20.9	-32.2	25	17.8
400	31	7,386	-27.3	-36.3	25	[illegible]
350	31	8,334	-34.6	-44.8	25	[illegible]
300	31	[illegible]	-42.9	-48.9	25	[illegible]
250	31	10,596	-51.9		25	25.4
200	[illegible]	[illegible]	-59.2		26	27.6
175	30	12,648	-61.1		26	26.3
150	29	13,802	-61.3		26	26.2
125	29	14,926	-64.3		26	[illegible]
100	28	16,276	-67.5		26	18.4
80	27	17,615	-68.2		[illegible]	12.8
70	25	18,416	-67.2		[illegible]	[illegible]
60	[illegible]	19,351	-65.0		25	4.9
50	[illegible]	[illegible]	-62.9		22	[illegible]
40	[illegible]	[illegible]	[illegible]		23	[illegible]
30	19	23,654	[illegible]		17	[illegible]
25	[illegible]	24,807	-56.5		06	1.2
20	17	26,232	-54.5		[illegible]	1.2
15	15	28,076	-52.7		31	[illegible]
10	14	[illegible]	-47.9		26	[illegible]
7	7	33,110	-43.4			

DENVER, COLO. 838 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1,611	-5.7	-12.3	17	1.7
1000	31	199				
950	31	608				
900	31	1,043				
850	31	1,494				
800	31	1,977	1.2	-11.4	23	2.4
750	31	2,493	-.5	-13.9	28	4.4
700	31	3,045	-3.2	-17.4	29	6.6
650	31	3,623	-7.1	-20.6	30	8.5
600	31	4,246	-11.4	-24.2	29	10.3
550	31	4,905	-15.6	-28.1	29	12.1
500	31	5,622	-20.4	-32.2	29	12.7
450	31	[illegible]	-25.8	-37.3	28	13.9
400	31	7,238	-32.0	-42.9	28	14.3
350	31	8,167	-39.4	-47.6	27	15.2
300	31	[illegible]	-47.5		27	16.1
250	31	10,385	-55.9		27	16.6
200	31	11,784	-61.2		27	21.5
175	31	12,613	[illegible]		27	20.8
150	31	13,576	-59.6		27	21.4
125	31	14,714	-60.4		27	19.8
100	31	16,101	-61.4		27	16.0
80	31	17,483	-61.5		27	12.0
70	31	18,311	-61.2		27	10.1
60	31	19,272	[illegible]		27	8.2
50	31	20,412	-59.4		27	6.5
40	31	21,810	-59.0		27	6.5
30	31	23,618	-58.5		27	4.5
25	29	24,766	-56.4		28	4.2
20	27	26,171	-57.8		27	4.7
15	[illegible]	27,996	-56.4		23	2.2

DODGE CITY, KANS. 928 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	791	-4.5	-8.4	28	1.3
1000	31	195				
950	31	601				
900	31	1,032	-1.6	-7.4	29	1.6
850	31	1,491	1.1	-6.9	26	3.4
800	31	1,976	.8	-10.3	27	4.3
750	31	2,494	-.5	-12.5	27	5.5
700	31	3,045	-3.2	-16.1	28	7.4
650	31	3,625	-6.2	-19.5	28	8.2
600	31	4,251	-10.0	-22.6	28	8.9
550	31	4,913	-14.4	-26.5	28	10.1
500	31	5,633	-19.4	-31.9	28	11.2
450	31	6,403	-25.0	-37.0	28	12.8
400	31	7,254	-31.6	-42.9	26	13.6
350	31	8,184	-39.0	-46.6	26	15.6
300	31	9,222	-47.0		26	18.4
250	31	10,408	-55.0		26	23.6
200	30	11,813	-60.2		26	22.4
175	30	12,646	-59.8		26	21.9
150	29	13,614	-59.6		26	20.0
125	29	14,750	-61.2		26	19.5
100	29	16,129	-63.1		27	14.7
80	29	17,502	-62.5		26	12.3
70	29	18,326	-61.9		26	10.7
60	28	19,282	-60.6		26	7.6
50	28	20,418	-60.1		26	6.0
40	26	21,810	-59.5		26	4.1
30	24	23,624	-58.0		28	1.5
25	20	24,770	-57.2		25	2.7
20	20	26,184	-56.5		23	3.3
15	15	28,027	-54.9		24	7.0
10	6	30,662	-51.0			

EL PASO, TEXAS 886 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1,193	1.9	-1.4	33	.6
1000	31	199				
950	31	617				
900	31	1,057				
850	31	1,524	4.9	-3.4	30	1.8
800	31	2,018	3.5	-6.4	26	4.4
750	31	2,536	1.2	-9.1	27	5.8
700	31	3,093	-1.6	-13.6	27	6.6
650	31	3,677	-4.8	-18.2	27	7.6
600	31	4,306	-8.6	-22.4	27	9.2
550	31	4,971	-12.9	-26.3	27	10.5
500	31	5,697	-17.7	-30.1	27	11.7
450	31	6,472	-23.0	-34.5	27	12.9
400	31	7,332	-29.2	-40.8	27	14.8
350	31	8,273	-36.2	-46.7	26	17.7
300	31	9,326	-44.0		26	21.1
250	31	10,527	-53.0		26	24.6
200	31	11,942	-59.5		26	26.2
175	30	12,773	-60.5		26	26.6
150	30	13,730	-61.7		26	24.5
125	30	14,654	-63.5		26	20.3
100	30	16,213	-66.5		26	17.6
80	29	17,564	-66.9		26	13.8
70	29	18,372	-65.9		26	10.0
60	29	19,312	-63.7		26	7.4
50	27	20,437	-62.6		26	3.3
40	26	21,619	-60.9		24	2.5
30	25	23,613	-58.9		33	.5
25	25	24,760	-57.7		26	.7
20	25	26,172	-55.9		27	2.3
15	24	28,014	-53.2		26	5.4
10	15	30,633	-50.0		26	11.6

ELY, NEV. 810 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	1,908	-10.3	-15.6	19	4.7
1000	30	255				
950	30	657				
900	30	1,086				
850	30	1,533				
800	30	2,005	-4.4	-11.0	20	3.6
750	30	2,516	-2.5	-12.9	21	2.3
700	30	3,062	-4.9	-15.4	25	3.6
650	30	3,635	-7.5	-18.8	27	6.4
600	30	4,262	-11.1	-22.7	28	7.0
550	30	4,918	-15.6	-27.2	28	8.3
500	30	5,638	-20.5	-31.7	28	9.6
450	30	6,400	-26.3	-36.8	28	10.7
400	30	7,251	-32.7	-41.1	28	10.8
350	30	8,179	-39.7	-44.7	29	11.3
300	30	9,216	-47.7		30	12.0
250	30	10,398	-55.9		29	13.2
200	30	11,802	-60.4		29	15.8
175	30	12,633	-61.0		28	17.8
150	30	13,594	-59.9		28	17.3
125	30	14,732	-60.4		28	15.7
100	28	16,113	-62.7		28	13.4
80	27	17,492	-62.2		28	10.0
70	27	18,316	-62.2		28	8.2
60	27	19,271	-60.6		27	6.1
50	26	20,410	-59.8		27	5.0
40	25	21,812	-59.1		28	4.9
30	22	23,610	-58.4		27	4.4
25	21	24,766	-58.2		25	1.7
20	19	26,185	-57.0		29	2.3
15	18	28,015	-56.1		32	2.9
10	16	30,600	-54.4		29	9.9

*** FAIRBANKS, ALASKA 10[illegible] MB**

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	[illegible]	-23.0	-20.6	31	[illegible]
1000	31	175			30	[illegible]
950	31	[illegible]	-16.5	-19.0	06	[illegible]
900	31	[illegible]	-15.7	-20.4	03	1.1
850	31	1,396	-16.3	-21.3	02	[illegible]
800	31	1,852	-17.2	-22.7	35	3.1
750	[illegible]	2,332	-19.0	-25.2	34	[illegible]
700	31	2,846	-21.2	-27.5	33	[illegible]
650	31	3,391	[illegible]	-30.5	33	[illegible]
600	31	3,971	-27.2	-33.6	32	6.2
550	31	[illegible]	-30.6	-37.2	32	[illegible]
500	31	5,266	-34.6	-39.4	32	[illegible]
450	31	5,993	-39.3	-42.9	31	10.1
400	[illegible]	6,794	-44.5	-46.1	32	[illegible]
350	31	7,676	-50.1		[illegible]	[illegible]
300	[illegible]	[illegible]	-55.1		[illegible]	12.1
250	31	9,830	-57.3		[illegible]	[illegible]
200	[illegible]	11,247	-55.1		31	14.4
175	[illegible]	12,101	[illegible]		[illegible]	[illegible]
150	[illegible]	[illegible]	-54.8		31	[illegible]
125	[illegible]	14,252	-56.0		[illegible]	14.5
100	[illegible]	15,670	-56.6		31	14.9
80	30	17,083	-57.2		31	[illegible]
70	30	17,927	-57.1		31	[illegible]
60	30	[illegible]	-57.1		31	[illegible]
50	[illegible]	[illegible]	-57.2		32	[illegible]
40	[illegible]	[illegible]	-57.6		31	[illegible]
30	[illegible]	23,286	-56.5		[illegible]	[illegible]
25	27	24,456	-55.5		33	16.7
20	[illegible]	[illegible]	-54.1		[illegible]	14.1
15	[illegible]	27,733	-53.6		33	[illegible]
10	19	30,318	-55.5		35	[illegible]
7	11	[illegible]	-54.5			

FLINT, MICH. [illegible] MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	234	-7.6	-12.2	24	.8
1000	31	192				
950	31	592	-7.3	-11.3	26	3.0
900	31	1,013	-6.7	-12.5	28	4.4
850	31	1,460	-6.7	-14.3	28	6.0
800	31	1,934	[illegible]	-15.4	28	[illegible]
750	31	2,434	-8.1	-17.2	28	10.2
700	31	2,971	-10.1	-18.5	28	11.8
650	31	[illegible]	-13.0	-20.2	28	14.4
600	31	4,146	-15.9	-23.7	28	16.7
550	31	4,794	-19.8	[illegible]	28	19.6
500	31	[illegible]	-24.1	-31.9	28	22.7
450	31	6,255	-29.0	-36.8	28	24.6
400	31	7,093	-34.9	-42.4	28	27.2
350	31	[illegible]	[illegible]	-45.6	27	29.9
300	31	[illegible]	-49.0		27	32.0
250	31	10,219	-55.8		27	35.6
200	31	[illegible]	-57.4		28	33.5
175	31	[illegible]	-55.6		28	30.0
150	[illegible]	13,456	-55.8		27	[illegible]
125	[illegible]	14,613	-57.4		28	25.6
100	31	[illegible]	-58.6		27	20.1
80	30	17,422	-58.5		27	16.0
70	30	18,260	-58.4		27	13.0
60	[illegible]	19,231	-57.7		27	10.7
50	30	[illegible]	-57.5		27	7.7
40	[illegible]	21,792	-56.7		[illegible]	[illegible]
30	25	23,037	-55.3		23	1.1
25	[illegible]	24,806	-55.3		11	1.7
20	23	[illegible]	-54.9		13	2.5
15	19	28,067	-54.0		[illegible]	4.5
10	[illegible]	[illegible]	[illegible]			

FORT WORTH, TEXAS 10[illegible] MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	180	4.9	2.3	35	.4
1000	31	195			35	1.9
950	31	617	4.5	1.3	[illegible]	[illegible]
900	31	[illegible]	5.4	-.4	22	4.0
850	31	1,523	5.1	-3.3	25	4.8
800	31	2,018	3.9	-5.9	[illegible]	[illegible]
750	31	2,542	1.6	-8.5	25	7.5
700	31	3,094	-1.1	-12.6	26	[illegible]
650	31	3,679	-4.4	-16.5	26	10.8
600	31	[illegible]	-8.1	-20.3	26	12.6
550	31	4,975	-12.3	-23.3	26	14.7
500	31	5,701	-17.0	-27.9	26	16.8
450	31	6,480	-22.5	-32.8	26	[illegible]
400	31	[illegible]	-28.6	-39.0	26	20.2
350	31	8,281	-36.1	-46.0	26	[illegible]
300	31	9,334	[illegible]		26	25.0
250	31	10,534	-53.2		26	28.7
200	31	11,945	-59.6		26	30.1
175	31	12,779	-60.4		26	26.5
150	30	[illegible]	-60.9		26	24.9
125	30	[illegible]	-63.3		26	22.3
100	30	16,226	-65.9		26	17.6
80	29	17,575	-66.3		26	13.2
70	[illegible]	18,385	-65.3		26	11.2
60	27	[illegible]	-63.7		27	7.4
50	25	20,448	-62.5		27	4.8
40	[illegible]	21,832	[illegible]		27	2.4
30	22	23,633	-58.5		26	2.0
25	18	[illegible]	-57.4		26	2.9
20	18	26,194	-55.6		26	[illegible]
15	14	28,045	-53.2		27	[illegible]
10	[illegible]	30,680	-51.3			
7	5	33,011	-47.0			

GLASGOW, MONT. 936 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	696	-13.8	-18.0	06	1.8
1000	31	[illegible]				
950	31	[illegible]				
900	31	[illegible]	-8.9	-13.8	29	2.9
850	31	1,445	-6.0	[illegible]	29	7.4
800	31	1,919	-7.0	-14.1	30	9.0
750	31	2,422	-6.8	-15.9	29	[illegible]
700	31	2,953	-11.3	-18.7	29	[illegible]
650	31	3,521	-14.3	-21.8	29	14.5
600	31	4,123	-17.9	-25.3	28	[illegible]
550	31	4,765	-22.0	-28.6	29	17.7
500	31	5,462	-26.7	-33.2	26	19.6
450	31	6,209	-31.6	-36.3	28	22.6
400	31	7,037	-37.5	-39.6	28	25.6
350	31	7,946	-44.0	-44.0	28	27.4
300	31	8,964	-50.9		29	27.8
250	31	10,135	-56.1		29	26.9
200	31	11,542	-58.5		29	24.0
175	31	12,384	-57.0		29	22.1
150	31	13,361	-56.3		28	20.8
125	31	14,516	-56.9		28	18.6
100	31	15,926	-57.9		28	17.8
80	30	17,321	-59.0		28	16.9
70	30	18,159	-58.4		26	16.1
60	29	19,123	-57.9		27	13.9
50	29	20,273	-57.9		27	12.7
40	29	21,680	-57.7		27	12.0
30	27	23,479	-58.6		25	13.3
25	25	24,658	-57.9		26	10.8
20	[illegible]	[illegible]	-57.9		26	[illegible]
15	[illegible]	27,875	-57.0		23	7.9
10	[illegible]	[illegible]	-56.7			

GRAND JUNCTION, COLO. 857 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1,474	-12.1	-14.4	13	1.6
1000	31	279				
950	31	675				
900	31	1,097				
850	31	1,537			13	2.3
800	31	2,013	-4.0	-10.9	14	2.7
750	31	2,523	-3.6	-12.4	19	2.6
700	31	3,067	-5.6	-14.7	26	4.1
650	31	3,641	-8.3	-17.5	27	6.8
600	31	4,263	-11.4	-21.3	27	8.7
550	31	4,923	-15.6	-25.3	28	10.1
500	31	5,638	-20.2	-30.0	28	11.4
450	31	6,407	-25.9	-34.6	28	12.8
400	31	7,253	-32.2	-41.2	28	13.7
350	31	8,181	-39.6	-44.9	27	15.2
300	31	9,216	-48.0		28	14.6
250	31	10,396	-55.7		27	16.7
200	31	11,798	-60.3		28	19.5
175	31	12,632	-59.2		28	18.2
150	31	13,598	-59.3		27	18.2
125	31	14,737	-60.3		27	16.6
100	31	16,121	-62.7		27	14.5
80	30	17,490	-62.2		27	12.1
70	30	18,316	-61.3		27	10.8
60	30	19,274	-60.4		27	6.3
50	29	20,408	-59.6		27	6.6
40	29	21,862	-59.6		27	5.7
30	29	23,603	-56.8		27	4.0
25	27	24,757	-58.2		27	3.4
20	26	26,171	-57.2		26	3.7
15	21	28,005	-56.0		27	3.1
10	10	30,599	-53.7			

See reference note at end of table

RAWINSONDE DATA

Average monthly values

* GREAT FALLS, MONT. 887 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1,123	-6.6	-13.1	23	5.3
1000	31	172				
950	31	579				
900	31	1,010				
850	31	1,456	-4.3	-14.0	24	9.8
800	31	1,933	-5.6	-13.6	26	9.9
750	31	2,442	-8.1	-15.2	27	11.7
700	31	2,972	-10.0	-17.3	28	13.0
650	31	3,547	-13.3	-20.2	28	14.0
600	31	4,146	-17.2	-24.3	28	14.6
550	31	4,795	-21.5	-28.8	28	16.8
500	31	5,490	-26.3	-33.0	28	18.2
450	31	6,245	-31.8	-36.3	27	19.7
400	31	7,068	-37.5	-38.3	27	22.7
350	31	7,978	-43.7	-43.7	27	26.3
300	31	8,999	-50.5		28	25.2
250	31	10,174	-55.8		28	25.9
200	31	11,579	-59.3		28	23.4
175	31	12,417	-57.9		28	23.7
150	31	13,392	-56.4		28	20.0
125	30	14,539	-57.4		28	18.2
100	25	15,922	-57.4		28	18.0
80	23	17,344	-57.8		27	15.4
70	23	18,185	-57.9		27	13.4
60	23	19,154	-58.5		28	13.4
50	20	20,293	-58.4		27	14.8
40	20	21,701	-57.4		26	9.9
30	17	23,537	-57.2		25	11.0
25	15	24,700	-57.2		24	4.1
20	12	26,155	-57.3		26	4.8
15	10	28,008	-57.9			
10	5	30,636	-54.4			
7						
5						
4						

GREEN BAY, WIS. 997 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	210	-10.4	-12.7	27	.8
1000	31	188				
950	31	586	-9.5	-12.2	30	1.8
900	31	1,002	-8.5	-14.0	28	3.5
850	31	1,447	-8.0	-16.5	28	5.6
800	31	1,919	-7.6	-17.0	28	7.5
750	31	2,419	-8.8	-18.0	28	10.1
700	31	2,954	-10.8	-20.2	28	12.6
650	31	3,519	-13.3	-22.6	28	14.3
600	31	4,127	-17.0	-25.6	28	15.8
550	31	4,772	-20.8	-28.0	28	18.6
500	31	5,474	-25.4	-32.0	28	21.0
450	31	6,226	-30.3	-37.1	28	24.3
400	31	7,061	-36.1	-42.4	28	27.1
350	31	7,975	-42.7	-47.0	28	30.1
300	31	9,001	-49.9		28	31.5
250	31	10,176	-56.0		28	32.5
200	31	11,588	-57.5		28	30.6
175	31	12,433	-56.4		28	26.4
150	31	13,414	-55.9		28	26.3
125	31	14,572	-56.9		28	23.5
100	30	15,978	-58.0		28	19.3
80	30	17,383	-58.5		28	16.6
70	30	18,221	-58.3		26	15.2
60	30	19,194	-57.5		28	12.4
50	30	20,347	-56.8		27	8.6
40	30	21,761	-56.6		27	6.1
30	28	23,594	-56.4		27	2.8
25	27	24,753	-56.1		29	.4
20	24	26,171	-55.5		23	2.7
15	16	28,006	-54.3		24	10.8
10	8	30,625	-52.4			

GREENSBORO, N. C. 991 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	273	-.9	-4.1	36	1.3
1000	31	199				
950	31	612	.9	-7.5	33	2.8
900	31	1,046	1.5	-9.2	32	3.7
850	31	1,507	2.3	-9.9	28	5.3
800	31	1,997	1.4	-10.9	27	6.7
750	31	2,514	-.5	-12.4	27	9.1
700	31	3,064	-2.8	-14.7	27	12.2
650	31	3,647	-5.9	-17.1	27	13.3
600	31	4,272	-9.7	-20.9	28	14.3
550	31	4,936	-14.0	-25.6	27	16.5
500	31	5,655	-18.9	-29.7	27	18.2
450	31	6,428	-24.3	-34.8	27	21.0
400	31	7,280	-30.5	-40.0	27	20.7
350	31	8,217	-37.2	-44.4	28	23.5
300	31	9,265	-45.0		26	24.9
250	31	10,460	-53.4		28	26.5
200	31	11,874	-58.9		28	29.0
175	31	12,711	-59.3		28	26.5
150	31	13,676	-59.5		28	25.3
125	30	14,813	-61.6		28	19.7
100	30	16,187	-64.1		27	16.9
80	30	17,551	-63.9		28	13.0
70	30	18,370	-63.1		29	9.4
60	30	19,319	-62.3		29	5.7
50	30	20,448	-60.8		29	3.9
40	30	21,841	-56.7		33	1.7
30	30	23,656	-56.5		01	.7
25	28	24,815	-55.2		05	1.3
20	28	26,243	-53.9		06	.6
15	27	28,101	-51.6		02	.8
10	20	30,743	-48.9		26	7.3
7	12	33,085	-44.5			

* GUAM, MARIANA IS. 998 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	111	24.3	21.9	08	4.7
1000	31	94				
950	31	545	21.8	19.2	08	11.1
900	31	[illegible]	19.1	15.8	08	[illegible]
850	31	1,500	16.6	11.9	[illegible]	7.8
800	31	2,016	15.2	5.7	08	[illegible]
750	31	2,563	13.2	[illegible]	09	5.6
700	31	3,139	10.8	-6.3	09	[illegible]
650	31	3,756	7.6	-10.1	09	5.9
600	31	4,408	3.7	-13.1	09	6.3
550	31	5,108	-.2	-17.6	10	5.6
500	31	5,865	-5.0	-22.4	11	6.5
450	31	6,685	-9.9	-27.6	11	6.4
400	31	7,586	-15.4	-33.0	09	4.8
350	31	8,580	-22.5	-38.8	09	3.1
300	31	9,692	-31.1	-45.0	12	2.1
250	31	10,958	-41.0		17	1.2
200	31	12,434	-53.2		18	4.0
175	31	13,280	-60.1		18	5.0
150	31	14,224	-67.7		17	5.8
125	31	15,298	-76.1		15	7.1
100	31	16,555	-84.1		13	8.3
80	28	17,782	-84.4		10	5.8
70	28	18,528	-79.2		09	3.1
60	27	19,422	-72.7		33	.6
50	27	20,508	-67.5		16	1.1
40	27	21,870	-62.3		11	3.9
30	27	23,664	-58.7		[illegible]	10.0
25	26	24,816	-56.2		[illegible]	14.7
20	26	26,245	-52.9		[illegible]	17.4
15	25	28,121	-47.9		09	[illegible]
10	24	30,817	-44.9		09	[illegible]
7	22	33,216	-41.6		09	7.1
5	19	35,532	-36.4		21	4.4
4	8	37,068	-35.4			

HILO, HAWAII 1011 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	11	19.8	17.2	22	1.4
1000	31	[illegible]	[illegible]	17.4	22	[illegible]
950	31	544	18.6	15.1	16	1.4
900	31	1,009	15.6	12.1	16	[illegible]
850	31	1,493	12.9	[illegible]	17	[illegible]
800	31	[illegible]	11.5	[illegible]	20	[illegible]
750	31	2,538	9.7	-4.5	23	4.1
700	31	3,110	6.8	-7.7	25	[illegible]
650	31	3,712	[illegible]	-13.3	26	6.9
600	31	4,361	-.3	-17.2	26	8.9
550	31	5,045	-4.8	-21.1	26	9.8
500	31	5,795	-9.9	-25.9	26	11.3
450	31	6,596	-15.3	-29.5	27	12.7
400	31	7,481	-21.1	-35.4	27	15.1
350	31	8,454	-27.8	-41.4	27	18.9
300	31	9,545	-35.7	-46.7	27	23.5
250	31	10,791	-44.0		27	30.4
200	29	12,261	-53.7		28	30.6
175	29	13,108	-59.5		28	29.4
150	29	14,060	-65.0		29	25.5
125	29	15,153	-71.7		29	22.5
100	29	16,451	-77.3		29	16.0
80	26	17,728	-79.2		29	7.4
70	26	18,491	-75.7		32	2.7
60	26	19,393	-69.9		09	1.6
50	25	20,494	-65.7		10	3.3
40	25	21,867	-60.1		10	2.0
30	25	23,674	-57.6		07	3.6
25	24	24,833	-55.4		08	3.4
20	23	26,270	-51.9		10	7.6
15	23	28,148	-48.5		11	7.0
10	15	30,812	-46.7			

HUNTINGTON W. VA. 995 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	246	-4.1	-8.3	19	.8
1000	31	206				
950	31	616	-1.9	-6.9	25	3.7
900	31	1,042	-2.2	-9.3	26	5.5
850	31	1,497	-1.8	-11.4	27	6.9
800	31	1,979	-2.3	-11.2	27	8.7
750	31	2,491	-3.4	-11.9	27	10.7
700	31	3,036	-5.0	-14.6	27	12.6
650	31	3,612	-8.0	-17.7	28	13.9
600	31	4,234	-11.7	-21.7	28	15.6
550	31	4,895	-15.6	-25.5	27	18.1
500	31	5,610	-20.3	-30.4	27	20.0
450	31	6,380	-25.9	-35.9	27	21.3
400	31	7,227	-32.0	-41.2	27	24.2
350	31	8,157	-38.8	-45.9	27	28.2
300	31	9,199	-46.5		27	31.3
250	31	10,389	-54.2		27	35.1
200	31	11,800	-59.3		27	37.3
175	30	12,636	-58.3		27	33.2
150	30	13,607	-58.1		27	29.8
125	30	14,751	-60.0		27	25.8
100	30	16,136	-62.5		27	22.6
80	30	17,514	-61.7		27	17.6
70	30	18,341	-61.2		27	14.7
60	29	19,299	-60.2		28	10.7
50	29	20,440	-58.8		28	7.0
40	28	21,848	-57.4		28	4.0
30	28	23,674	-55.5		32	1.2
25	27	24,842	-54.7		07	1.0
20	26	26,271	-53.8		12	.5
15	21	28,132	-52.3		13	1.2
10	13	30,789	-49.0			
7						
5						

* INTERNATIONAL FALLS, MINN. 978 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	360	-17.2	-21.1	16	1.6
1000	31	188				
950	31	574	-15.6	-18.7	17	3.7
900	31	983	-13.0	-16.9	22	4.8
850	31	1,421	-11.5	-17.9	26	6.6
800	31	1,886	-11.4	-18.8	27	7.7
750	31	2,376	-12.8	-19.8	27	9.1
700	31	2,905	-14.4	-20.9	27	10.8
650	31	3,459	-17.0	-22.6	28	13.3
600	31	4,061	-20.0	-27.2	28	15.9
550	31	4,695	-23.8	-30.1	28	18.8
500	31	5,391	-28.2	-32.3	28	19.4
450	31	6,134	-33.0	-36.1	28	21.5
400	31	6,958	-38.8	-42.0	28	23.6
350	31	7,863	-45.0	-46.5	28	25.9
300	31	8,880	-51.0		28	28.3
250	31	10,051	-56.6		28	29.5
200	30	11,479	-57.1		28	27.6
175	30	12,328	-55.3		28	24.8
150	30	13,313	-55.0		28	24.0
125	30	14,476	-55.8		28	20.3
100	30	15,891	-56.9		28	19.2
80	30	17,303	-57.5		27	15.5
70	29	18,140	-57.1		27	16.0
60	29	19,117	-56.6		27	14.4
50	29	20,273	-56.8		27	12.5
40	29	21,688	-56.6		26	9.4
30	28	23,514	-56.8		26	10.4
25	24	24,716	-55.8		25	4.5
20	23	26,164	-55.2		19	1.7
15	20	28,032	-54.7		16	3.2
10	15	30,630	-53.3		14	5.3
7	6	32,914	-51.8			

JACKSON, MISS. 1012 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	94	3.5	1.8	04	.6
1000	31	191	5.2	2.0	11	1.3
950	31	615	5.7	-.2	18	1.9
900	31	1,055	5.8	-1.4	26	2.7
850	31	1,523	5.5	-3.1	27	5.1
800	31	2,018	4.0	-6.4	27	6.5
750	31	2,538	1.7	-9.8	27	8.4
700	31	3,095	-.8	-12.4	27	10.6
650	30	3,677	-4.4	-15.8	27	11.8
600	30	4,309	-8.1	-19.4	27	13.6
550	30	4,972	-12.3	-23.1	27	15.7
500	30	5,703	-17.1	-27.4	27	17.0
450	30	6,479	-22.6	-32.6	27	19.0
400	30	7,340	-29.0	-37.0	27	21.4
350	30	8,282	-35.7	-43.6	27	24.0
300	30	9,337	-43.3	-50.7	27	26.3
250	30	10,541	-51.7		26	31.3
200	30	11,962	-58.7		27	34.9
175	30	12,796	-60.3		26	34.7
150	30	13,755	-61.5		26	30.6
125	30	14,879	-63.7		26	26.7
100	30	16,236	-66.9		26	22.4
80	30	17,578	-67.5		26	16.0
70	30	18,383	-66.6		26	11.8
60	29	19,319	-64.9		27	8.4
50	29	20,436	-62.5		28	4.7
40	28	21,820	-60.3		28	3.1
30	25	23,623	-58.1		30	1.7
25	23	24,772	-57.3		33	1.1
20	23	26,188	-55.4		03	1.0
15	21	28,027	-54.0		08	2.7
10	16	30,634	-50.3		20	1.7
7	6	32,912	-49.2			

JACKSONVILLE, FLA. 1023 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	5	7.3	5.6	34	1.6
1000	31	191	9.9	[illegible]	36	[illegible]
950	31	621	9.8	4.9	[illegible]	1.7
900	31	1,067	8.1	2.1	[illegible]	[illegible]
850	31	1,538	[illegible]	-2.8	26	[illegible]
800	31	[illegible]	[illegible]	-7.5	25	[illegible]
750	31	2,553	3.8	-12.6	27	[illegible]
700	31	3,118	1.0	-15.1	27	[illegible]
650	31	3,706	-2.0	-19.1	27	12.1
600	31	4,343	-5.7	-22.6	27	[illegible]
550	31	5,011	-10.1	-27.9	27	15.6
500	31	5,748	-15.0	-30.0	26	17.4
450	31	6,525	-20.8	-33.2	26	19.8
400	31	7,397	-27.0	-38.1	27	[illegible]
350	31	8,347	-33.8	-45.2	26	24.7
300	31	9,410	-41.8	-53.0	27	[illegible]
250	31	10,623	-50.6		27	32.6
200	31	[illegible]	-57.9		27	36.4
175	30	[illegible]	-60.2		27	37.0
150	29	13,847	-61.4		27	33.5
125	29	14,970	-64.5		27	[illegible]
100	29	16,321	-68.4		27	[illegible]
80	29	17,652	-69.6		27	[illegible]
70	29	18,449	-68.6		27	13.9
60	29	19,375	-66.5		27	8.1
50	28	20,486	-63.5		29	[illegible]
40	28	21,864	-60.3		36	[illegible]
30	27	23,671	-56.9		01	[illegible]
25	27	24,825	-55.3		04	[illegible]
20	26	26,251	-53.7		07	[illegible]
15	25	[illegible]	-51.3		[illegible]	[illegible]
10	19	30,771	-46.1		27	[illegible]
7	14	33,188	-39.4			
5	6	35,494	-36.2			

JOHN F. KENNEDY INT. AP, N.Y. 1024 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	5	-4.5	-11.1	33	2.9
1000	31	193	-4.8	-11.8	33	4.7
950	31	[illegible]	-4.4	-12.2	32	5.3
900	31	1,023	-4.6	-12.8	31	[illegible]
850	31	1,474	-4.7	-15.0	30	9.7
800	31	1,951	-5.3	-15.5	29	11.6
750	31	[illegible]	-6.6	-16.5	29	14.2
700	31	2,994	-8.3	-16.9	28	15.0
650	31	[illegible]	-10.4	-19.1	28	18.7
600	31	4,181	-13.7	-23.2	28	20.3
550	31	[illegible]	-17.8	-26.6	28	22.9
500	31	5,545	-22.1	-32.4	29	25.8
450	31	6,311	-27.5	-37.4	28	[illegible]
400	31	7,149	-33.7	-42.9	28	31.4
350	31	8,074	-40.3	-47.1	28	[illegible]
300	31	9,109	-47.9		28	[illegible]
250	31	10,293	[illegible]		28	[illegible]
200	31	[illegible]	-58.4		28	[illegible]
175	31	12,549	-56.5		28	30.3
150	31	13,529	-56.3		28	[illegible]
125	31	14,683	-56.1		[illegible]	[illegible]
100	31	16,084	-55.4		28	[illegible]
80	30	17,481	-60.1		29	13.5
70	30	18,315	-59.7		29	10.4
60	30	19,282	-58.4		29	[illegible]
50	30	20,432	-57.5		31	[illegible]
40	30	[illegible]	-56.3		31	[illegible]
30	29	[illegible]	-54.7		[illegible]	[illegible]
25	29	24,847	-54.1		[illegible]	1.1
20	27	26,298	-52.8		10	3.3
15	26	28,148	-51.4		10	3.7
10	17	[illegible]	-49.1		11	[illegible]
7	6	33,157	-45.1			

JOHNSTON IS., PACIFIC AREA 1011 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	3	23.5	18.6	08	3.1
1000	31	96	22.7	18.0	07	3.5
950	31	539	19.1	15.6	07	3.3
900	31	1,004	15.7	12.7	08	2.4
850	31	1,488	14.0	4.0	11	1.3
800	31	1,998	12.6	-1.8	21	.9
750	30	2,536	10.5	-6.7	25	2.5
700	30	3,109	8.2	-12.1	25	4.0
650	30	3,714	5.1	-15.6	26	5.4
600	30	4,366	1.0	-18.4	26	6.6
550	30	5,054	-3.1	-22.7	26	6.7
500	30	5,809	-7.5	-26.5	28	8.1
450	30	6,620	-13.1	-31.2	30	9.5
400	30	7,509	-18.7	-36.7	29	12.1
350	30	8,492	-25.2	-41.7	29	14.6
300	30	9,594	-32.8	-48.5	28	16.7
250	30	10,853	-42.2		29	16.5
200	30	12,326	-53.3		30	18.1
175	30	13,173	-59.7		30	18.2
150	29	14,119	-66.3		30	17.5
125	29	15,203	-74.1		30	17.5
100	28	16,479	-80.9		30	13.6
80	27	17,730	-82.4		30	6.2
70	27	18,482	-78.3		31	2.4
60	26	19,377	-70.9		06	.4
50	26	20,474	-65.1		09	1.9
40	25	21,850	-60.7		09	3.0
30	22	23,659	-56.9		09	6.8
25	22	24,820	-54.6		08	9.9
20	21	26,256	-51.2		09	12.8
15	17	28,151	-47.4		10	12.7
10	5	30,806	-45.4			
7						
5						
4						

KING SALMON, ALASKA 1016 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	15	-11.9	-16.8	35	1.8
1000	31	137	-6.7	-13.9	35	2.0
950	31	534	-8.9	-15.0	36	5.1
900	31	953	-9.3	-16.6	35	5.7
850	31	1,395	-9.4	-18.6	35	6.0
800	31	1,863	-10.8	-20.9	34	5.6
750	31	2,355	-13.0	-23.1	34	6.9
700	31	2,881	-15.2	-25.0	34	8.7
650	31	3,435	-18.0	-28.3	34	8.6
600	31	4,033	-21.5	-31.4	33	9.7
550	31	4,665	-25.2	-34.6	33	10.5
500	31	5,356	-29.4	-37.7	32	11.5
450	31	6,096	-34.2	-41.2	32	12.2
400	31	6,917	-40.1	-44.7	32	14.9
350	31	7,816	-46.4		32	16.1
300	31	8,826	-52.2		32	17.0
250	31	9,994	-56.0		31	17.9
200	31	11,412	-55.9		30	16.8
175	31	12,264	-54.5		31	15.9
150	31	13,253	-53.8		30	[illegible]
125	30	14,416	-53.8		30	13.5
100	30	15,844	-55.3		30	15.8
80	30	17,267	-56.0		32	15.1
70	30	18,114	-56.2		32	16.6
60	30	19,095	-56.1		31	14.5
50	30	20,253	-56.2		32	15.2
40	30	[illegible]	-56.2		32	16.3
30	30	23,499	-56.2		33	15.5
25	28	24,676	-55.8		33	14.8
20	24	26,081	-55.1		34	[illegible]
15	22	27,904	-54.0		35	17.2
10	17	30,502	-51.3			
7	6	[illegible]	[illegible]			

* KOROR, CAROLINE IS. 1016 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	30	27.0	23.7	06	[illegible]
1000	31	81	26.5	23.1	07	2.9
950	31	528	23.0	18.9	07	[illegible]
900	31	1,004	20.2	14.5	06	[illegible]
850	31	1,497	18.0	9.6	08	7.2
800	31	2,015	15.4	6.2	09	[illegible]
750	31	2,557	12.9	1.7	09	6.7
700	31	3,138	10.1	-2.7	[illegible]	7.2
650	31	3,747	6.7	-7.1	09	8.3
600	31	4,405	3.0	-10.4	09	[illegible]
550	31	5,103	-.8	-14.0	09	[illegible]
500	31	5,862	-5.0	-19.1	09	[illegible]
450	31	6,680	-9.8	-23.9	10	[illegible]
400	31	7,584	-15.1	-29.9	[illegible]	11.1
350	31	8,581	-22.1	-37.0	10	[illegible]
300	31	9,695	-30.7	[illegible]	11	9.0
250	31	[illegible]	-40.9	[illegible]	11	9.4
200	31	12,439	-53.4		11	12.6
175	31	13,284	-60.7		12	[illegible]
150	31	14,225	-68.6		12	15.3
125	31	15,294	-76.9		11	17.3
100	31	16,552	-83.5		11	[illegible]
80	31	17,797	-80.3		[illegible]	3.4
70	31	[illegible]	-75.5		29	[illegible]
60	31	19,461	-70.6		28	6.1
50	31	20,554	[illegible]		27	3.7
40	30	21,917	-62.6		09	5.4
30	29	23,709	-56.8		09	21.0
25	27	24,861	[illegible]		[illegible]	[illegible]
20	21	26,279	-52.6		09	27.1
15	11	28,136	-46.8		09	[illegible]

* KOTZEBUE, ALASKA 1021 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	5	-16.5	-20.2	13	[illegible]
1000	31	[illegible]	-14.5	-19.3	14	[illegible]
950	31	[illegible]	-12.1	-17.2	19	[illegible]
900	31	[illegible]	-12.4	[illegible]	24	[illegible]
850	31	1,401	[illegible]	-20.5	25	[illegible]
800	31	[illegible]	-15.2	-22.9	27	[illegible]
750	31	2,344	-17.9	-24.9	27	[illegible]
700	31	2,859	-20.5	[illegible]	26	[illegible]
650	31	3,403	-23.1	-29.9	25	[illegible]
600	31	[illegible]	-26.2	-33.0	25	[illegible]
550	31	[illegible]	[illegible]	-35.2	[illegible]	[illegible]
500	31	[illegible]	-34.2	-39.0	25	[illegible]
450	31	[illegible]	-39.0	[illegible]	25	[illegible]
400	31	6,817	-44.2	[illegible]	24	[illegible]
350	31	7,702	-49.4		25	[illegible]
300	31	[illegible]	-54.1		25	[illegible]
250	31	9,861	[illegible]		[illegible]	[illegible]
200	30	11,265	-55.5		26	[illegible]
175	30	12,118	-54.8		[illegible]	[illegible]
150	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]
125	29	[illegible]	-55.0		[illegible]	[illegible]
100	28	15,690	-55.7		26	[illegible]
80	28	17,111	-55.7		26	[illegible]
70	27	[illegible]	-56.0		27	[illegible]
60	27	[illegible]	-55.9		27	[illegible]
50	27	[illegible]	-55.9		[illegible]	[illegible]
40	[illegible]	[illegible]	-55.6		26	[illegible]
30	24	[illegible]	-55.7		26	[illegible]
25	21	24,512	-56.3		[illegible]	[illegible]
20	[illegible]	[illegible]	-56.8		29	[illegible]
15	10	27,743	-55.1			

KWAJALEIN, MARSHALL IS. [illegible] MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	[illegible]	[illegible]	22.5	05	[illegible]
1000	31	76	25.8	21.8	[illegible]	[illegible]
950	31	527	[illegible]	19.4	[illegible]	[illegible]
900	31	[illegible]	[illegible]	15.4	[illegible]	[illegible]
850	31	1,485	17.3	12.2	06	7.7
800	31	2,005	15.7	5.2	07	[illegible]
750	31	2,551	13.4	.3	[illegible]	[illegible]
700	31	[illegible]	[illegible]	-5.0	[illegible]	[illegible]
650	31	3,744	7.3	-11.7	[illegible]	[illegible]
600	31	4,398	3.2	-16.3	08	[illegible]
550	31	5,098	-.6	[illegible]	[illegible]	7.4
500	31	5,853	[illegible]	-25.6	07	[illegible]
450	31	6,674	-9.7	-31.2	07	[illegible]
400	31	7,574	-15.1	-36.5	[illegible]	[illegible]
350	31	8,571	-21.6	-41.5	06	[illegible]
300	31	9,687	-30.1	[illegible]	[illegible]	[illegible]
250	31	10,957	[illegible]	-54.4	04	2.3
200	31	12,435	-53.1	-63.8	12	.4
175	31	13,282	-60.0	-70.9	14	[illegible]
150	31	[illegible]	-67.9		05	1.4
125	30	15,297	-76.5		[illegible]	[illegible]
100	30	16,554	[illegible]		07	7.2
80	29	17,776	[illegible]		09	[illegible]
70	29	[illegible]	[illegible]		[illegible]	[illegible]
60	29	19,417	-73.1		27	[illegible]
50	28	20,500	-67.5		28	4.1
40	28	[illegible]	-63.6		[illegible]	.7
30	28	23,637	[illegible]		[illegible]	[illegible]
25	[illegible]	24,784	-56.8		09	[illegible]
20	27	26,206	-53.7		[illegible]	[illegible]
15	27	28,080	[illegible]		09	[illegible]
10	27	30,784	-42.5		[illegible]	[illegible]
7	25	[illegible]	-37.5		11	[illegible]
5	24	35,593	-34.7			
4	[illegible]	37,180	-32.2			

See reference note at end of table

RAWINSONDE DATA

Average monthly values

JANUARY 1968

LAKE CHARLES, LA. 1022 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	5	7.3	6.2	05	2.2
1000	31	185	8.9	6.0	10	2.4
950	31	615	8.3	2.8	16	2.1
900	31	1,057	8.1	1.9	22	2.9
850	31	1,529	7.3	-1.6	25	4.8
800	31	2,027	5.8	-5.0	26	7.1
750	31	2,557	3.6	-7.7	26	8.4
700	31	3,111	.7	-11.0	26	10.6
650	31	3,703	-2.5	-15.5	26	11.5
600	31	4,334	-6.3	-19.4	26	13.5
550	31	5,004	-10.6	-23.6	26	14.8
500	31	5,737	-15.1	-28.7	26	17.3
450	31	6,519	-20.6	-32.4	26	19.7
400	31	7,386	-27.0	-38.2	26	22.3
350	31	8,335	-34.3	-44.8	26	23.0
300	31	9,394	-42.7	-49.3	26	24.8
250	31	10,600	-51.5		26	27.4
200	31	12,021	-58.8		26	32.7
175	31	12,655	-60.9		26	31.9
150	31	13,811	-61.9		26	30.9
125	30	14,936	-64.4		26	26.1
100	30	16,288	-68.3		26	20.7
80	30	17,624	-68.2		26	14.3
70	29	18,426	-67.5		26	10.7
60	28	19,357	-65.7		26	6.4
50	28	20,472	-62.9		27	3.3
40	27	21,855	-60.6		28	2.1
30	26	23,657	-58.0		30	.6
25	25	24,808	-56.8		32	1.7
20	23	26,226	-55.1		34	1.7
15	20	28,079	-51.9		35	1.8
10	12	30,715	-47.8			

LANDER, WYO. 829 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1,696	-11.4	-15.6	25	.7
1000	31	228				
950	31	627				
900	31	1,050				
850	31	1,498				
800	31	1,969	-3.7	-12.3	25	.8
750	31	2,478	-3.5	-14.9	28	3.6
700	31	3,023	-5.8	-17.4	28	6.8
650	31	3,593	-9.5	-20.4	28	9.8
600	31	4,215	-12.9	-24.6	28	12.8
550	31	4,864	-17.0	-28.8	28	14.1
500	31	5,584	-21.9	-33.7	28	15.5
450	31	6,342	-27.7	-38.8	28	16.4
400	31	7,188	-34.3	-43.1	28	17.4
350	31	8,107	-41.6	-46.5	28	18.5
300	31	9,135	-49.3		28	19.6
250	31	10,310	-56.7		28	20.8
200	30	11,715	-61.0		28	19.9
175	30	12,545	-60.5		28	20.4
150	30	13,510	-58.8		27	20.2
125	30	14,655	-59.0		27	17.1
100	29	16,043	-60.4		27	15.3
80	29	17,432	-60.9		27	13.1
70	29	18,261	-60.7		27	12.2
60	29	19,224	-59.7		27	11.5
50	29	20,366	-58.9		26	9.9
40	29	21,768	-58.4		26	8.4
30	28	23,574	-58.2		26	7.4
25	25	24,726	-58.3		25	7.1
20	21	26,136	-57.4		25	5.7
15	16	27,963	-56.5		22	4.9
10	6	30,617	-55.9			

* LIHUE KAUAI, HAWAII 1008 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	36	18.9	17.1	24	1.7
1000	31	103	20.1	17.0	25	1.3
950	31	544	18.2	14.4	19	.7
900	31	1,008	14.9	11.3	22	2.2
850	31	1,491	12.4	5.6	23	3.3
800	31	1,996	10.9	-2.9	25	3.9
750	31	2,530	8.9	-8.8	25	6.1
700	31	3,103	5.8	-11.7	25	7.7
650	31	3,703	2.6	-15.2	26	8.6
600	31	4,349	-1.0	-18.1	26	10.9
550	31	5,029	-5.2	-22.0	27	12.0
500	31	5,780	-10.2	-26.5	27	13.3
450	31	6,578	-15.7	-30.7	27	14.9
400	31	7,463	-21.8	-35.9	27	16.3
350	31	8,433	-28.6	-42.1	28	19.9
300	31	9,520	-36.5	-47.3	28	25.0
250	31	10,762	-44.6		28	28.3
200	30	12,229	-53.3		28	30.6
175	30	13,078	-58.7		28	29.5
150	30	14,035	-64.0		28	28.5
125	30	15,135	-70.5		28	25.5
100	29	16,438	-77.0		28	22.2
80	29	17,712	-78.2		27	15.5
70	28	18,480	-75.0		27	10.4
60	28	19,383	-70.9		27	4.3
50	28	20,478	-65.6		08	1.4
40	28	21,647	-61.5		11	1.9
30	28	23,646	-57.5		36	.4
25	27	24,802	-55.6		30	.8
20	27	26,228	-53.4		08	2.4
15	27	28,096	-49.6		13	2.5
10	25	30,764	-47.5		21	4.0
7	21	33,132	-42.4		24	9.3
5	19	35,426	-38.4		25	16.9
4	14	37,001	-34.8		26	19.4
3	10	39,033	-31.6			

LITTLE ROCK, ARK. 1015 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	79	.6	-2.0	02	1.9
1000	31	195	1.3	-2.1	03	1.9
950	31	610	2.3	-2.3	27	.3
900	31	1,047	3.3	-3.2	26	3.1
850	31	1,510	2.9	-4.2	27	5.2
800	31	2,001	2.1	-5.3	28	6.8
750	31	2,518	-.1	-8.8	27	7.8
700	31	3,072	-2.4	-11.9	27	9.7
650	31	3,654	-5.7	-15.6	27	11.4
600	31	4,281	-9.4	-19.7	27	12.2
550	31	4,944	-13.2	-24.2	27	13.4
500	31	5,670	-17.8	-28.6	27	15.9
450	31	6,442	-23.4	-33.5	27	17.2
400	31	7,302	-29.8	-38.0	26	20.3
350	31	8,240	-36.9	-44.8	26	20.9
300	31	9,290	-44.7		27	23.6
250	31	10,488	-52.9		26	29.0
200	31	11,903	-59.7		27	34.6
175	31	12,736	-60.3		27	31.3
150	31	13,698	-60.0		26	27.2
125	29	14,829	-62.3		26	24.0
100	27	16,193	-65.2		26	18.3
80	22	17,547	-64.5		26	14.0
70	22	18,362	-64.0		27	11.1
60	20	19,309	-63.0		27	8.0
50	19	20,431	-61.3		28	5.2
40	19	21,820	-59.4		30	3.1
30	17	23,625	-57.8		29	2.0
25	16	24,777	-56.9		32	1.9
20	15	26,198	-55.6		01	.3
15	12	28,035	-54.1		30	1.8
10	5	30,676	-51.7			

MCGRATH, ALASKA 1008 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	16	103	-20.9	-19.6	01	.3
1000	16	164				
950	16	553	-16.0	-18.4	04	2.2
900	16	957	-14.3	-18.7	05	4.8
850	16	1,391	-14.0	-19.5	04	3.9
800	16	1,851	-15.1	-21.2	02	3.7
750	16	2,334	-16.7	-22.7	36	4.1
700	16	2,853	-19.3	-25.1	33	4.8
650	16	3,396	-22.2	-28.5	33	5.5
600	16	3,986	-25.6	-32.1	32	6.2
550	16	4,603	-29.4	-35.1	30	7.1
500	16	5,286	-33.5	-37.4	30	9.1
450	16	6,011	-38.6	-40.6	30	12.4
400	16	6,817	-43.8		30	13.3
350	16	7,701	-50.0		30	15.1
300	16	8,698	-54.3		30	16.5
250	16	9,860	-56.3		30	17.6
200	16	11,282	-54.3		30	16.7
175	16	12,139	-53.6		29	15.2
150	16	13,131	-53.2		29	15.9
125	16	14,304	-53.5		28	16.3
100	16	15,735	-54.5		28	18.1
80	16	17,161	-55.0		29	19.0
70	16	18,013	-54.8		29	20.3
60	16	19,000	-54.7		29	21.4
50	16	20,166	-55.0		29	21.0
40	15	21,618	-55.1		29	23.2
30	15	23,451	-55.9		30	23.6
25	13	24,651	-55.2		31	22.1
20	11	26,059	-56.2		32	18.4
15	8	27,949	-56.7			

* MAJURO, MARSHALL IS. 1008 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	3	28.5	24.3	06	6.0
1000	31	77	27.3	21.4	06	6.9
950	31	521	23.2	17.2	07	9.3
900	31	1,000	20.1	13.6	07	9.4
850	31	1,492	17.5	9.6	08	8.6
800	31	[illegible]	15.5	4.1	08	[illegible]
750	31	2,555	14.0	[illegible]	08	6.3
700	31	3,134	10.9	-4.0	08	5.7
650	31	3,745	7.4	-8.8	08	5.8
600	31	4,404	3.7	-13.3	08	6.6
550	30	5,101	-.2	-18.4	07	5.8
500	30	5,863	-4.3	-22.4	06	5.7
450	30	6,685	-8.9	-27.2	07	6.8
400	30	7,592	-14.6	-32.8	06	7.5
350	30	8,592	-20.6	-38.6	06	6.1
300	30	9,714	-26.9	-45.6	04	4.1
250	30	10,992	-39.1	-54.2	01	3.4
200	30	12,482	-51.5		04	1.5
175	30	13,335	-56.6		03	1.1
150	30	14,287	-66.4		14	1.9
125	30	15,368	-74.8		24	4.6
100	30	16,038	-83.0		06	7.5
80	30	17,666	-84.4		07	[illegible]
70	29	18,617	-77.0		29	.4
60	27	19,513	-71.2		27	7.0
50	22	20,603	-66.7		28	7.5
40	16	21,972	-61.5		11	2.5
30	13	23,755	-59.9		09	16.9
25	11	[illegible]	-57.1			
20	8	26,313	-52.4			

* MARCUS IS., N. PACIFIC 1013 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	[illegible]	22.6	16.2	34	1.8
1000	30	125	21.0	13.6	34	.1
950	30	567	16.6	9.8	24	.9
900	30	1,025	13.0	7.4	24	2.6
850	30	[illegible]	10.3	3.1	25	3.6
800	30	2,007	8.4	-2.2	25	6.9
750	30	2,542	7.5	-8.2	26	10.4
700	30	3,105	5.8	-14.6	27	14.1
650	30	3,711	3.4	-17.0	26	18.0
600	30	4,355	.2	-19.9	27	20.7
550	30	5,044	-3.6	-23.1	27	24.6
500	3	5,796	-7.8	-26.9	27	28.0
450	30	6,607	-12.1	-30.5	27	31.5
400	30	7,501	-17.7	-35.6	27	32.9
350	30	8,488	-24.0	-40.8	27	34.7
300	30	9,596	-31.5	-47.3	28	34.1
250	30	10,862	-40.7	-53.9	28	35.7
200	30	12,346	-51.7		28	37.1
175	30	13,200	-58.0		27	35.3
150	30	14,155	-64.9		27	32.1
125	30	15,247	-72.6		27	28.9
100	30	16,531	-79.9		27	23.0
80	29	17,793	-79.3		27	15.3
70	29	18,554	-76.7		27	9.2
60	27	19,451	-71.6		29	3.7
50	27	20,546	-64.5		09	.8
40	26	21,928	-59.2		04	4.1
30	24	23,751	-55.3		10	3.0
25	24	24,921	-53.0		09	2.7
20	19	26,363	-49.7		22	2.4
15	17	28,254	-47.3			
10	10	30,946	-44.0			

* MEDFORD, OREG. 973 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	401	.2	-1.4	15	.4
1000	31	176				
950	31	593	2.1	-.4	15	.8
900	31	1,028	3.1	-2.6	17	3.3
850	31	1,490	1.5	-5.4	20	4.0
800	31	1,977	-.7	-8.7	23	6.1
750	31	2,487	-3.3	-11.2	24	8.5
700	31	3,035	-6.2	-14.7	25	9.9
650	31	3,608	-9.6	-18.4	26	11.0
600	31	4,226	-13.5	-21.9	26	13.0
550	31	4,880	-18.0	-25.7	26	13.8
500	31	5,589	-22.7	-31.3	26	16.2
450	31	6,352	-28.0	-36.4	26	17.9
400	31	7,191	-34.0	-41.8	26	20.4
350	31	8,115	-40.8	-45.1	26	21.2
300	31	9,148	-47.8		26	21.9
250	31	10,333	-54.7		27	21.3
200	31	11,743	-59.6		28	19.0
175	29	12,576	-59.3		28	18.8
150	29	13,546	-58.1		28	16.5
125	29	14,694	-58.7		28	14.7
100	28	16,095	-61.0		28	13.9
80	28	17,482	-60.8		29	10.1
70	28	18,312	-60.8		28	8.5
60	28	19,272	-60.0		28	8.0
50	27	20,408	-59.9		28	7.0
40	27	21,803	-59.7		29	6.2
30	26	23,601	-59.2		28	6.3
25	25	24,734	-59.6		28	5.8
20	25	26,133	-58.7		27	4.6
15	22	27,973	-58.5		30	5.8
10	15	30,525	-57.9		29	10.4
7	10	32,829	-51.7		28	15.4

MERIDA, MEXICO 1020 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	11	16.7	15.8	07	2.9
1000	31	177	20.4	16.6	08	6.0
950	31	613	17.7	13.2	09	6.6
900	31	[illegible]	14.9	9.0	09	4.7
850	31	1,562	12.1	4.9	08	3.6
800	31	2,069	10.6	-2.4	09	2.1
750	31	2,601	8.7	-9.0	13	1.1
700	31	3,174	5.6	-10.8	17	1.1
650	31	3,774	2.2	-14.8	22	1.9
600	31	4,419	-1.2	-19.9	24	2.7
550	31	5,101	-5.2	-23.6	24	4.0
500	31	5,851	-10.3	-27.9	25	6.4
450	31	6,646	-16.2	-31.0	25	8.5
400	31	7,531	-22.3	-37.1	25	10.3
350	31	[illegible]	-29.4	-42.8	25	11.9
300	31	9,580	-38.4	-50.9	25	13.6
250	31	10,807	-47.8		26	15.3
200	29	12,250	-57.5		25	16.3
175	29	13,086	-61.1		25	16.4
150	29	14,037	-64.3		25	16.8
125	26	15,144	-69.1		25	15.0
100	24	16,456	-73.6		24	[illegible]
80	21	17,749	-75.9		24	8.2
70	20	18,523	-74.3		25	3.2
60	20	19,431	-70.3		13	1.6
50	20	20,527	-65.2		08	4.1
40	20	21,904	-60.4		09	4.4
30	19	23,716	-56.2		07	6.3
25	19	24,881	-53.6		07	6.9
20	17	26,324	-50.1		06	4.4
15	14	[illegible]	-46.7		08	3.5
10	7	30,911	-44.1			

MIAMI, FLA. 1020 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	4	16.0	13.5	02	1.8
1000	31	174	17.8	14.0	05	3.5
950	31	612	15.3	11.2	07	3.1
900	31	1,070	12.6	7.3	10	2.2
850	31	1,548	9.9	3.7	13	1.7
800	31	2,051	8.1	-3.8	22	1.3
750	31	2,581	6.5	-10.7	27	3.1
700	31	3,146	4.3	-15.2	28	4.3
650	31	3,741	1.1	-18.3	28	5.4
600	31	4,386	-2.7	-22.1	27	7.5
550	31	5,065	-7.0	-25.8	27	8.9
500	31	5,808	-12.0	-30.2	27	10.8
450	31	6,595	-17.8	-34.1	27	14.4
400	31	7,478	-24.2	-39.2	27	17.2
350	31	8,436	-31.4	-44.6	27	20.3
300	31	9,512	-39.9	-52.5	27	22.3
250	31	10,735	-48.8		27	27.2
200	30	12,164	-57.8		27	31.0
175	30	13,003	-59.6		27	30.6
150	30	13,961	-62.7		26	29.5
125	30	15,073	-67.3		26	27.4
100	30	16,403	-72.0		26	22.1
80	30	17,711	-73.4		27	12.5
70	30	18,492	-72.5		27	7.1
60	29	19,405	-69.5		27	3.9
50	29	20,506	-64.9		04	1.6
40	29	21,881	-60.5		04	2.7
30	27	23,691	-56.3		05	4.0
25	27	24,854	-54.2		04	3.3
20	25	26,294	-51.8		04	1.5
15	21	28,161	-48.9		26	2.8
10	8	30,901	-45.2			

MIDLAND, TEXAS 91[illegible] MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	874	2.6	.3	29	1.2
1000	31	187				
950	31	[illegible]				
900	31	1,047	5.2	.2	28	1.6
850	31	1,515	6.1	-3.4	26	3.7
800	31	2,011	5.3	-6.1	27	5.2
750	31	[illegible]	2.7	[illegible]	27	7.2
700	31	3,091	-.6	-11.4	27	[illegible]
650	31	3,678	-4.4	-14.7	26	9.7
600	31	[illegible]	-7.9	-21.0	26	11.8
550	31	[illegible]	-12.2	-25.9	26	14.4
500	31	5,700	-16.8	-29.7	26	14.8
450	31	6,476	-22.0	-33.9	25	17.0
400	31	7,340	-28.3	-39.6	25	[illegible]
350	31	8,284	-35.3	-44.8	25	22.4
300	31	9,339	-43.4		25	25.4
250	31	10,542	-52.5		25	27.8
200	31	[illegible]	-59.7		26	28.9
175	31	12,790	-61.0		26	26.7
150	31	[illegible]	-61.0		26	24.4
125	31	14,875	-63.5		26	21.0
100	31	16,235	-66.4		26	17.0
80	29	17,581	-67.0		26	[illegible]
70	29	18,388	-65.3		26	[illegible]
60	27	19,332	-63.8		26	6.4
50	26	20,456	-62.0		26	2.2
40	25	21,637	-60.7		35	1.3
30	22	23,635	-56.1		31	.5
25	19	24,781	-57.0		05	.4
20	15	26,192	-55.4		36	1.4
15	12	28,022	-54.1		32	1.0
10	5	[illegible]	-49.6			

MONTGOMERY, ALA. 1017 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	61	3.4	.1	04	1.6
1000	31	197	5.5	1.2	07	1.9
950	31	[illegible]	5.7	-.1	22	.8
900	31	1,061	5.6	-2.3	26	3.7
850	31	1,528	5.1	-3.8	27	5.5
800	31	2,022	3.7	-5.7	27	7.6
750	31	2,544	2.1	-11.0	27	8.4
700	31	3,100	-.4	-12.8	27	[illegible]
650	31	3,686	-3.9	-15.0	26	12.7
600	31	4,317	-7.8	-19.0	26	14.0
550	31	4,984	-12.2	-23.4	26	15.6
500	31	5,712	-16.9	-28.2	26	18.3
450	31	6,491	-22.2	-32.5	26	20.9
400	31	7,350	-28.5	-37.4	26	22.2
350	31	8,294	-35.2	-43.2	26	24.8
300	31	9,351	-43.0	-49.4	26	27.4
250	31	10,558	-51.2		27	31.5
200	31	[illegible]	-58.5		27	33.6
175	31	12,817	-60.2		27	35.9
150	31	13,776	-61.5		26	32.5
125	31	14,900	-63.7		26	28.0
100	31	16,256	-67.2		26	23.1
80	31	[illegible]	-67.5		26	16.5
70	31	18,403	-66.8		26	12.5
60	31	19,340	-64.8		27	9.0
50	31	20,459	-62.6		28	5.0
40	29	21,843	-60.1		[illegible]	3.3
30	29	23,650	-57.5		36	1.5
25	29	24,807	-55.5		02	1.1
20	29	[illegible]	-53.9		04	1.9
15	28	[illegible]	-51.5		02	1.6
10	25	30,743	-47.0		26	3.8
7	14	33,145	-43.1			
5	7	[illegible]	-41.3			

* NANTUCKET, MASS. 1022 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	14	-2.9	-6.8	33	3.5
1000	31	181	-3.5	-8.5	32	4.3
950	31	585	-4.7	-12.0	30	6.6
900	31	1,011	-5.1	-13.5	30	[illegible]
850	31	1,460	-5.2	-13.5	29	10.5
800	31	1,936	-5.9	-14.0	29	12.3
750	31	2,439	-7.0	-16.0	28	14.3
700	31	2,977	-9.5	-17.4	28	14.8
650	31	3,543	-12.3	-21.1	28	17.7
600	31	4,155	-15.5	-24.7	28	21.0
550	31	4,605	-19.1	-28.8	28	22.6
500	31	5,511	-23.5	-33.8	28	24.5
450	31	6,267	-28.6	-39.4	28	27.7
400	31	7,107	-34.5	-45.1	28	30.8
350	31	8,027	-41.1	-49.7	28	33.4
300	31	9,058	-48.5		28	34.6
250	31	10,240	-54.6		28	36.8
200	30	11,651	-56.3		28	34.0
175	29	12,498	-55.1		28	32.5
150	29	13,479	-55.6		28	29.5
125	28	14,638	-56.7		28	25.4
100	[illegible]	16,047	-58.4		27	20.2
80	28	17,449	-58.6		27	16.0
70	28	18,287	-57.9		28	12.8
60	28	19,262	-57.3		28	11.0
50	27	20,416	-56.3		28	5.7
40	27	21,839	-55.0		26	1.9
30	27	23,682	-53.8		[illegible]	.8
25	27	24,856	-53.0		09	2.4
20	26	26,294	-52.5		10	3.5
15	23	28,158	-51.0		08	4.5
10	19	[illegible]	-49.3		09	1.8
7	16	33,177	-45.3		24	3.7

NASHVILLE, TENN. 1003 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	180	-1.6	-4.7	04	.9
1000	31	204			07	1.1
950	31	615	-.1	-5.0	24	2.3
900	31	1,048	.6	-5.0	27	3.9
850	31	1,508	.8	-6.2	26	6.1
800	31	1,994	-.2	-8.7	28	7.6
750	31	2,508	-1.9	-10.9	28	8.3
700	31	3,057	-4.2	-13.3	27	10.5
650	31	3,638	-6.7	-16.9	28	12.5
600	31	4,261	-10.4	-20.1	27	15.1
550	31	4,922	-15.0	-25.7	27	16.0
500	31	5,641	-19.5	-30.0	27	18.3
450	31	6,410	-24.7	-33.9	27	19.8
400	31	7,263	-31.0	-38.6	27	21.5
350	31	8,197	-37.6	-43.9	27	25.1
300	31	9,243	-45.4		27	27.0
250	31	10,437	-53.5		27	31.1
200	31	11,849	-59.4		27	31.9
175	31	12,684	-59.7		27	29.6
150	31	13,648	-59.7		27	24.8
125	31	14,782	-62.2		27	23.3
100	30	16,150	-64.4		27	20.1
80	27	17,512	-64.0		27	13.3
70	27	18,329	-63.4		28	9.3
60	25	19,275	-62.2		28	7.2
50	23	20,405	-60.6		31	3.6
40	22	21,799	-59.1		34	1.0
30	22	23,610	-57.0		04	1.7
25	21	24,767	-55.9		07	3.0
20	20	26,186	-55.3		07	1.4
15	19	28,031	-53.0		22	1.1
10	15	30,666	-47.7		27	11.7
7	5	33,054	-41.7			

* NOME, ALASKA 1020 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	5	-12.5	-17.5	08	1.3
1000	30	157	-10.1	-14.7	12	1.7
950	30	553	-9.8	-15.4	19	2.2
900	30	970	-10.8	-17.0	21	1.6
850	30	1,408	-11.8	-19.2	27	2.3
800	30	1,872	-13.3	-21.2	28	3.5
750	30	2,357	-15.4	-23.5	27	4.9
700	30	2,880	-18.1	-25.8	28	5.8
650	30	3,429	-21.1	-28.2	28	7.4
600	30	4,019	-24.2	-32.7	29	8.8
550	30	4,643	-27.9	-36.5	28	10.8
500	30	5,328	-32.1	-37.5	28	12.5
450	30	6,060	-36.8	-42.8	29	13.6
400	30	6,872	-42.1	-45.4	28	14.5
350	30	7,765	-47.6		28	16.2
300	30	8,771	-53.2		28	11.0
250	30	9,935	-56.9		28	11.0
200	29	11,338	-56.4		28	10.9
175	29	12,189	-54.6		28	11.5
150	29	13,177	-54.0		29	11.3
125	29	14,347	-54.2		29	11.6
100	28	15,773	-54.5		30	13.5
80	28	17,201	-54.8		30	15.4
70	28	18,053	-55.1		30	16.2
60	28	19,038	-55.1		30	17.6
50	27	20,196	-54.9		31	18.1
40	27	21,622	-54.5		31	19.5
30	26	23,453	-54.7		31	18.5
25	26	24,619	-55.0		30	17.4
20	25	26,061	-55.8		32	14.8
15	18	27,886	-56.3			
10	10	30,414	-56.3			

See reference note at end of table

RAWINSONDE DATA

Average monthly values

JANUARY 1968

NORTH PLATTE, NEBR. 921 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	848	-9.9	-13.1	33	.9
1000	31	203				
950	31	602				
900	31	1.023	-4.8	-10.1	31	3.1
850	31	1.477	-1.0	-10.2	30	5.1
800	31	1.962	-1.0	-11.7	29	7.2
750	31	2.474	-2.6	-14.1	29	8.8
700	31	3.020	-5.7	-16.8	29	9.8
650	31	3.592	-8.7	-20.4	29	10.9
600	31	4.215	-12.3	-23.9	29	12.7
550	31	4.869	-16.4	-27.7	29	14.5
500	31	5.586	-21.4	-32.6	29	14.5
450	31	6.350	-26.7	-37.8	28	16.1
400	31	7.197	-33.1	-42.5	28	18.3
350	31	8.122	-40.2	-46.6	28	19.7
300	31	9.157	-48.1		27	22.2
250	31	10.337	-56.3		27	22.9
200	31	11.735	-60.7		27	25.4
175	31	12.570	-58.7		27	23.9
150	31	13.539	-58.5		27	22.4
125	31	14.682	-59.8		27	19.6
100	31	16.071	-61.1		27	15.1
80	31	17.458	-60.9		27	12.2
70	31	18.288	-60.5		27	10.6
60	31	19.251	-59.7		27	8.4
50	29	20.406	-58.4		27	6.6
40	29	21.809	-58.3		28	4.2
30	28	23.627	-57.8		27	2.7
25	27	24.782	-57.4		26	2.1
20	25	26.205	-56.2		18	.8
15	20	28.054	-55.7		16	1.5
10	5	30.626	-56.2			
7						
5						

OAKLAND, CALIF. 1020 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	6	5.5	4.0	14	1.2
1000	31	167	7.8	2.3	13	1.7
950	31	591	8.3	-1.0	12	1.3
900	31	1.037	7.2	-4.8	22	1.7
850	31	1.505	5.6	-8.3	24	2.9
800	31	2.000	3.6	-11.1	25	4.0
750	31	2.517	.9	-14.6	27	5.5
700	31	3.073	-2.3	-17.1	26	6.3
650	31	3.652	-6.0	-20.0	27	7.6
600	31	4.280	-10.0	-23.1	28	9.0
550	31	4.937	-14.3	-26.4	28	10.4
500	31	5.661	-19.3	-30.9	27	11.3
450	31	6.426	-25.2	-35.8	27	13.3
400	31	7.280	-31.9	-41.4	27	14.3
350	31	8.209	-39.3	-43.8	27	15.7
300	31	9.246	-47.4		27	17.0
250	31	10.428	-55.6		28	18.3
200	31	11.831	-59.9		28	19.0
175	31	12.664	-60.1		28	19.7
150	30	13.621	-59.5		28	18.1
125	30	14.759	-60.6		28	15.6
100	29	16.144	-62.7		28	12.9
80	26	17.519	-62.2		28	7.3
70	26	18.344	-61.5		29	6.2
60	25	19.297	-60.6		29	4.2
50	24	20.439	-60.0		32	1.5
40	23	21.842	-59.2		31	1.2
30	22	23.650	-59.0		33	1.6
25	21	24.790	-58.2		32	2.1
20	20	26.190	-57.4		31	3.6
15	16	28.015	-56.4		28	6.9
10	15	30.596	-55.1		28	16.3
7	6	32.813	-54.4			
5						

OMAHA, NEBR. 974 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	403	-8.7	-11.9	31	.9
1000	31	194				
950	31	595	-7.1	-11.1	28	2.2
900	31	1.017	-3.3	-11.1	26	4.7
850	31	1.471	-2.0	-11.3	28	7.3
800	31	1.953	-2.6	-11.5	26	8.7
750	31	2.461	-4.2	-13.4	28	10.1
700	31	3.006	-6.1	-17.1	28	11.8
650	31	3.579	-9.2	-20.8	28	13.9
600	31	4.199	-12.9	-24.6	28	15.7
550	31	4.853	-17.1	-28.3	28	17.7
500	31	5.566	-21.8	-32.8	28	20.0
450	31	6.326	-27.5	-37.8	28	20.8
400	31	7.171	-33.8	-43.0	28	23.5
350	31	8.093	-40.7	-48.2	28	22.3
300	31	9.125	-48.4		28	25.0
250	31	10.303	-56.3		27	26.4
200	31	11.704	-59.5		27	25.9
175	31	12.541	-58.6		28	24.1
150	31	13.511	-58.1		27	22.4
125	31	14.653	-59.9		27	20.2
100	31	16.040	-61.3		27	15.0
80	31	17.426	-60.4		28	11.2
70	30	18.256	-60.0		28	8.6
60	30	19.218	-59.8		28	6.3
50	29	20.363	-57.1		28	4.3
40	27	21.772	-58.0		30	2.4
30	26	23.589	-57.2		31	.7
25	24	24.743	-56.9		16	.9
20	21	26.169	-56.6		15	2.2
15	11	27.995	-55.6			
10						
7						
5						

PAGO PAGO, AMERICAN SAMOA 1007 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	5	29.4	24.4	07	2.8
1000	31	65	28.3	22.6	07	3.1
950	31	516	23.7	18.0	05	4.1
900	31	993	20.9	14.3	05	4.9
850	31	1.487	18.2	10.7	05	4.8
800	31	2.004	15.7	7.0	05	3.8
750	31	2.544	13.1	2.9	05	3.5
700	31	3.127	10.1	-.8	05	2.9
650	31	3.733	6.9	-5.0	05	3.6
600	31	4.394	3.2	-8.4	05	2.9
550	31	5.089	-.8	-13.1	05	2.3
500	31	5.851	-4.9	-17.6	05	1.7
450	31	6.670	-9.9	-22.9	04	1.0
400	31	7.572	-15.3	-28.3	29	1.2
350	31	8.568	-22.1	-35.6	29	1.7
300	31	9.684	-30.5	-43.9	26	2.4
250	31	10.953	-40.7	-50.9	23	4.9
200	31	12.432	-53.1		24	7.8
175	31	13.279	-60.2		23	8.5
150	31	14.224	-67.7		24	10.1
125	31	15.301	-74.8		24	10.2
100	31	16.575	-81.2		24	[illegible]
80	31	17.827	-79.7		12	3.6
70	31	18.593	-74.3		10	7.1
60	29	19.496	-69.6		[illegible]	[illegible]
50	25	20.596	-65.2		09	13.9
40	21	21.972	-60.0		09	17.3
30	20	23.786	-55.8		09	21.5
25	10	24.954	-53.7			
20	5	26.386	-48.9			
15						
10						
7						
5						

PEORIA, ILL. 1000 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	200	-7.7	-10.8	18	.2
1000	31	196			12	[illegible]
950	31	598	-5.3	-9.3	27	3.5
900	31	1.024	-2.7	-10.6	26	5.8
850	31	1.478	-2.6	-11.1	28	[illegible]
800	31	1.958	-3.7	[illegible]	29	[illegible]
750	31	2.461	-5.1	-15.0	28	[illegible]
700	31	[illegible]	[illegible]	-18.4	28	[illegible]
650	31	3.580	-9.8	-20.4	28	14.1
600	31	4.197	-13.1	-23.3	28	14.8
550	31	4.849	-16.8	-28.0	28	17.
500	31	5.565	-21.7	-32.5	28	18.9
450	31	6.325	-27.1	-37.3	27	20.7
400	31	7.170	-33.5	-43.2	27	22.8
350	31	8.093	-40.5	-49.0	27	24.4
300	31	9.126	-48.2		27	26.1
250	31	10.306	-55.6		27	29.2
200	31	11.709	-59.6		27	31.2
175	31	12.546	-58.6		27	30.4
150	31	13.517	-58.3		27	26.7
125	31	14.661	-59.6		27	24.7
100	30	16.047	-61.2		27	20.
80	29	17.436	-61.2		27	16.3
70	29	18.265	-60.0		28	13.8
60	29	19.227	-59.8		27	[illegible]
50	29	20.368	-58.9		28	[illegible]
40	29	21.771	-58.1		28	[illegible]
30	29	23.586	-57.3		26	3.4
25	29	24.739	-56.7		23	3.3
20	28	26.158	-55.2		22	2.5
15	25	28.001	-54.5		17	3.3
10	21	30.625	-51.3		15	2.2
7	17	32.958	-46.6		26	4.4
5	6	35.217	-42.5			

PITTSBURGH, PA. 980 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	359	-6.6	-10.9	23	1.1
1000	31	201				
950	31	605	-5.2	-10.2	25	3.4
900	31	1.028	-5.4	-11.9	27	5.1
850	31	1.477	-4.6	-13.4	28	6.8
800	31	1.954	-5.1	-14.1	27	9.4
750	31	2.464	-6.0	-15.2	28	10.9
700	31	3.000	-7.8	-16.6	28	12.5
650	31	3.571	-10.0	-19.4	28	15.4
600	31	4.187	-12.7	-22.7	28	18.3
550	31	4.842	-17.0	-26.5	28	19.4
500	31	5.552	-21.5	-31.0	28	22.1
450	31	6.315	-27.2	-37.1	28	25.0
400	31	7.158	-33.4	-42.5	28	27.7
350	31	8.082	-40.2	-48.5	28	33.6
300	31	9.117	-47.7		28	36.1
250	31	10.300	-54.8		28	35.8
200	31	11.711	-58.2		28	35.1
175	31	12.552	-57.6		28	31.4
150	31	13.526	-57.3		28	28.5
125	30	14.676	-59.0		28	23.9
100	28	16.070	-60.2		28	19.0
80	25	17.452	-59.9		28	13.8
70	25	18.285	-59.2		28	11.0
60	25	19.252	-58.4		28	9.2
50	23	20.399	-58.6		27	6.5
40	23	21.805	-57.1		27	4.0
30	20	23.627	-56.2		29	1.9
25	18	24.792	-55.8		32	.6
20	17	26.209	-55.1		09	1.5
15	17	28.051	-53.3		14	1.2
10	16	30.681	-50.3		20	1.7
7	13	33.034	-45.7		25	6.3
5	5	35.276	-41.0			

PONAPE, CAROLINE IS. 1003 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	[illegible]	27.9	23.6	07	5.0
1000	31	67	27.5	22.8	07	5.9
950	31	513	23.4	18.0	07	9.7
900	31	991	20.4	14.5	08	10.9
850	31	1.483	17.9	10.0	08	10.8
800	31	2.002	16.3	4.9	08	8.6
750	31	2.546	13.6	.8	08	7.7
700	31	3.128	10.5	-3.3	09	7.3
650	31	3.740	7.4	-8.7	09	8.4
600	31	4.398	4.2	-13.5	09	9.6
550	31	5.096	.4	-18.2	08	9.8
500	31	5.861	-3.8	-22.5	08	11.3
450	31	6.682	-8.8	-27.4	[illegible]	12.3
400	31	7.590	-14.3	-32.5	08	11.5
350	31	8.590	-20.9	-38.4	08	8.6
300	31	9.711	-29.1	-45.3	08	7.5
250	31	10.988	-39.4	-53.9	10	5.7
200	31	12.475	-51.8		12	6.3
175	31	13.327	-58.7		12	4.4
150	31	14.278	-66.3		11	4.4
125	31	15.360	-74.6		09	6.3
100	30	16.628	-83.3		08	12.5
80	30	17.864	-81.5		10	7.2
70	29	18.627	-74.5		22	1.2
60	27	19.534	-69.8		28	6.7
50	25	20.632	-65.6		28	6.1
40	19	21.993	-61.6		07	3.4
30	14	23.782	-59.3		09	19.0
25	12	24.924	-56.4		09	24.4
20	6	26.352	-51.1			
15						
10						
7						
5						

PORTLAND, MAINE 102[illegible] MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	20	-10.9	-16.5	31	2.4
1000	31	172	-8.4	-15.3	31	2.8
950	31	572	-8.0	-14.8	[illegible]	4.2
900	31	991	-8.3	-16.4	[illegible]	6.2
850	31	1.435	-8.7	-19.5	[illegible]	7.7
800	31	1.904	-9.5	-19.5	28	[illegible]
750	31	2.399	-10.7	-19.9	28	12.1
700	31	2.931	-12.5	-21.4	28	14.2
650	31	3.493	-15.1	-23.2	28	15.6
600	31	4.096	-18.3	-27.1	28	17.8
550	31	4.735	-22.0	-31.5	28	19.4
500	31	5.437	-26.1	-35.8	28	21.9
450	31	6.182	-30.9	-40.6	28	23.6
400	31	7.020	-36.8	-45.1	28	25.3
350	31	7.933	-42.7		28	[illegible]
300	31	8.958	-49.3		28	30.3
250	31	10.137	-54.7		28	30.2
200	31	11.559	-55.0		27	28.4
175	31	12.413	-54.1		27	26.9
150	31	13.402	-53.6		27	23.7
125	31	14.566	-55.4		27	21.1
100	31	15.985	-57.1		27	18.
80	31	17.398	-56.6		27	14.3
70	31	18.244	-56.5		27	11.5
60	31	19.228	-55.6		28	8.0
50	30	20.391	-55.1		28	6.5
40	30	21.818	-54.4		27	2.8
30	29	23.665	-54.1		26	.9
25	29	24.836	-53.5		14	.4
20	29	26.275	-52.6		11	2.3
15	24	28.135	-51.8		10	3.6
10	23	30.787	-49.8		17	1.7
7	17	33.132	-46.7		23	2.7
5	[illegible]	35.357	-44.0			

QUILLAYUTE, WASH. 1[illegible] MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	[illegible]	3.9	[illegible]	14	[illegible]
1000	31	[illegible]			14	[illegible]
950	31	[illegible]	[illegible]	-.7	17	6.8
900	31	967	.1	-3.4	20	8.6
850	31	1.423	-2.0	-7.2	21	[illegible]
800	31	1.904	-4.1	-9.5	23	[illegible]
750	31	2.410	-7.0	-13.7	24	10.3
700	31	2.946	[illegible]	-17.3	25	11.4
650	31	[illegible]	-13.7	-21.2	25	14.0
600	31	4.118	-17.9	-25.2	25	13.4
550	31	4.757	-22.1	-30.5	26	14.3
500	31	5.458	-26.6	-34.0	26	16.
450	31	6.205	-31.6	[illegible]	27	[illegible]
400	31	7.035	-37.3	[illegible]	27	18.4
350	31	7.946	-43.1	[illegible]	27	[illegible]
300	31	8.970	-49.4		28	22.6
250	31	10.150	-54.6		28	[illegible]
200	28	11.566	-57.0		28	21.7
175	26	12.404	-56.5		29	[illegible]
150	26	13.383	-56.2		29	[illegible]
125	23	[illegible]	-56.6		29	16.1
100	21	15.948	-57.3		29	13.7
80	18	17.349	-57.6		29	12.2
70	16	18.211	-58.8		29	[illegible]
60	14	[illegible]	-59.7		30	6.5
50	13	20.322	-56.5		31	[illegible]
40	11	21.720	-57.9			
30	11	23.530	-59.3		31	[illegible]
25	11	24.073	-58.6		35	[illegible]
20	11	[illegible]	-57.8			
15	6	27.950	-59.0			
10	4	30.457	-58.3			
7						
5						

RAPID CITY, S. DAK.

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	[illegible]	-6.7	-13.2	32	[illegible]
1000	31	[illegible]				
950	31	587				
900	31	1.013			31	[illegible]
850	31	[illegible]	-1.3	[illegible]	31	[illegible]
800	31	1.948	-3.4	-12.6	30	[illegible]
750	31	2.452	[illegible]	-15.1	30	[illegible]
700	31	2.995	-8.0	-17.2	30	11.4
650	31	3.561	-10.8	-21.2	29	[illegible]
600	31	4.179	-14.3	-25.4	29	13.7
550	31	4.827	-18.6	-29.6	29	16.1
500	31	5.537	-23.3	-33.4	29	17.8
450	31	6.291	-28.9	-37.7	28	[illegible]
400	31	7.130	-35.5	-43.3	28	20.3
350	31	8.046	-42.4	-47.7	28	21.7
300	31	9.072	-49.5		[illegible]	21.9
250	31	10.246	-56.9		28	24.7
200	31	11.641	-61.0		28	23.5
175	31	12.476	-56.7		27	23.0
150	31	[illegible]	-56.0		28	21.6
125	31	14.594	-59.0		28	[illegible]
100	31	15.989	-60.3		27	15.0
80	30	17.387	-59.8		28	13.1
70	30	18.223	-59.2		27	11.8
60	30	19.191	-58.6		27	[illegible]
50	29	20.341	-56.7		27	8.6
40	28	21.746	-58.2		27	7.1
30	24	23.552	-58.4		25	[illegible]
25	19	24.703	-57.7		23	[illegible]
20	13	26.109	-56.9			
15	5	27.953	-56.0			
10						
7						
5						

ST CLOUD, MINN. 983 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	316	-13.7	-17.7	22	.7
1000	31	186				
950	31	581	-12.1	-15.0	20	1.9
900	31	993	-8.9	-14.3	25	4.5
850	31	1.438	-6.8	-15.3	27	[illegible]
800	31	1.911	-6.7	-16.5	28	9.5
750	31	2.415	-8.4	-18.3	28	11.3
700	31	2.948	-10.5	-19.8	28	12.6
650	31	3.514	-13.4	-22.9	28	14.4
600	31	4.122	-16.9	-26.4	28	16.0
550	31	4.766	-21.0	-29.2	28	18.0
500	31	5.469	-25.6	-33.8	28	19.8
450	31	6.218	-30.9	-36.3	28	21.4
400	31	7.052	-36.6	-41.3	28	23.3
350	31	7.965	-42.7	-47.8	28	25.4
300	31	8.991	-49.5		28	26.9
250	31	10.166	-56.2		28	27.9
200	30	11.565	-58.7		28	26.6
175	30	12.408	-56.7		28	25.1
150	30	13.387	-56.0		28	22.8
125	30	14.545	-57.0		28	21.6
100	30	15.953	-58.4		28	[illegible]
80	30	17.354	-58.9		28	15.4
70	30	18.192	-58.1		27	14.6
60	30	19.165	-57.7		27	12.6
50	30	20.316	-57.6		27	9.9
40	30	21.725	-57.3		26	9.6
30	28	23.543	-56.7		26	9.3
25	28	24.698	-56.7		26	5.9
20	27	26.111	-56.7		22	3.8
15	25	27.964	-55.5		21	4.1
10	11	30.604	-52.8			
7						
5						

ST PAUL IS., ALASKA 1016 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	[illegible]	-.9	-3.1	16	[illegible]
1000	29	137	-.7	-3.7	16	3.5
950	29	544	-2.6	-7.0	19	3.8
900	29	973	-4.2	-9.9	20	4.4
850	29	1.422	-6.1	-12.3	21	4.0
800	29	1.695	-8.3	-16.1	22	3.6
750	29	2.393	-11.1	-19.2	23	4.1
700	29	2.921	-13.6	-22.2	24	[illegible]
650	29	3.480	-16.9	[illegible]	25	5.8
600	29	4.078	-20.4	-29.8	25	5.7
550	29	4.717	-23.9	-33.2	25	6.7
500	29	[illegible]	-28.2	-37.0	25	6.8
450	29	6.154	-33.4	-39.7	25	6.9
400	29	6.975	-38.7	-43.9	25	7.8
350	29	7.880	-44.8		26	[illegible]
300	29	8.897	-51.3		26	4.2
250	29	10.066	-56.7		27	[illegible]
200	29	11.477	-56.8		27	[illegible]
175	29	12.327	-54.6		27	9.8
150	29	13.318	-53.2		27	9.1
125	29	[illegible]	-53.0		27	[illegible]
100	29	15.927	-54.1		27	8.7
80	29	17.361	-53.7		28	7.6
70	29	18.219	-53.8		29	[illegible]
60	29	19.206	-54.2		30	[illegible]
50	29	20.376	-54.1		31	7.7
40	29	21.807	-54.3		32	[illegible]
30	29	23.649	-54.5		33	[illegible]
25	29	24.815	-55.0		34	[illegible]
20	28	26.245	-55.3		35	11.2
15	24	28.064	-56.7		35	[illegible]
10	22	30.629	-55.6		35	7.2
7	17	[illegible]	-55.6		27	[illegible]
5	7	35.063	-57.4			

SALEM, OREG. 1011 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	[illegible]	3.5	[illegible]	16	[illegible]
1000	31	[illegible]			19	3.0
950	31	568	4.1	.4	21	7.4
900	31	1.004	2.2	-3.1	22	[illegible]
850	31	1.464	.1	-6.5	23	9.7
800	31	1.947	-2.4	-9.5	24	10.6
750	31	2.455	-5.4	-12.3	25	11.3
700	31	2.995	-8.7	[illegible]	25	12.2
650	31	[illegible]	-12.0	-21.3	26	13.4
600	31	4.174	-15.8	-24.8	26	14.7
550	31	4.818	-20.0	-26.6	26	16.1
500	31	5.525	-24.6	-32.8	26	17.4
450	31	6.279	-29.9	-36.7	26	19.3
400	31	7.113	-35.6	-40.4	27	20.7
350	31	8.030	-41.8	-45.8	27	[illegible]
300	31	9.059	-48.2		27	20.7
250	30	10.247	-54.4		27	21.3
200	29	11.655	-58.2		27	21.8
175	29	12.495	-58.4		28	18.9
150	29	13.466	-57.6		28	[illegible]
125	29	14.615	-58.6		28	16.2
100	29	16.016	-59.3		27	[illegible]
80	29	17.411	-59.9		28	12.7
70	29	18.244	-59.7		28	11.7
60	29	19.208	-59.0		28	[illegible]
50	29	20.350	-59.5		27	[illegible]
40	28	21.736	-60.0		27	[illegible]
30	28	23.553	-59.0		26	[illegible]
25	28	24.697	-58.7		[illegible]	7.3
20	25	26.098	-58.3		26	[illegible]
15	16	27.949	-58.2		28	[illegible]
10	6	30.446	-56.8			
7						
5						

SALT LAKE CITY, UTAH

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1.288	-7.2	-11.4	17	.1
1000	31	239				
950	31	644				
900	31	1.070				
850	31	1.521	[illegible]	-9.7	18	[illegible]
800	31	2.003	-1.7	-11.0	19	[illegible]
750	31	2.514	-3.6	-12.4	22	[illegible]
700	31	3.058	-6.3	[illegible]	25	[illegible]
650	31	3.632	-9.2	-18.3	27	[illegible]
600	31	[illegible]	-12.5	-22.1	[illegible]	[illegible]
550	31	4.907	-16.7	[illegible]	26	[illegible]
500	31	5.618	-21.5	[illegible]	27	[illegible]
450	31	[illegible]	-27.0	[illegible]	27	[illegible]
400	31	7.225	-33.5	-40.5	27	13.4
350	31	8.147	-40.9	-45.3	[illegible]	[illegible]
300	31	9.178	-46.7		28	[illegible]
250	31	10.356	-56.3		28	[illegible]
200	31	[illegible]	-60.7		28	[illegible]
175	31	[illegible]	-54.6		28	[illegible]
150	31	[illegible]	-59.7		[illegible]	17.
125	[illegible]	14.690	-60.2		27	17.
100	29	[illegible]	-62.2		27	14.
80	29	17.450	-61.5		27	[illegible]
70	29	[illegible]	-60.9		27	[illegible]
60	29	19.236	-60.8		27	[illegible]
50	28	20.369	[illegible]		27	[illegible]
40	[illegible]	[illegible]	-59.2		[illegible]	[illegible]
30	26	23.570	-59.1		[illegible]	[illegible]
25	24	24.709	[illegible]		25	[illegible]
20	[illegible]	26.102	[illegible]		[illegible]	[illegible]
15	14	27.922	-58.2		[illegible]	[illegible]
10	7	30.499	[illegible]			
7						
5						

SAN [illegible], CALIF. 1004 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	124	7.7	3.7	[illegible]	[illegible]
1000	31	[illegible]	[illegible]	3.4	06	[illegible]
950	31	[illegible]	11.9	-.9	06	[illegible]
900	31	1.036	9.9	-5.3	33	[illegible]
850	31	1.509	7.8	[illegible]	32	1.1
800	31	2.007	5.2	-11.0	29	[illegible]
750	31	2.530	3.1	[illegible]	29	[illegible]
700	31	3.089	.5	[illegible]	[illegible]	[illegible]
650	31	3.674	-2.7	-21.3	[illegible]	[illegible]
600	31	[illegible]	-7.1	-24.1	27	7.
550	31	4.975	-11.7	-28.1	27	[illegible]
500	31	5.707	-16.8	-31.2	28	[illegible]
450	31	6.484	-22.8	-35.3	[illegible]	[illegible]
400	31	7.344	-29.5	-40.4	28	[illegible]
350	31	8.283	-36.7	-45.2	[illegible]	[illegible]
300	31	9.333	-44.7		[illegible]	[illegible]
250	31	10.531	[illegible]		28	21.
200	31	[illegible]	-59.7		28	[illegible]
175	31	12.778	-60.6		[illegible]	22.7
150	30	13.735	-60.6		27	[illegible]
125	30	14.864	-63.0		27	[illegible]
100	30	[illegible]	-65.5		27	[illegible]
80	29	[illegible]	-65.5		27	[illegible]
70	29	18.396	-64.4		27	[illegible]
60	29	19.341	-62.7		27	[illegible]
50	29	[illegible]	-61.1		27	[illegible]
40	28	21.863	-59.5		28	1.4
30	27	23.663	-58.7		28	1.
25	26	24.811	-57.4		23	[illegible]
20	[illegible]	[illegible]	-55.8		26	[illegible]
15	21	26.070	-53.4		28	[illegible]
10	[illegible]	30.709	-49.8			
7						
5						

See reference note at end of table

RAWINSONDE DATA

Average monthly values

JANUARY 1968

SAN JUAN, P. R. — 1017 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	6	22.2	18.4	07	2.2
1000	31	151	22.2	17.6	07	5.0
950	31	591	19.0	14.8	07	7.2
900	31	1,058	15.6	11.2	07	7.5
850	31	1,541	12.4	7.5	07	7.3
800	31	2,047	9.7	1.1	07	6.0
750	31	2,581	9.0	-7.0	08	5.1
700	31	3,152	6.8	-11.6	06	3.7
650	31	3,756	4.1	-16.1	03	2.9
600	31	4,404	.6	-20.1	36	3.2
550	31	5,090	-3.6	-23.6	33	4.0
500	31	5,844	-8.6	-27.5	31	5.0
450	31	6,645	-14.6	-32.4	31	6.1
400	31	7,533	-21.4	-37.9	30	8.3
350	31	8,504	-28.4	-43.1	30	12.4
300	31	9,592	-36.1	-50.0	29	18.2
250	31	10,835	-44.6		27	24.4
200	31	12,294	-54.4		27	29.4
175	31	13,140	-59.0		27	29.6
150	31	14,094	-64.3		28	26.9
125	31	15,193	-70.1		28	19.8
100	31	16,498	-76.2		29	12.4
80	31	17,773	-78.9		31	5.4
70	31	18,535	-77.1		34	2.4
60	30	19,429	-71.9		04	2.0
50	30	20,523	-64.8		04	1.5
40	30	21,903	-59.2		06	3.4
30	30	23,724	-55.1		08	4.9
25	30	24,893	-53.0		09	6.4
20	30	26,340	-50.0		10	8.9
15	28	28,236	-47.0		11	7.6
10	22	30,949	-42.3		10	4.3
7	8	33,338	-39.2			
5						

SAN NICOLAS, CALIF. — 998 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	174	11.3	6.6	31	2.4
1000	30	156				
950	30	588	12.2	-2.5	31	1.6
900	30	1,038	9.4	-5.4	30	1.3
850	30	1,510	7.5	-9.0	30	1.7
800	30	2,007	5.1	-13.8	30	2.2
750	30	2,531	2.6	-15.9	28	3.1
700	30	3,086	-.2	-17.3	28	4.7
650	30	3,675	-3.6	-22.4	28	5.8
600	30	4,303	-7.6	-26.9	28	6.8
550	30	4,974	-12.3	-27.7	28	7.2
500	30	5,694	-17.9	-32.9	28	8.1
450	30	6,473	-24.0	-37.6	28	9.7
400	30	7,322	-30.4	-41.5	28	12.0
350	30	8,257	-37.7	-47.6	28	14.3
300	30	9,301	-46.0	-55.2	28	16.6
250	30	10,491	-54.3	-62.8	28	20.7
200	30	11,899	-60.1	-67.7	28	24.4
175	30	12,731	-60.5	-68.8	28	22.6
150	29	13,691	-60.9		28	20.8
125	29	14,816	-63.7		27	18.4
100	29	16,177	-66.2		28	14.7
80	28	17,525	-65.4		27	7.9
70	28	18,340	-64.3		27	5.8
60	28	19,286	-62.8		27	5.1
50	28	20,414	-61.0		27	3.6
40	28	21,805	-59.7		26	2.3
30	28	23,608	-58.7		27	3.4
25	27	24,757	-57.6		24	2.2
20	27	26,173	-55.6		25	4.6
15	26	28,020	-53.2		27	11.6
10	19	30,647	-50.3		27	19.8
7	12	32,990	-45.3			

* SAULT STE MARIE, MICH. — 996 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	221	-13.1	-16.1	07	1.2
1000	31	192				
950	31	584	-11.7	-15.1	17	1.3
900	31	998	-10.9	-16.4	25	3.0
850	31	1,438	-10.7	-18.0	27	5.4
800	31	1,904	-11.2	-20.3	28	7.4
750	31	2,401	-12.3	-21.8	28	9.5
700	31	2,924	-14.0	-23.6	28	11.5
650	31	3,484	-16.3	-25.2	28	13.8
600	31	4,083	-19.2	-27.0	29	16.5
550	31	4,722	-23.0	-30.6	29	18.9
500	31	5,418	-27.4	-33.1	28	21.6
450	31	6,165	-32.6	-38.0	28	23.4
400	31	6,986	-38.3	-42.8	26	26.0
350	31	7,895	-44.2		28	29.6
300	31	8,914	-50.8		28	31.7
250	31	10,086	-55.5		28	33.5
200	31	11,503	-56.0		28	30.2
175	31	12,356	-54.7		28	27.5
150	31	13,344	-53.9		28	26.6
125	31	14,512	-54.9		28	23.7
100	31	15,933	-56.2		28	20.1
80	30	17,349	-56.4		27	16.5
70	30	18,195	-56.5		27	15.0
60	30	19,174	-56.2		27	13.1
50	30	20,333	-56.0		27	11.7
40	30	21,754	-55.5		26	8.0
30	29	23,589	-55.1		24	7.1
25	29	24,755	-54.5		22	6.8
20	28	26,182	-54.0		21	7.0
15	26	28,032	-52.7		20	9.1
10	26	30,650	-50.5		20	9.8
7	20	32,970	-47.7		22	10.3
5	12	35,231	-44.5		26	4.9

* SHEMYA, ALASKA — 1002 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	38	.8	-.9	17	5.4
1000	31	50			15	4.2
950	31	457	-2.2	-4.3	17	6.9
900	31	888	-4.6	-7.5	18	7.1
850	31	1,336	-6.2	-11.1	18	7.3
800	31	1,809	-8.3	-15.5	18	8.0
750	31	2,309	-10.3	-19.2	19	8.1
700	31	2,837	-12.9	-23.6	19	8.3
650	31	3,395	-16.1	-27.0	19	9.1
600	31	3,997	-19.9	-30.2	19	9.4
550	31	4,630	-24.4	-34.7	19	9.9
500	31	5,325	-29.1	-38.1	18	11.3
450	31	6,065	-34.1	-42.0	18	11.6
400	30	6,893	-39.3	-46.0	17	12.0
350	30	7,796	-45.1		19	11.2
300	30	8,812	-50.9		19	12.4
250	30	9,983	-55.7		20	11.6
200	30	11,403	-54.8		20	10.7
175	30	12,261	-52.4		21	9.8
150	30	13,259	-51.5		21	9.7
125	30	14,443	-51.6		22	9.2
100	30	15,889	-51.6		21	7.5
80	30	17,336	-51.7		22	5.6
70	30	18,201	-51.9		22	5.5
60	30	19,200	-51.9		23	4.8
50	30	20,381	-52.2		21	2.9
40	30	21,825	-52.2		19	3.7
30	30	23,682	-53.2		16	3.1
25	28	24,855	-53.9		14	2.6
20	27	26,295	-54.8		12	4.4
15	26	28,135	-56.1		12	5.6
10	22	30,706	-57.6		16	5.0
7	12	32,955	-57.9			
5	8	35,107	-59.5			

* SHREVEPORT, LA. — 1014 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	79	4.3	2.1	09	.7
1000	31	189	4.8	2.3	11	1.5
950	31	617	5.8	1.4	18	2.9
900	31	1,052	6.3	-.7	23	2.9
850	31	1,521	5.2	-3.2	26	3.9
800	31	2,016	4.2	-5.0	27	6.5
750	31	2,538	1.6	-7.4	27	8.3
700	31	3,092	-1.3	-10.6	26	9.6
650	31	3,682	-4.5	-15.6	26	10.9
600	31	4,307	-8.1	-19.9	26	12.8
550	31	4,976	-12.3	-24.1	26	14.1
500	31	5,700	-17.0	-27.9	26	16.8
450	31	6,480	-22.7	-32.4	27	18.3
400	31	7,338	-29.0	-36.3	27	19.6
350	31	8,280	-35.9	-42.9	26	22.4
300	31	9,334	-43.9		26	26.3
250	31	10,535	-52.7		26	28.7
200	30	11,946	-59.6		26	35.2
175	30	12,779	-60.4		26	31.4
150	30	13,738	-61.1		26	27.6
125	30	14,862	-64.0		26	24.4
100	30	16,220	-66.5		26	21.6
80	28	17,563	-67.0		26	14.3
70	25	18,369	-65.5		27	8.3
60	24	19,308	-64.0		27	6.6
50	23	20,429	-62.3		28	3.5
40	23	21,813	-60.5		31	1.1
30	22	23,615	-58.4		04	1.7
25	22	24,763	-57.4		04	1.9
20	22	26,179	-55.7		04	2.3
15	21	28,023	-53.0		32	2.6
10	19	30,664	-48.3		28	7.1
7	11	33,023	-44.1		26	9.6

SPOKANE, WASH. — 933 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	717	-3.0	-6.[illegible]	17	2.6
1000	31	[illegible]				
950	31	587				
900	31	994	-2.2	-6.5	20	5.1
850	31	1,452	-3.3	-9.2	22	7.4
800	31	1,931	-4.9	-11.4	24	9.1
750	31	2,431	-7.6	-13.9	25	10.6
700	31	2,971	-10.6	-16.3	25	12.1
650	31	3,55[illegible]	-13.9	-1[illegible]	25	13.6
600	31	4,141	-17.7	-23.8	25	14.2
550	31	4,778	-22.1	-28.6	26	15.5
500	31	5,448	-27.0	-32.7	26	16.0
450	31	6,222	-32.0	-34.6	26	18.2
400	31	7,054	-37.4	-37.2	27	21.1
350	31	7,965	-43.0	-43.2	27	23.8
300	31	8,991	-49.0		27	25.2
250	31	10,173	-54.4		27	25.6
200	31	11,587	-58.1		26	24.8
175	31	12,424	-57.3		26	23.8
150	31	13,405	-56.7		28	20.4
125	31	14,559	-57.5		27	19.2
100	31	15,965	-58.7		26	17.4
80	31	17,365	-59.3		26	15.5
70	30	18,212	-59.2		27	13.7
60	30	19,178	-58.7		27	12.8
50	30	20,324	-58.5		27	11.1
40	29	21,722	-58.7		26	12.1
30	26	23,540	-56.9		26	11.[illegible]
25	22	24,722	-57.3		26	8.1
20	2[illegible]	26,120	-57.6		26	9.9
15	13	27,696	-59.2		26	12.6
10	6	30,578	-55.5			
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* SWAN ISLAND, W. I. — 1015 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	10	24.4	19.5	05	5.1
1000	31	139	23.5	18.6	05	6.8
950	31	587	20.0	16.1	06	8.0
900	31	1,051	16.6	12.7	07	7.7
850	31	1,537	13.5	9.1	07	7.0
800	31	2,046	11.0	2.8	06	5.9
750	31	2,589	9.3	-2.6	08	5.2
700	31	3,154	6.8	-7.1	09	4.8
650	31	3,756	4.2	-12.5	10	4.6
600	31	4,407	.4	-16.3	11	2.9
550	31	5,093	-3.8	-20.1	16	2.6
500	31	5,846	-8.6	-25.1	21	2.6
450	31	6,651	-14.4	-30.3	24	3.6
400	30	7,535	-20.9	-36.3	25	7.4
350	30	8,507	-28.4	-41.9	26	11.1
300	30	9,592	-37.0	-48.8	26	13.6
250	30	10,828	-46.8		26	16.6
200	29	12,279	-56.1		25	21.1
175	29	13,118	-60.[illegible]		25	22.6
150	29	14,070	-65.0		25	23.2
125	27	15,169	-70.1		25	18.7
100	26	16,477	-76.3		25	12.4
80	22	17,758	-79.0		23	6.1
70	21	18,515	-77.6		20	2.3
60	21	19,409	-73.3		12	1.5
50	21	20,490	-67.8		10	2.7
40	20	21,851	-62.0		10	2.3
30	20	23,646	-57.1		07	5.7
25	20	24,806	-55.3		08	8.1
20	2[illegible]	26,237	-52.6		[illegible]	1[illegible].4
15	18	28,122	-47.7		[illegible]	1[illegible].4
10	16	30,813	-45.5		10	7.0
7	10	33,212	-40.4			

TAMPA, FLA. — 1021 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	8	11.5	9.6	06	2.1
1000	31	185	13.9	9.4	07	3.5
950	31	617	12.5	8.1	12	1.1
900	31	1,071	10.7	4.7	24	2.6
850	31	1,546	8.5	.6	25	4.1
800	31	2,045	6.6	-5.8	25	4.8
750	31	2,575	5.4	-11.4	27	5.7
700	31	3,136	3.0	-14.2	27	7.5
650	31	3,734	.0	-18.2	27	8.9
600	31	4,370	-3.9	-21.9	27	11.5
550	31	5,045	-8.3	-25.4	26	12.9
500	31	5,785	-13.2	-29.8	26	14.9
450	31	6,578	-19.1	-33.6	26	17.5
400	31	7,446	-25.4	-38.4	26	20.5
350	31	8,402	-32.3	-45.4	26	22.9
300	31	9,471	-40.6	-52.1	26	26.6
250	31	10,690	-49.6		26	29.8
200	31	12,123	-56.0		26	33.9
175	30	12,954	-60.3		26	33.6
150	30	13,913	-61.4		26	30.8
125	30	15,033	-65.5		26	28.1
100	30	16,375	-69.9		26	24.3
80	30	17,698	-71.1		26	15.7
70	30	18,489	-7[illegible]		26	10.4
60	30	19,410	-67.8		28	5.2
50	30	20,515	-64.4		31	1.9
40	26	21,891	-60.6		04	3.5
30	25	23,697	-56.7		04	4.2
25	25	24,858	-54.6		04	3.3
20	23	26,289	-52.7		03	2.6
15	20	28,158	-50.1		12	.2
10	8	30,832	-46.6			

TOPEKA, KANS. — 991 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	269	-5.7	-8.7	26	.5
1000	31	199				
950	31	609	-3.8	-7.9	25	2.9
900	31	1,034	-.6	-7.1	25	6.0
850	31	1,491	-.7	-8.4	26	8.1
800	31	1,976	-1.0	-9.9	27	8.1
750	31	2,487	-2.7	-12.6	28	8.6
700	31	3,035	-5.0	-15.3	28	9.8
650	31	3,608	-8.1	-20.0	27	11.3
600	31	4,233	-11.4	-22.9	27	13.1
550	31	4,890	-15.3	-27.7	27	13.6
500	31	5,610	-20.3	-31.6	27	14.6
450	31	6,377	-26.1	-37.0	27	16.3
400	31	7,223	-32.7	-42.4	27	18.1
350	31	8,150	-39.9	-47.2	27	19.9
300	31	9,187	-47.4		27	20.0
250	31	10,371	-55.1		27	24.3
200	31	11,776	-59.9		27	22.5
175	31	12,610	-59.4		27	22.2
150	31	13,577	-59.1		27	21.8
125	31	14,716	-61.0		27	18.0
100	31	16,096	-62.6		27	15.4
80	31	17,472	-62.2		27	13.0
70	31	18,298	-61.4		27	10.9
60	31	19,256	-61.1		28	6.5
50	31	20,391	-60.0		28	5.9
40	31	21,786	-58.7		28	4.2
30	30	23,600	-57.6		28	2.2
25	27	24,743	-57.4		26	3.4
20	25	26,153	-56.4		25	6.4
15	23	27,984	-54.1		25	9.7
10	16	30,593	-51.7			

* TRUK, CAROLINE IS. — 1009 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	2	28.1	23.9	05	5.0
1000	31	78	27.3	22.6	06	6.2
950	31	525	23.3	18.0	07	10.6
900	31	1,002	20.3	14.1	08	11.0
850	31	1,495	17.7	9.0	08	9.9
800	31	2,012	15.5	4.6	09	9.0
750	31	2,558	13.4	.2	09	8.4
700	31	3,137	10.4	-3.1	09	8.3
650	31	3,749	7.2	-7.5	09	9.7
600	31	4,406	3.4	-12.1	09	11.1
550	31	5,102	-.3	-17.4	09	11.0
500	31	5,866	-4.4	-22.5	09	11.3
450	31	6,686	-9.5	-27.4	09	11.2
400	31	7,592	-14.8	-32.4	09	10.7
350	31	8,591	-21.4	-38.7	09	9.5
300	31	9,710	-29.7	-45.3	11	7.4
250	31	10,982	-40.2	-53.4	11	6.0
200	31	12,465	-52.5		13	5.5
175	30	13,314	-59.8		12	5.3
150	30	14,260	-67.7		12	6.0
125	30	15,334	-76.4		10	8.9
100	30	16,590	-85.2		10	14.6
80	29	17,819	-82.4		10	9.2
70	29	18,576	-76.4		20	.6
60	28	19,479	-71.2		27	6.0
50	27	20,569	-66.4		27	6.8
40	27	21,935	-61.9		11	1.0
30	22	23,721	-59.7		09	17.0
25	16	24,866	-57.2		09	22.7
20	13	26,290	-53.5		09	26.2
15	8	28,140	-49.0			

* TUCSON, ARIZ. — 92[illegible] MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	78[illegible]	6.[illegible]	.6	14	3.3
1000	31	167				
950	31	58[illegible]				
900	31	1,[illegible]39	10.1	.3	14	4.2
850	31	1,513	6.[illegible]	-[illegible].7	15	3.3
800	31	2,012	5.3	-6.[illegible]	18	2.9
750	31	2,532	2.5	-11.5	24	3.1
700	31	3,092	.0	-15.5	26	[illegible]
650	31	3,678	-3.4	-19.2	27	[illegible].9
600	31	4,312	-7.1	-23.1	26	7.9
550	31	4,979	-11.7	-27.0	27	[illegible].5
500	31	5,710	-16.8	-30.2	27	9.7
450	31	6,46[illegible]	-22.8	-35.5	27	11.4
400	31	7,346	-29.2	-40.9	27	13.5
350	31	8,[illegible]	-36.2	-47.1	27	15.5
300	31	9,338	-44.2		27	19.[illegible]
250	31	10,536	-52.9		27	21.9
200	31	11,951	-59.1		27	24.5
175	31	12,785	-6[illegible].3		27	24.4
150	31	13,744	-6[illegible]		27	22.6
125	31	14,67[illegible]	-63.[illegible]		27	20.[illegible]
100	31	16,234	-66.[illegible]		26	1[illegible].2
80	31	17,585	-65.9		26	1[illegible].2
70	31	18,398	-64.5		27	9.5
60	31	19,341	-63.2		26	7.3
50	31	20,467	-62.4		25	[illegible]
40	31	21,958	-60.1		26	2.5
30	31	23,658	-58.4		26	1.8
25	31	24,806	-57.8		26	2.6
20	31	26,220	-55.7		25	2.[illegible]
15	29	28,059	-53.1		28	7.6
10	28	30,[illegible]57	-49.2		27	[illegible]4.5
7	16	33,051	-4[illegible]		26	[illegible]4.7
5	11	3[illegible],317	-41.6		26	3[illegible]
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* VANDENBERG AFB, CALIF. — 10[illegible] MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	10	6.5	3.8	[illegible]	1.3
1000	30	163	1[illegible].5	4.2	06	1.4
950	30	595	11.6	-3.[illegible]	07	.7
900	30	1,043	9.4	-6.0	31	.3
850	30	1,515	7.2	-1[illegible].6	29	1.2
800	30	[illegible]11	5.[illegible]	-15.6	3[illegible]	[illegible]
750	30	2,534	2.6	-18.8	29	3.1
700	30	3,090	-.5	-21.4	29	3.9
650	30	3,67[illegible]	-3.4	-23.1	29	4.9
600	30	4,307	-7.6	-26.4	29	7.1
550	30	4,973	-12.3	-30.2	28	7.7
500	30	5,700	-17.6	-33.9	28	8.4
450	30	6,47[illegible]	-23.7	-38.2	28	9.3
400	30	7,328	-30.6	-43.1	28	11.4
350	29	8,264	-37.7	-45.6	28	12.1
300	29	9,309	-46.1		29	14.6
250	29	10,497	-54.9		29	16.3
200	29	11,[illegible]	-[illegible]		28	[illegible]
175	29	12,734	-[illegible].4		28	[illegible].1
150	29	13,[illegible]94	-60.8		27	19.1
125	29	14,82[illegible]	-62.5		26	1[illegible].2
100	29	16,191	-65.2		27	13.2
80	29	17,552	-64.4		28	[illegible].8
70	29	18,369	-63.4		28	7.3
60	29	19,318	-62.1		28	4.[illegible]
50	28	20,448	-60.9		29	[illegible]
40	24	21,836	-60.2		[illegible]	2.[illegible]
30	2[illegible]	23,639	-59.1		34	.9
25	21	24,786	-58.1		[illegible]	1.3
20	21	26,194	-57.[illegible]		34	1.6
15	[illegible]	28,028	-55.0		[illegible]	4.4
10	17	30,608	-5[illegible]		[illegible]	13.[illegible]
7	1[illegible]	32,94[illegible]	-47.[illegible]			

VICTORIA, TEXAS — 101[illegible] MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	33	8.3	7.0	02	2.0
1000	31	179	9.2	6.5	15	1.9
950	31	6[illegible]5	9.6	6.6	15	2.3
900	31	1,05[illegible]	[illegible].5	3.9	21	4.1
850	31	1,529	8.0	.7	22	5.[illegible]
800	31	2,029	6.7	-2.6	24	5.9
750	31	2,556	4.8	-8.4	24	7.1
700	31	3,118	1.9	-11.0	25	8.4
650	31	3,706	-1.6	-12.7	26	10.3
600	31	4,345	-5.5	-16.8	26	12.2
550	31	5,016	-9.9	-21.5	26	13.5
500	31	5,751	-14.6	-26.8	26	15.[illegible]
450	31	6,534	-20.4	-32.9	26	17.3
400	31	7,402	-26.8	-38.9	26	19.5
350	31	8,351	-34.2	-45.4	26	21.5
300	31	9,412	-42.7	-49.2	26	23.9
250	31	10,618	-52.0		26	26.1
200	31	12,036	-59.7		26	30.8
175	30	12,871	-61.6		26	29.9
150	30	13,825	-62.5		25	27.4
125	30	14,941	-65.7		25	2[illegible].2
100	28	16,285	-68.9		26	19.[illegible]
80	27	17,616	-69.1		26	12.4
70	25	18,41[illegible]	-67.6		26	8.3
60	25	19,341	-65.7		26	4.7
50	25	20,454	-63.3		27	2.3
40	25	21,834	-6[illegible]		[illegible]9	.6
30	23	23,637	-58.2		36	.4
25	23	24,787	-56.8		35	1.4
20	21	26,210	-54.5		35	3.1
15	18	28,061	-51.9		35	1.3
10	11	30,708	-47.6			

* WAKE IS., PACIFIC AREA — 1013 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	5	24.1	19.5	05	4.3
1000	31	114	23.2	16.4	05	4.6
950	31	556	19.6	15.8	05	4.7
900	31	1,024	16.3	13.1	05	4.0
850	31	1,509	13.7	8.8	03	2.3
800	31	2,02[illegible]	12.9	-1.3	35	2.3
750	31	2,559	11.7	-9.9	33	3.4
700	31	3,135	9.4	-13.6	32	4.9
650	31	3,743	6.2	-16.9	31	5.8
600	31	4,398	3.1	-20.0	30	7.7
550	31	5,090	-.7	-22.6	29	9.0
500	31	5,852	-5.6	-25.6	29	10.8
450	31	6,667	-11.2	-29.8	30	12.7
400	31	7,565	-17.0	-35.9	29	14.2
350	31	8,554	-23.6	-41.4	30	16.0
300	31	9,664	-31.3	-48.0	29	17.9
250	31	10,929	-41.2		29	18.9
200	31	12,408	-52.7		29	18.7
175	31	13,257	-59.5		29	17.9
150	31	14,205	-66.7		29	15.7
125	29	15,286	-74.[illegible]		28	14.5
100	28	16,557	-82.1		28	10.9
80	27	17,794	-84.2		27	5.1
70	27	18,539	-80.3		26	2.2
60	26	19,425	-72.3		23	1.2
50	26	20,518	-65.0		24	.9
40	26	21,847	-59.9		33	1.0
30	25	23,7[illegible]5	-57.4		[illegible]4	2.5
25	25	24,861	-56.0		07	4.4
20	23	26,290	-52.2		07	7.8
15	23	28,174	-47.4		06	9.4
10	20	30,865	-45.4		10	7.1
7	17	33,252	-42.7		18	2.9
5	14	35,561	-36.6		28	5.3
4	7	37,128	-32.7			

* WALLOPS IS., VA. NASA — 1025 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	3	-2.3	-6.3	36	2.3
1000	30	197	.1	-8.5	35	3.3
950	30	606	-.1	-9.9	33	4.2
900	30	1,041	-.3	-11.4	31	5.0
850	30	1,498	-.4	-12.9	29	7.1
800	30	1,983	-1.2	-13.5	29	8.3
750	30	2,496	-2.8	-14.0	28	11.9
700	30	3,042	-4.9	-16.4	28	14.1
650	30	3,621	-7.8	-18.5	28	16.3
600	30	4,242	-11.2	-20.9	28	18.5
550	30	4,900	-15.3	-24.8	28	19.7
500	30	5,619	-20.2	-29.8	28	21.5
450	30	6,387	-25.6	-34.6	28	23.7
400	30	7,237	-31.6	-41.0	28	25.9
350	30	8,169	-36.5	-46.2	28	30.3
300	30	9,212	-45.8		27	29.1
250	30	10,404	-54.0		28	28.6
200	29	11,817	-59.5		28	26.3
175	28	12,650	-58.6		27	26.8
150	28	13,620	-58.3		27	24.9
125	27	14,760	-60.3		27	21.1
100	25	16,139	-61.2		26	16.8
80	23	17,524	-61.6		26	13.6
70	23	18,351	-61.5		26	10.7
60	23	19,306	-60.9		28	8.4
50	23	20,443	-59.8		30	5.2
40	23	21,842	-58.3		33	2.2
30	23	23,660	-56.6		06	2.4
25	23	24,818	-55.7		06	3.3
20	22	26,241	-54.6		06	2.9
15	20	28,093	-52.5		07	2.7
10	14	30,716	-48.4		29	2.5
7	7	33,105	-44.5			

See reference note at end of table

RAWINSONDE DATA

Average monthly values

Standard pressure surface (mb)	[illegible] DULLES INT. AP. — No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Speed	[illegible] — No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Speed
SURFACE	31	[illegible]	-5.4	[illegible]	34	[illegible]	31	[illegible]	-5.6	-4.1	15	1.3
1000	31	[illegible]	-2.9	-9.9	33	2.3	31	219				
950	31	[illegible]	-2.3	-10.6	31	3.4	31	[illegible]				
900	31	[illegible]	-2.5	-11.5	31	[illegible]	31	1,063				
850	31	[illegible]	-2.4	-13.3	[illegible]	7.1	31	1,512	-1.0	[illegible]	15	[illegible]
800	31	[illegible]	-2.9	-14.8	29	[illegible]	31	1,996	-.9	-11.6	[illegible]	4.1
750	31	[illegible]	-4.0	-14.8	28	11.5	31	[illegible]	-3.1	[illegible]	24	[illegible]
700	31	[illegible]	-5.5	-15.7	26	13.3	31	[illegible]	-6.0	[illegible]	25	7.6
650	31	[illegible]	-8.2	-17.7	28	[illegible]	31	3,625	-8.8	[illegible]	26	[illegible]
600	31	[illegible]	[illegible]	-21.2	28	[illegible]	31	4,247	-12.5	[illegible]	[illegible]	11.3
550	31	[illegible]	-15.9	-25.3	28	19.7	31	4,901	-16.9	[illegible]	26	[illegible]
500	31	[illegible]	-20.8	-30.5	26	21.5	31	5,614	-21.4	[illegible]	27	[illegible]
450	31	[illegible]	-26.4	[illegible]	28	22.8	31	6,375	-27.0	-36.9	27	13.9
400	31	[illegible]	-32.6	-42.1	28	25.6	31	7,221	-33.4	[illegible]	27	[illegible]
350	31	8,134	-39.5	-46.8	27	29.1	31	8,145	-40.5	-43.1	27	[illegible]
300	31	[illegible]	-47.2		27	31.8	31	9,178	-48.3		28	[illegible]
250	31	[illegible]	-54.0		27	35.3	31	[illegible]	-56.1		27	[illegible]
200	31	11,767	-59.0		27	35.5	31	[illegible]	[illegible]		28	[illegible]
175	31	[illegible]	-58.3		27	34.0	31	12,591	-60.0		27	18.4
150	30	[illegible]	-57.6		28	29.5	30	[illegible]	-59.0		27	17.
125	31	14,722	-59.7		27	27.0	[illegible]	14,692	-59.8		27	15.5
100	31	16,112	-61.1		27	21.6	29	16,081	-60.9		27	12.9
80	28	17,495	-61.1		27	15.4	29	17,468	-60.9		28	[illegible]
70	28	18,323	-61.2		27	12.0	29	18,297	-61.0		28	8.6
60	25	[illegible]	-60.2		[illegible]	[illegible]	27	[illegible]	-60.1		29	[illegible]
50	25	[illegible]	-58.5		28	6.3	24	20,410	-59.4		27	4.5
40	[illegible]	[illegible]	-57.0		27	3.4	[illegible]	21,819	-58.5		27	3.1
30	[illegible]	[illegible]	[illegible]		[illegible]	1.9	21	23,627	-58.4		26	[illegible]
25	[illegible]	[illegible]	[illegible]		[illegible]	1.5	19	24,771	-57.6		25	[illegible]
20	[illegible]	[illegible]	-52.9		[illegible]	1.5	14	[illegible]	-57.0		11	.9
15	14	[illegible]	-51.2		12	1.6	8	[illegible]	-55.3			
10	[illegible]	[illegible]	[illegible]									
7												

Standard pressure surface (mb)	[illegible] — No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Speed	[illegible], ALASKA — No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Speed
SURFACE	31	1,492	-13.5	-16.1	17	1.0	31	12	-7.6	[illegible]	09	[illegible]
1000	31	292					31	79			[illegible]	3.1
950	31	[illegible]					31	[illegible]	[illegible]	-11.3	[illegible]	[illegible]
900	31	1,109					31	[illegible]	-6.7	-15.9	[illegible]	[illegible]
850	31	1,545			18	.8	31	1,354	-9.5	-16.4	[illegible]	3.5
800	31	2,021	[illegible]	-7.2	21	[illegible]	31	[illegible]	-11.8	-19.4	[illegible]	[illegible]
750	31	2,535	-.7	-9.5	[illegible]	4.7	31	[illegible]	-14.4	[illegible]	[illegible]	[illegible]
700	31	[illegible]	[illegible]	-12.2	24	[illegible]	31	[illegible]	-17.5	[illegible]	[illegible]	[illegible]
650	31	3,667	[illegible]	-16.1	[illegible]	[illegible]	31	3,382	[illegible]	[illegible]	30	[illegible]
600	31	4,297	[illegible]	-19.9	[illegible]	[illegible]	31	[illegible]	[illegible]	-31.1	[illegible]	[illegible]
550	31	[illegible]	[illegible]	-24.5	27	[illegible]	31	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
500	31	5,683	[illegible]	-26.1	27	9.4	31	[illegible]	-33.2	-37.4	[illegible]	5.1
450	31	6,454	[illegible]	-33.0	27	[illegible]	31	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
400	31	7,310	[illegible]	[illegible]	27	[illegible]	31	[illegible]	-43.3	-41.7	[illegible]	[illegible]
350	31	8,246	-37.7	-45.0	27	[illegible]	31	7,702	[illegible]		31	[illegible]
300	31	9,291	-45.9		27	17.8	31	[illegible]	-52.2		31	[illegible]
250	31	10,481	[illegible]		27	[illegible]	31	[illegible]	-55.0		[illegible]	[illegible]
200	31	[illegible]	[illegible]		27	[illegible]	31	[illegible]	[illegible]		[illegible]	[illegible]
175	31	12,720	[illegible]		27	[illegible]	31	12,161	-53.6		31	[illegible]
150	31	[illegible]	[illegible]		27	[illegible]	31	[illegible]	[illegible]		31	[illegible]
125	31	[illegible]	-62.5		[illegible]	[illegible]	31	14,313	[illegible]		31	[illegible]
100	31	16,180	-64.5		[illegible]	15.3	31	15,729	[illegible]		31	13.6
80	31	[illegible]	-64.9		[illegible]	[illegible]	31	17,136	-57.8		31	[illegible]
70	31	18,355	-64.0		26	[illegible]	30	17,978	-58.3		31	16.1
60	31	19,301	-62.7		27	[illegible]	29	18,941	-58.4		31	15.3
50	30	20,424	-61.4		26	5.1	29	[illegible]	-58.9		31	14.8
40	28	21,821	[illegible]		26	[illegible]	29	21,486	-58.6		32	[illegible]
30	25	23,619	[illegible]		26	2.5	29	[illegible]	[illegible]		31	[illegible]
25	24	24,765	-58.4		27	2.4	[illegible]	[illegible]	-56.6		[illegible]	15.3
20	21	[illegible]	-56.9		27	[illegible]	27	[illegible]	-56.2		31	13.2
15	11	[illegible]	[illegible]				23	27,728	[illegible]		34	12.8
10							18	[illegible]	[illegible]		[illegible]	[illegible]
7							11	[illegible]	[illegible]			

Standard pressure surface (mb)	[illegible] IS. (†) — No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Speed
SURFACE	31	17	26.8	23.9	[illegible]	[illegible]
1000	31	82	26.1	22.6	06	[illegible]
950	31	530	[illegible]	18.2	07	10.1
900	31	1,004	[illegible]	14.5	08	[illegible]
850	31	1,496	17.4	10.6	08	[illegible]
800	31	2,012	15.2	5.3	09	[illegible]
750	31	2,553	[illegible]	[illegible]	09	[illegible]
700	31	3,134	9.8	-3.0	[illegible]	[illegible]
650	31	3,743	[illegible]	-7.1	10	[illegible]
600	31	4,400	3.0	-11.3	10	11.1
550	31	5,096	-.8	-15.7	10	[illegible]
500	31	[illegible]	-5.2	-19.7	10	10.1
450	31	6,675	-9.5	[illegible]	11	[illegible]
400	31	7,580	-15.3	-31.1	10	[illegible]
350	31	[illegible]	-22.1	-37.3	10	[illegible]
300	31	[illegible]	-30.5	-44.3	11	[illegible]
250	31	10,960	-40.6	-53.3	12	[illegible]
200	31	[illegible]	-53.0		[illegible]	[illegible]
175	31	13,286	[illegible]		[illegible]	[illegible]
150	31	14,230	[illegible]		13	[illegible]
125	31	[illegible]	[illegible]		[illegible]	14.5
100	31	16,563	-83.7		11	15.1
80	31	17,802	-81.3		12	[illegible]
70	30	[illegible]	-76.8		26	[illegible]
60	30	19,458	-71.2		28	[illegible]
50	30	20,550	-66.1		[illegible]	2.1
40	[illegible]	21,918	-61.5		09	[illegible]
30	27	23,713	[illegible]		[illegible]	[illegible]
25	26	24,866	-55.3		[illegible]	21.7
20	23	26,300	-51.9		09	[illegible]
15	16	[illegible]	-47.6		09	[illegible]
10	6	[illegible]	-45.1			
7						

Standard pressure surface (mb)	YUCCA FLAT, NEV. [illegible] — No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Speed	[illegible], ARIZ. — No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Speed
SURFACE	31	1,194	-2.6	-9.2	29	1.3	20	131	7.2	-.8	01	.4
1000	31	209					20	[illegible]	8.9	-.5	36	.5
950	31	[illegible]					20	587	12.9	-2.0	36	1.6
900	31	1,056					20	1,038	10.3	-3.1	31	.5
850	31	1,517	3.4	-10.1	36	2.5	20	1,512	7.4	-6.4	28	1.4
800	31	[illegible]	1.6	-12.2	13	.5	20	2,008	4.9	-10.4	28	[illegible]
750	31	2,524	-.4	-14.9	21	[illegible]	20	2,529	2.7	[illegible]	26	2.8
700	31	3,076	-2.9	-17.8	24	[illegible]	20	3,088	-.1	-18.3	27	4.1
650	31	3,657	-6.1	-21.7	26	[illegible]	20	3,671	-3.3	-21.0	27	5.3
600	31	[illegible]	-10.1	-25.3	27	[illegible]	20	4,307	-7.3	[illegible]	27	6.5
550	31	4,944	-14.0	-28.5	27	7.8	20	4,971	[illegible]	[illegible]	27	7.5
500	31	[illegible]	-19.8	-33.3	28	[illegible]	20	5,702	-17.1	-29.4	27	10.4
450	31	6,432	-25.4	-38.4	28	9.6	20	6,474	[illegible]	-33.4	27	11.9
400	31	[illegible]	-31.8	-43.3	29	[illegible]	20	7,336	-29.6	[illegible]	27	12.7
350	31	8,212	-36.9	-46.0	29	13.2	20	[illegible]	-36.9	-44.3	27	[illegible]
300	31	9,251	-46.7		29	14.4	20	9,321	-45.4		27	16.7
250	31	10,437	-55.3		29	17.2	20	[illegible]	-54.2		27	19.4
200	31	11,839	-60.4		28	19.5	18	[illegible]	[illegible]		27	22.3
175	31	12,670	-60.5		28	[illegible]	17	12,747	-60.5		26	19.
150	31	13,630	-60.4		28	18.5	13	13,715	-62.4		26	[illegible]
125	31	14,763	-61.6		28	16.6	9	14,821	-63.8			
100	31	16,138	-63.5		28	[illegible]	7	16,181	-65.3			
80	31	17,507	-63.4		28	9.7	7	17,537	-65.9			
70	31	[illegible]	-62.9		28	7.7	7	18,349	-64.3			
60	31	19,279	-61.6		28	7.2	6	19,289	-62.5			
50	31	20,412	-60.1		28	5.3	6	20,421	-60.1			
40	31	21,807	-59.5		26	3.8	6	21,816	-60.3			
30	31	23,612	-58.9		27	2.7	6	23,615	-58.6			
25	[illegible]	24,765	-58.6		24	[illegible]	6	24,768	-56.0			
20	19	[illegible]	-56.8		26	5.3						
15	15	[illegible]	-56.2		30	[illegible]						

Note: All observations scheduled at 1200, G.C.T. Pressures shown under station names are the average monthly station pressures for the month of record, corrected to the height of the floors of the instrument shelters used for rawinsonde purposes. "Number of observations" refers to those of dynamic height only. Although the number of temperature observations at any given pressure surface is usually the same as for height, it is possible for temperature to be missing for one or more pressure surfaces of some observations. Dew Point averages are limited to those observations with temperatures warmer than -40°C. Observations of wind speed and direction are sometimes lost due to limiting angles, i.e., elevation angles less than 6° above the horizon, or any obstruction above the horizon.
The temperature and wind values are based on 15 or more observations at the surface or 5 observations at a standard pressure level for temperature and 10 for wind. Dew Point data are not published for standard pressure surfaces for which less than 5 observations are available. Dew Point data are computed and expressed on the basis of vapor pressure over water. Unless otherwise indicated, they are obtained from carbon hygristors.

These average values for standard pressure surfaces were obtained by rawinsondes; dynamic height (geopotential) in units of .98 dynamic meter, temperature and dew point in degrees Celsius, and resultant winds in tens of degrees and meters per second.

Rawinsondes at this station were equipped with hypsometers to permit more accurate evaluations of pressure, and consequently height, at pressures lower than 50 mb. These rawinsondes were carried aloft by special high altitude balloons, in an effort to consistently reach higher altitudes.
† Observations for these stations are scheduled at 0000 G.C.T.
† Dew Point temperatures are based on a minimum of 5 observations. Therefor, due to the lesser number of Dew Point observations at the higher levels comparison with dry-bulb temperatures should be made with care. Dew Point temperatures replaced Relative Humidity January 1967.

SOLAR RADIATION DATA

Solar radiation intensities, tabulated in langleys per minute on a surface normal to the direction of the sun.

Date	A.M. 78.7°	A.M. 75.7°	A.M. 70.7°	A.M. 60.0°	*	P.M. 60.0°	P.M. 70.7°	P.M. 75.7°	P.M. 78.7°
				ALBUQUERQUE, N. MEX.					
Air mass	4.19	3.35	2.51	1.67	*	1.67	2.51	3.35	4.19
Jan. 25----	New pyrheliometer installed				1.47	1.38	1.20	1.10	1.00
27----	----	----	----	----	----	----	----	----	.92
28----	----	----	1.22	1.38	----	----	1.19	1.07	----
29----	----	----	----	----	----	----	1.24	1.13	1.02
30----	----	----	----	1.42	1.47	1.33	1.26	----	.90
Averages	----	----	1.22	1.40	1.47	1.36	1.22	1.10	0.96
				TUCSON, ARIZ.					
Air mass	4.56	3.65	2.74	1.83	*	1.83	2.74	3.65	4.56
Jan. 1-----	0.99	1.10	1.20	1.33	1.34	1.23	1.10	0.96	----
2-----	1.03	1.12	1.22	1.34	1.37	1.29	1.10	.97	0.83
4-----	.69	.74	.97	1.20	1.24	1.22	----	----	----
5-----	.79	----	----	----	----	----	----	----	----
6-----	.92	1.02	1.14	1.30	----	1.26	----	----	----
8-----	----	----	----	----	1.24	1.17	1.00	.88	.77
11----	----	----	----	----	1.39	1.32	1.18	1.05	.97
13----	1.01	----	1.23	1.40	1.42	1.37	----	----	1.02
14----	----	1.19	1.27	----	1.42	1.39	1.24	1.13	1.01
16----	.98	1.07	----	----	----	----	----	----	----
17----	.87	.98	----	1.27	1.38	1.31	1.16	1.01	.89
18----	----	----	1.19	----	1.40	1.33	1.12	1.02	.91
19----	.98	1.08	1.20	1.32	1.40	1.30	1.07	.96	.89
20----	.94	1.03	1.16	1.30	1.36	----	1.07	.97	.88
21----	.92	1.02	1.14	1.30	1.36	1.28	1.12	1.00	.91
22----	.93	1.01	1.10	1.30	1.37	1.28	1.10	.94	----
23----	.92	1.01	1.13	1.28	1.40	1.33	1.16	1.02	.91
24----	.92	1.03	1.14	1.29	1.30	1.20	1.01	1.00	.90
25----	.92	1.02	1.17	1.32	----	----	----	----	----
26----	Pyrheliometer inoperative								
29----	----	----	----	----	----	----	1.13	1.00	----
30----	.93	1.04	1.16	1.33	1.40	1.30	1.09	1.02	----
Averages	0.92	1.03	1.16	1.23	1.36	1.28	1.11	0.99	0.90
				MAUNA LOA OBS., HAWAII					
Air mass	3.36	2.69	2.01	1.34	*	1.34	2.01	2.69	3.36
Jan. 6-----	----	----	----	1.47	----	----	----	1.28	1.13
7-----	----	----	----	1.51	1.62	1.51	1.38	1.28	1.19
8-----	1.25	1.33	1.38	1.54	1.62	1.49	1.35	1.26	----
10----	1.22	1.32	1.40	1.52	----	1.52	1.39	1.29	1.20
11----	----	----	----	1.54	1.60	1.52	1.38	1.29	1.19
12----	1.21	1.30	1.34	1.52	1.62	1.52	1.40	1.30	1.21
13----	1.24	1.33	1.42	1.55	1.65	1.54	1.42	1.32	1.23
14----	1.23	1.31	1.40	1.52	1.59	1.39	1.26	----	----
15----	1.26	1.29	[illegible]	1.54	1.62	----	----	----	----
16----	1.15	[illegible]	[illegible]	[illegible]	1.60	1.48	1.37	1.22	----
20----	1.22	1.30	1.39	[illegible]	----	----	----	----	----
21----	1.15	[illegible]	1.40	1.50	----	----	----	----	----
24----	1.23	1.30	1.40	1.52	1.61	----	----	----	----
29----	1.21	1.24	1.40	1.52	1.62	1.46	1.36	1.22	1.12
30----	1.22	1.30	1.40	1.51	1.62	----	----	----	----
31----	1.23	1.31	1.40	1.52	----	----	----	----	----
Averages	1.22	1.30	1.40	1.52	1.62	1.49	1.37	1.27	1.18

Date	A.M. 78.7°	A.M. 75.7°	A.M. 70.7°	A.M. 60.0°	*	P.M. 60.0°	P.M. 70.7°	P.M. 75.7°	P.M. 78.7°
				MADISON, WIS.					
Air mass	4.69	3.75	2.81	1.88	*	1.88	2.81	3.75	4.69
Jan. 7-----	S 0.92	S 1.05	S 1.19	----	S 1.30	----	S 1.23	S 1.11	S 1.01
9-----	----	----	----	----	----	power failure		M .92	M .88
Averages	0.92	1.05	1.19	----	1.30	----	1.23	1.02	0.90
				BLUE HILL OBS., MASS.					
Air mass	4.89	3.92	2.94	1.96	*	1.96	2.94	3.92	4.89
Jan. 2-----	0.95	1.04	1.13	----	----	----	----	----	----
5-----	.89	1.00	1.16	----	1.27	----	1.17	1.04	0.95
6-----	----	.96	1.03	----	1.13	----	----	----	----
7-31--	Equipment inoperative								
Averages	0.92	1.00	1.11	----	1.20	----	1.17	1.04	0.95
				OMAHA, NEBR.					
Air mass	4.78	3.82	2.87	1.91	*	1.91	2.87	3.82	4.78
Jan. 1-----	----	----	HS1.14	----	HS1.25	----	----	----	----
5-----	HS0.84	HS1.00	HM1.08	----	----	----	----	----	----
7-----	HS1.00	HS1.08	HS1.18	----	HS1.28	----	HS1.14	HS1.02	HS0.90
10----	KS .74	KS .90	KS1.10	----	HS1.27	----	HS1.14	HS .95	----
15----	----	----	----	----	HM1.18	----	----	----	----
16----	HM .88	HS1.10	HS1.13	----	HS1.28	----	HS1.09	HS .88	HS .72
17----	.78	----	1.04	----	HM1.15	----	HI .93	----	----
18----	.89	HS1.03	----	----	----	----	HS1.19	HS1.04	HS .97
21----	----	HM1.00	HM1.12	----	HM1.29	----	HM1.14	HM1.04	HM .92
24----	----	----	HM1.07	----	----	----	----	----	----
25----	HM .80	HM .91	HM1.07	----	HM1.22	----	----	----	----
30----	----	----	HI1.08	KS1.28	HS1.27	HS1.18	----	----	----
Averages	0.85	1.00	1.10	1.28	1.24	1.18	1.11	0.99	0.88
				GUAM, M. I.					
Air mass	4.92	3.93	2.95	1.97	*	1.97	2.95	3.93	4.92
	No observations due to cloudiness								

KS Slight smoke
HS Slight haze
HM Moderate haze
HI Intense haze

S Slight haze - indeterminable
M Moderate haze - indeterminable
* Values corresponding to true solar noon

[illegible] air mass values for each station listed above appears in the February 1957 [illegible] 8, No. 2, page 63, of this publication.

SOLAR RADIATION DATA

Daily totals and monthly averages of solar radiation (direct and diffuse) received on a horizontal surface, tabulated in langleys.

JANUARY 1968

Station	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
	Day of month																															
ALBUQUERQUE N.M.	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	347	298	139	316	366	379	370	136	227	228	214	---	254	---
AMES IOWA	80	152	163	229	114	103	249	52	224	225	99	116	106	210	246	244	233	225	233	237	250	94	261	56	251	---	58	43	131	262	39	166
ANNETTE ALASKA	75	30	10	85	19	12	79	88	99	94	21	14	22	9	28	14	9	49	56	90	32	11	88	65	103	133	100	140	141	99	145	63
APALACHICOLA FLORIDA	98	254	185	185	377	103	188	319	327	133	84	220	202	103	373	386	---	377	382	359	387	369	181	146	388	415	415	372	237	380	240	273
ARGONNE NAT. LAB.	154	62	227	238	213	159	266	121	169	177	212	73	84	52	185	232	250	104	188	261	259	71	210	183	223	129	36	69	35	275	50	160
ASTORIA OREGON	156	134	45	51	93	166	36	75	44	93	121	12	18	44	128	72	59	34	48	26	155	134	195	119	107	162	221	93	133	147	79	97
ATLANTA GEORGIA	45	43	59	93	108	34	290	312	22	20	51	47	60	128	177	319	316	316	318	317	316	281	113	26	281	317	290	258	310	205	228	184
BARROW ALASKA +	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	0	1	3	2	4	8	4	---
BETHEL ALASKA	0	23	0	11	2	11	59	13	19	48	52	14	32	12	55	65	59	73	---	---	---	---	---	---	---	---	---	---	---	---	---	---
BISMARCK N.DAK.	179	199	155	117	159	209	203*	112	196	179	77	206*	198	185	207	191	96	210	131	209	214	137	83	171	88	190	73	60	264	227	220	166*
BLUE HILL MASS.	215	178	36	46	218	185	158	236	220	232	243	242	224	53	115	246	233	202	206	227	159	203	120	88	37	269	254	68	81	53	136	167
BOISE IDAHO	67	89	197	166	144	200	180	62	37	---	---	203	107	117	122	137	213	164	153	209	177	214	202	220	204	146	172	181	61	76	117	149
BROWNSVILLE TEXAS	92	164	345	81	119	97	40	59	202	85	76	79	429	447	389	263	259	284	---	91	215	256	460	464	453	390	226	354	332	337	338	248
BURLINGTON VERMONT	201	166	49	67	191	131	107	130	197	210	230	227	200	268	37	232	153	158	38	94	113	86	51	241	223	128	223	91	35	26	200	145
CAPE HATTERAS N.C.	144	70	117	48	309	56	88	323	156	54	37	195	41	174	290	329	331	329	310	320	322	334	186	49	27	357	343	334	345	283	101	207
CARIBOU MAINE	121	185	99	156	168	199	93	110	194	201	195	203	195	203	97	180	221	132	76	125	70	223	67	130	226	180	230	251	147	62	---	158
CHARLESTON S.C.	61	48	125	114	288	183	277	365	135	21	24	35	90	215	272	358	353	349	331	341	349	343	229	62	70	388	367	312	212	332	211	221
CLEVELAND OHIO	177	118	51	173	145	50	193	230	39	129	229	202	23	108	92	254	253	---	50	249	190	107	---	---	257	200	89	36	44	61	151	139
COLUMBIA MISSOURI	97	60	---	284	198	95	285	67	213	263	136	50	132	174	170	75	279	42	300	136	214	103	189	92	296	292	144	83	28	102	75	156
DAVIS CALIFORNIA	57	213	193	219	258	49	48	32	98	250	278	201	184	64	188	242	286	288	271	250	201	275	241	279	285	248	219	158	47	48	303	193
DODGE CITY KANSAS	83	85	157	308	278	284	290	244	290	158	43	283	292	263	289	275	190	265	191	272	176	139	311	259	301	44	186	263	135	347	209	223
E. LANSING MICHIGAN	204	---	125	168	134	119	216	222	93	255	223	186	98	69	238	202	221	232	169	207	215	123	120	138	291	107	70	50	40	239	48	161
EL CENTRO CALIF. NPF	347	288	278	304	276	300	308	252	252	150	304	241	311	311	296	272	292	334	334	334	335	334	332	340	306	279	248	248	365	354	347	299
EL PASO TEXAS	346	261	313	307	163	294	91	177	110	199	378	389	302	389	381	381	342	231	272	216	116	375	404	392	415	240	400	301	218	404	328	295
ELY NEVADA	258	206	313	307	300	324	304	241	236	183	330	315	287	305	223	281	345	305	294	306	329	334	332	330	321	250	231	360	339	232	319	292
EPPLEY NEWPORT R.I.	112	159	27	28	212	177	95	224	205	216	225	228	---	---	92	237	150	199	198	222	171	239	124	54	29	255	243	78	90	66	195	157
FAIRBANKS ALASKA	7	1	6	3	1	2	2	5	3	6	20	22	16	6	10	4	5	5	10	10	17	3	5	16	7	2	6	3	24	15	12	8
FLAMING GORGE UTAH	143	148	262	270	208	267	75	258	241	170	280	108	295	123	197	116	280	207	130	310	307	193	256	198	250	339	246	214	277	367	140	222
FORT WORTH TEXAS	112	130	59	166	67	---	218	40	68	127	62	337	356	345	347	348	136	33	55	86	38	181	---	343	372	234	32	49	119	51	160	161
FRESNO CALIFORNIA	62	32	134	249	68	87	39	51	162	37	257	223	235	203	260	266	279	196	244	217	178	195	291	280	273	197	66	344	256	67	270	184
GAINESVILLE FLORIDA	94	114	155	154	324	282	164	313	294	---	167	113	163	133	342	354	376	275	294	326	340	346	244	92	115	361	328	254	279	243	239	243
GLASGOW MONTANA	103	179	136	80	172	184	106	120	157	73	179	190	167	190	169	178	118	135	177	186	149	74	119	115	202	87	153	122	208	221	161	149
GRAND JUNCTION COLO.	200	180	176	322	312	299	287	306	284	136	221	334	330	311	277	264	311	332	328	342	341	323	323	312	332	251	154	291	334	328	256	284
GREAT FALLS MONTANA	113	210	153	67	90	205	95	200	102	105	192	187	336	182	108	148	209	122	121	178	51	190	99	204	119	115	218	215	158	210	259	154
GREENSBORO N.C.	101	118	89	108	273	36	262	292	40	23	104	140	30	140	264	241	311	305	284	302	289	280	132	66	165	339	277	263	284	187	44	187
INDIANAPOLIS INDIANA	264	74	105	264	246	65	289	190	137	181	294	107	81	74	273	315	301	285	308	201	88	90	165	293	298	261	122	73	36	66	78	181
ITHACA NEW YORK	179	116	11	65	207	98	195	144	103	212	250	224	203	34	51	194	146	50	11	228	80	85	25	252	270	195	116	23	32	11	67	125
LAKE CHARLES LA.	40	114	161	[illegible]	84	61	324	43	20	52	49	96	387	362	332	371	361	241	84	239	156	196	105	375	380	217	206	152	266	256	212	193
LAKELAND FLORIDA	296	334	242	324	353	347	327	267	366	217	292	245	266	274	328	266	362	179	330	352	389	381	342	255	247	419	328	323	293	237	---	306
LARAMIE WYOMING	152	181	219	198	200	219	228	214	163	152	222	234	213	191	235	151	166	231	199	224	262	152	177	237	251	226	243	173	280	272	172	208
LAS VEGAS NEVADA	291	269	292	295	296	301	305	275	185	197	293	196	281	307	264	259	322	330	300	313	319	319	325	330	287	304	195	360	353	299	350	291
LITTLE ROCK ARKANSAS	66	69	35	189	98	56	304	68	36	161	81	45	180	190	279	307	312	295	132	---	---	98	244	321	327	256	99	121	127	53	91	160
LOS ANGELES CALIF.	240	147	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	341	332	318	331	351	306	94	245	359	363	297	298	---
MADISON WISCONSIN	84	123	219	243	168	94	246	90	204	227	170	46	107	62	230	214	233	107	229	236	257	104	257	115	120	85	21	58	83	274	45	153
MANHATTAN KANSAS	76	115	80	252	204	205	232	52	250	240	37	260	108	145	255	251	95	217	256	250	253	76	195	210	258	165	87	146	90	75	70	168
MATANUSKA ALASKA	5	3	26	7	28	28	29	11	18	26	31	32	33	37	37	17	53	41	26	62	30	13	16	41	22	9	22	87	61	73	74	32
MEDFORD OREGON	115	81	137	77	126	97	99	66	92	116	212	154	127	56	226	130	97	61	147	184	205	162	209	211	132	235	248	135	107	139	96	138
MIAMI FLORIDA	408	413	360	368	228	346	369	290	319	160*	326	322	124	295*	332	383	364	103	400	408	256	319	245	378	302	434	194	222	326	442	356	316*
MIDLAND TEXAS	269	165	109	96	158	137	90	---	330	250	309	341	339	333	329	275	190	120	69	66	126	138	359	340	346	185	311	325	161	131	347	225
NASHVILLE TENNESSEE	131	58	29	218	312	27	318	255	34	31	57	35	92	125	80	221	312	327	244	176	299	131	69	335	347	334	232	258	201	57	221	180
NEW YORK N.Y. U	232	166	34	29	227	123	239	232	145	223	243	240	203	7	38	260	191	212	195	234	206	166	41	52	42	269	244	45	51	31	262	157
NORTH OMAHA NEBRASKA	177	146	179	251	205	194	265	177	282	260	54	267	197	162	278	275	250	278	253	259	276	87	235	273	280	186	47	55	156	304	50	205
OAK RIDGE TENNESSEE	90	70	[illegible]	161	301	22	227	303	39	41	91	99	31	124	116	315	283	302	276	194	292	285	31	174	327	316	273	224	175	136	316	183
OKLAHOMA CITY OKLA.	88	47	46	271	60	125	251	66	84	79	33	331	298	273	320	332	105	30	45	169	112	45	248	289	341	245	67	100	94	78	94	154
PAGE ARIZONA	298	299	257	---	---	161	226	242	259	164	272	311	330	333	257	241	342	330	335	344	351	336	338	357	344	283	270	---	358	353	218	293

Note.--Langley is the unit used to denote one gram calorie per square centimeter. Values with an asterisk are interpolated.

+ Sun below horizon January 1 through 23.

U Indicates Urban sites

SOLAR RADIATION DATA

Daily totals and monthly averages of solar radiation (direct and diffuse) received on a horizontal surface, tabulated in langleys.

JANUARY 1968

Station	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
PALMER AAES ALASKA	4	3	26	7	15	10	33	25	14	22	27	27	28	36	40	17	42	30	24	39	29	11	14	27	25	11	25	85	58	64	67	29
PHOENIX ARIZONA	329	323	168	321	302	328	275	326	272	126	328	253	329	355	240	261	339	367	364	315	361	361	369	371	339	124	200	263	383	388	310	303
PORTLAND MAINE	220	211	54	95	220	189	83	235	150	230	235	236	223	113	89	247	249	218	191	235	139	174	57	193	80	257	263	77	66	48	280	173
PROSSER WASHINGTON	137	163	145	97	160	138	55	106	98	166	171	87	70	43	89	99	121	44	128	53	192	40	32	150	175	94	220	---	147	228	180	121
RAPID CITY S.DAK.	152	216	201	154	109	245	225	161	160	205	146	235	217	225	225	216	214	227	180	230	224	216	178	300	57	70	81	104	262	247	173	189
RENO NEVADA	216	104	231	233	234	226	201	85	154	232	248	244	167	120	227	190	265	245	226	261	210	269	272	273	215	278	126	233	249	84	264	212
RICHLAND 25 NW WASH.	137	44	145	67	191	71	35	149	167	69	233	175	156	209	215	131	156	140	103	106	134	79	107	89	185	175	88	102	59	101	134	128
RIVERSIDE CALIFORNIA	204	11	239	253	252	172	264	169	169	2	246	164	242	267	228	183	244	286	282	290	289	271	293	303	265	179	51	303	304	270	269	225
RUSTON LOUISIANA	1	0	---	26	20	---	121	68	16	4	1	---	---	---	289	315	311	249	241	226	224	160	22	326	312	268	244	130	236	32	180	155
SAINT CLOUD MINN.	81	137	158	183	165	133	193	132	190	149	81	89	148	156	89	205	163	110	133	189	172	63	230	65	76	140	75	110	242	228	40	140
SALT LAKE CITY	130	138	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	257	260	208	150	---	---	285	211	184	---
SAN ANTONIO TEXAS	245	76	82	73	51	108	312	33	69	273	95	372	398	390	365	368	63	170	28	50	300	384	381	404	407	125	62	71	124	149	255	203
SANTA MARIA CALIF.	169	150	281	294	295	296	300	162	196	106	253	221	248	242	157	304	---	308	314	324	302	305	328	335	288	57	93	342	272	203	359	250
SAULT STE MARIE MICH	130	150	---	72	112	177	156	---	81	---	210	169	196	171	209	90	64	45	111	102	113	57	164	245	134	202	106	39	31	216	50	129
SEATTLE TACOMA WASH.	63	94	60	20	89	107	42	67	31	91	80	21	36	86	70	61	60	30	36	23	106	74	143	36	35	113	201	173	80	113	69	75
SEATTLE WASHINGTON	---	84	45	13	57	97	30	55	48	88	62	17	15	81	65	60	37	15	26	19	63	90	82	11	35	115	156	163	56	119	136	65
SPOKANE WASHINGTON	113	156	71	48	165	94	41	152	47	153	151	107	71	25	34	82	109	61	49	48	60	62	68	56	109	211	210	163	92	203	100	100
STATE COLLEGE PENN.	266	237	33	127	220	73	221	246	94	166	272	234	95	17	89	258	226	256	36	250	88	238	79	234	302	261	203	36	48	24	37	160
STERLING VIRGINA	249	101	---	146	287	105	244	262	82	181	292	231	61	41	137	279	294	294	---	294	273	292	---	53	---	315	297	95	---	---	25	197
SWAN ISLAND W.I.	458	376	453	471	478	466	466	265	432	214	239	398	217	172	412	442	410	214	276	462	489	479	499	502	368	265	423	437	431	391	514	391
TAMPA FLORIDA	374	370	304	361	377	374	304	356	372	198	345	256	---	244	311	327	403	328	373	349	418	414	324	293	280	451	417	310	288	366	---	341
TUCSON ARIZONA	317	320	154	293	264	330	166	312	292	132	329	296	343	342	283	293	340	349	349	346	346	345	351	361	336	59	217	216	314	374	209	290
WAKE ISLAND PACIFIC	429	418	400	349	423	439	402	426	432	419	409	420	452	265	408	291	411	290	472	432	428	337	441	480	---	433	408	442	432	388	494	409

Note.--Langley is the unit used to denote one gram calorie per square centimeter.

Values with an asterisk are interpolated.

NET RADIATION

Net radiation in langleys per day (8 a.m. to 8 a.m.) at Palmer, Alaska

JANUARY 1968

Date.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
Langleys. . .	-6	-2	-25	-2	-26	-30	-26	-31	-11	-52	-57	-55	-50	-36	-43	-30	-43	-52	-19	-7	-15	-32	-30	-24	-13	-5	-7	3	-59	-93	-87	-31

The measurement is made with a CSIRO Funk net exchange radiometer over a plot of sod. The value represents the total incoming minus the total outgoing radiation of all wave lengths.

These data are of an experimental nature and are published as received from the Palmer Exp. Station. The instrument with which they were measured has not been checked by the Weather Bureau.

SOLAR ULTRA-VIOLET RADIATION DATA

Daily totals and monthly average (< 3900 A) Ames, Iowa

Date. . . .	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
Langleys. . .	3.70	5.05	6.58	7.40	5.23	4.24	7.19	2.34	6.94	6.67	4.15	5.05	4.69	7.94	8.57	10.10	10.01	9.56	9.29	9.38	9.56	4.69	8.93	3.24	9.65	7.58	3.06	2.52	6.40	10.73	2.43	6.5

These data are from an U - V Eppley total ultra violet sensor and Speedomax H (Leeds Northrup) Recorder. It is at the same location (Agronomy Building, Iowa State University, Ames) as the published total solar radiation instrumentation. This instrument has not been checked by the ESSA, Weather Bureau.

TOTAL OZONE DATA

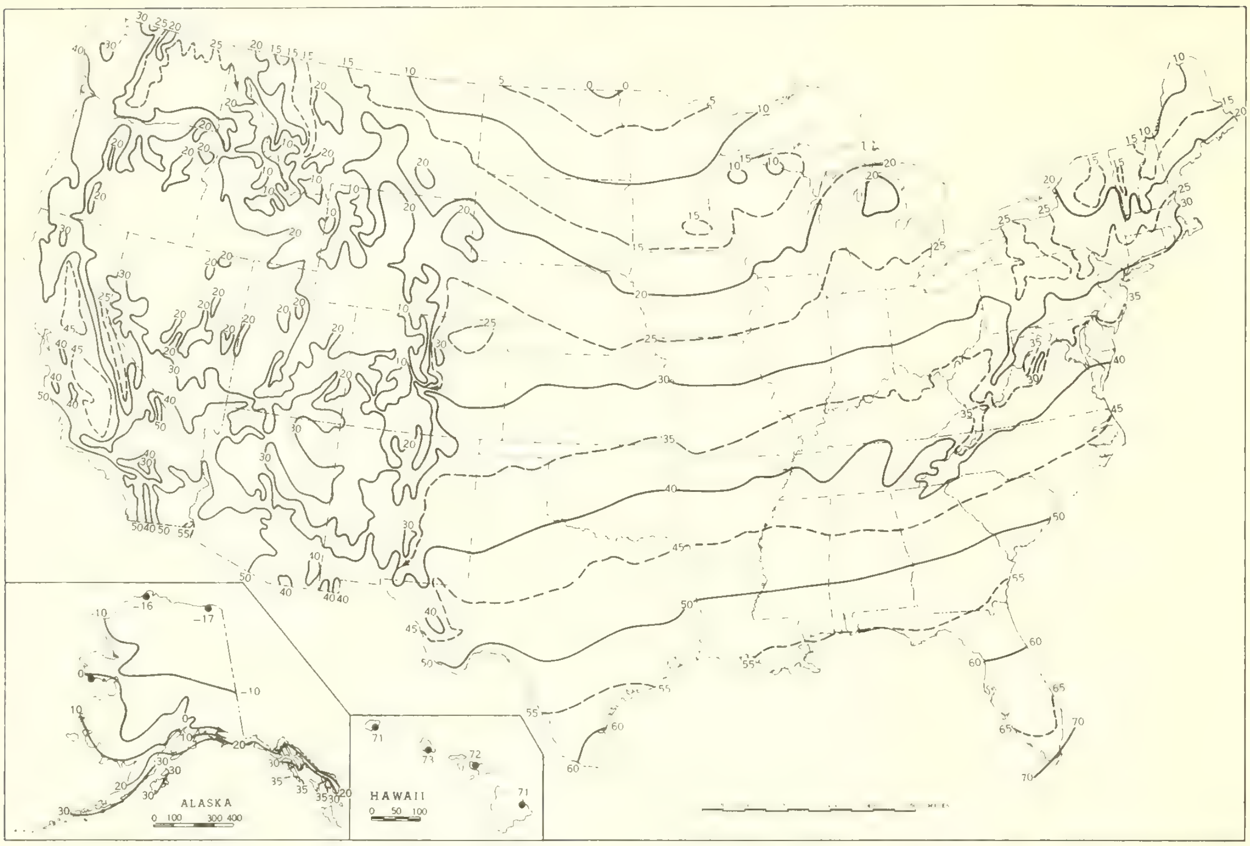
These provisional ozone data are obtained from measurements made with a Dobson ozone spectrophotometer, and are applicable approximately to local apparent noon. The data are presented in the code [illegible] defined in the August 1962 WMO circular entitled "PUBLICATION OF DATA FOR METEOROLOGICAL RESEARCH, WORLD OZONE DATA."

Units: Milli-atmo-cms.

Station	Day of month																															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean O_3

Data will be delayed

Chart 1. A. Normal Daily Average Temperature (°F. 1931-60), January



B. Temperature Departure from 30 - Year Mean (F 1931-60), January 1968.

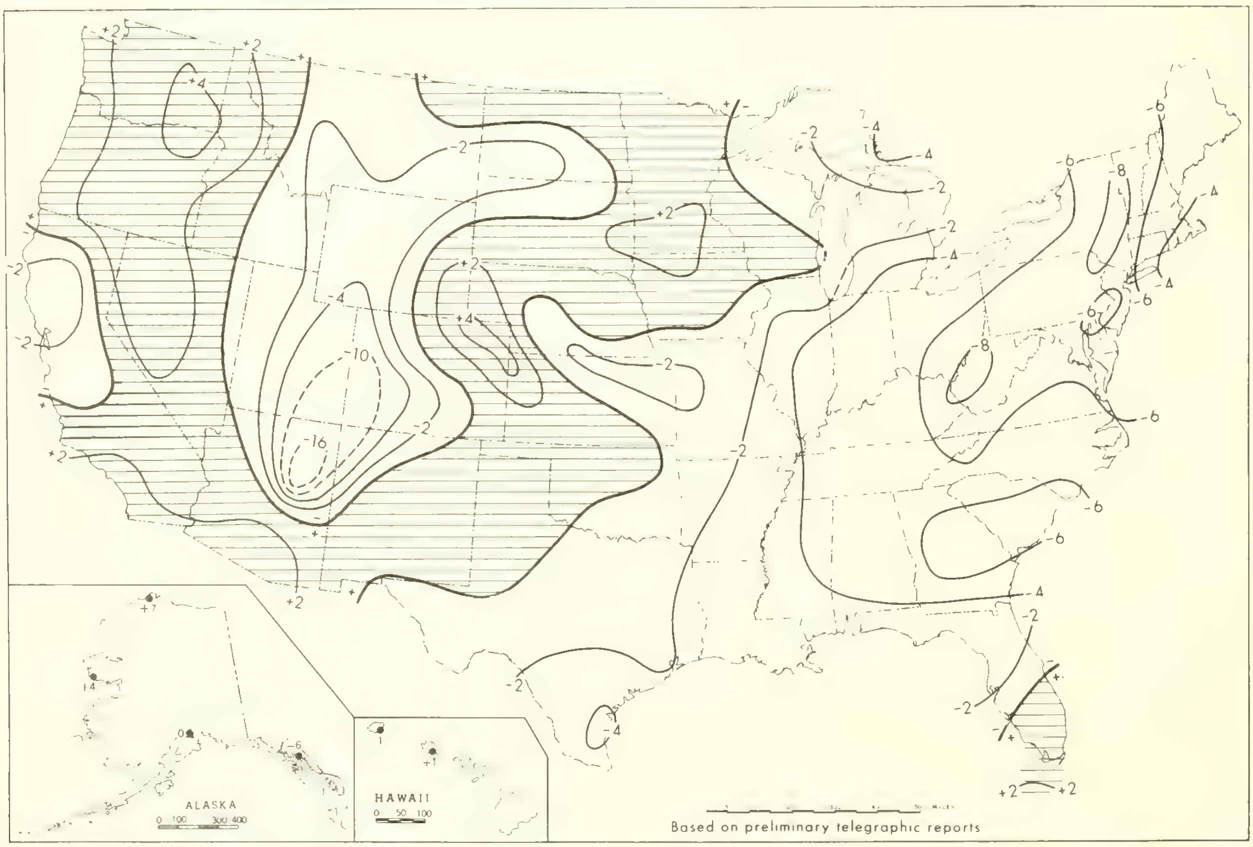


Chart II. Total Precipitation (Inches), January 1968.

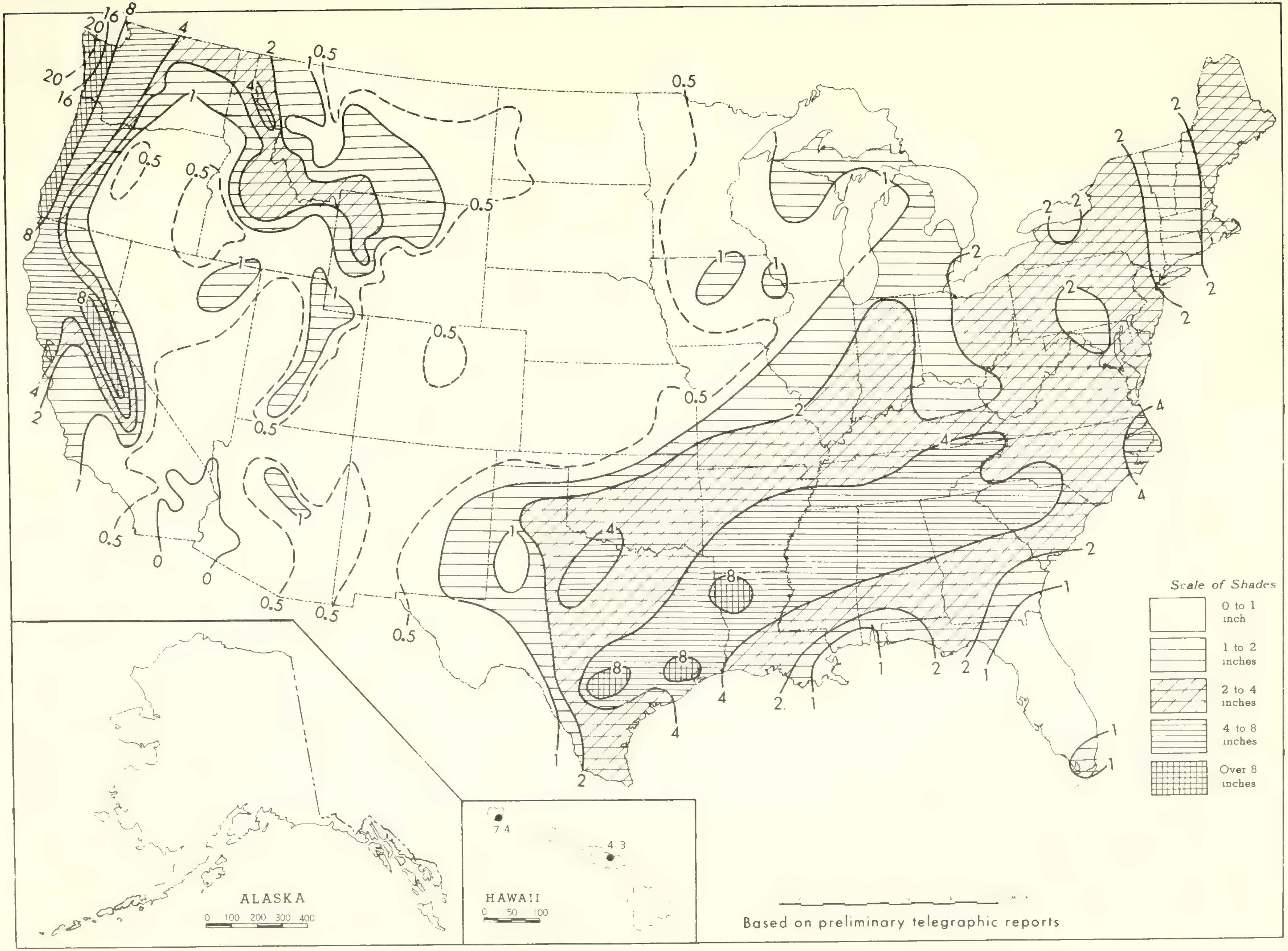


Chart III. Percentage of Normal Precipitation, January 1968.

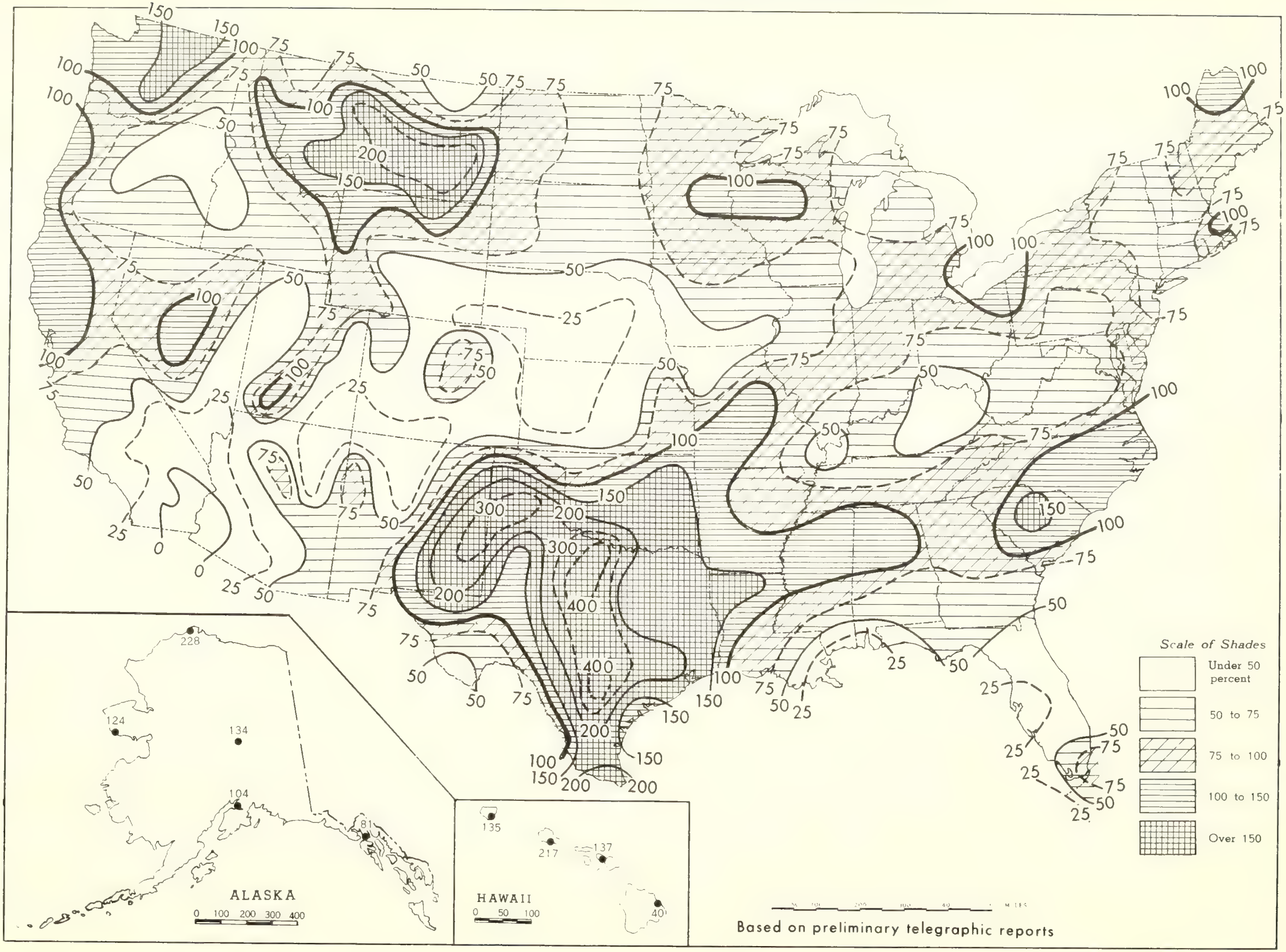
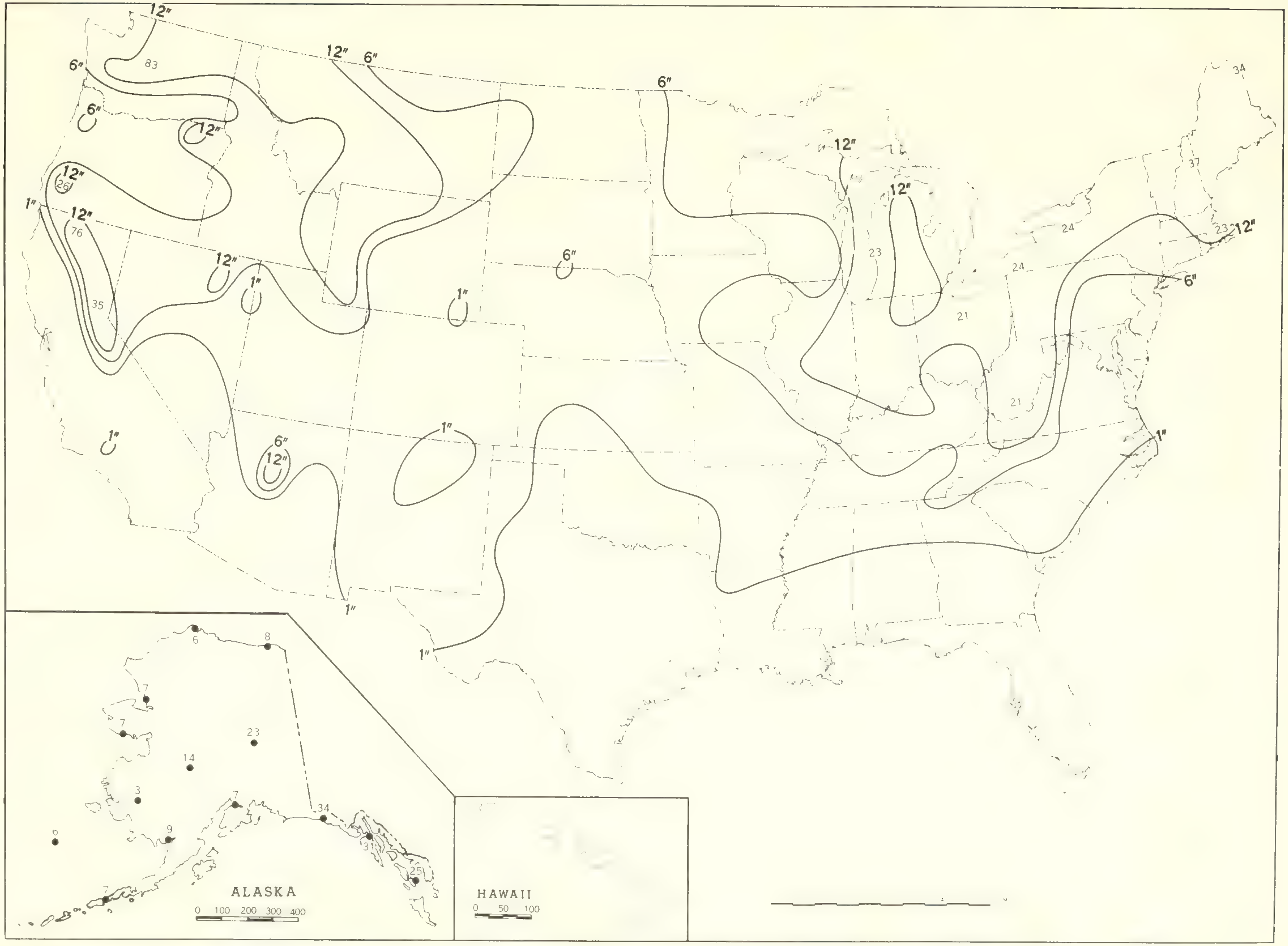
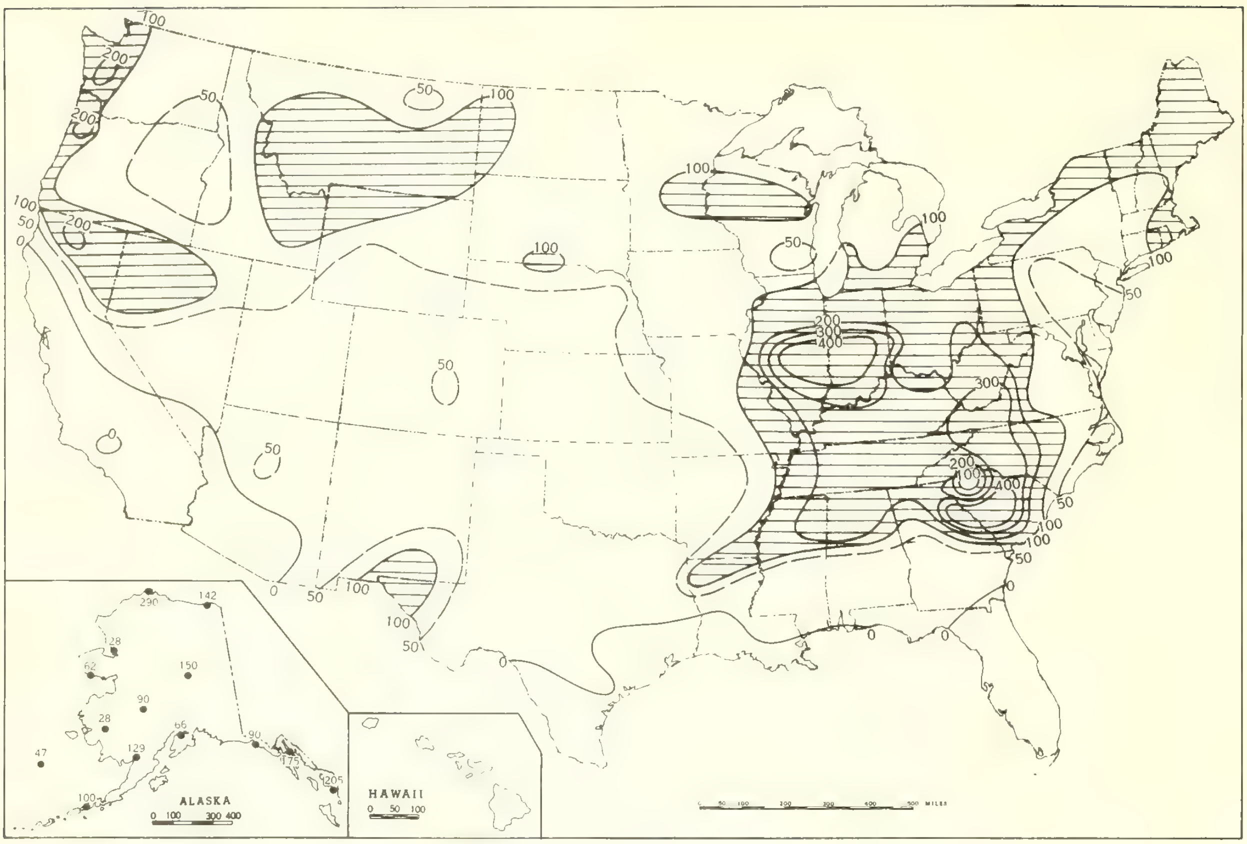


Chart IV. Total Snowfall (Inches), January 1968.

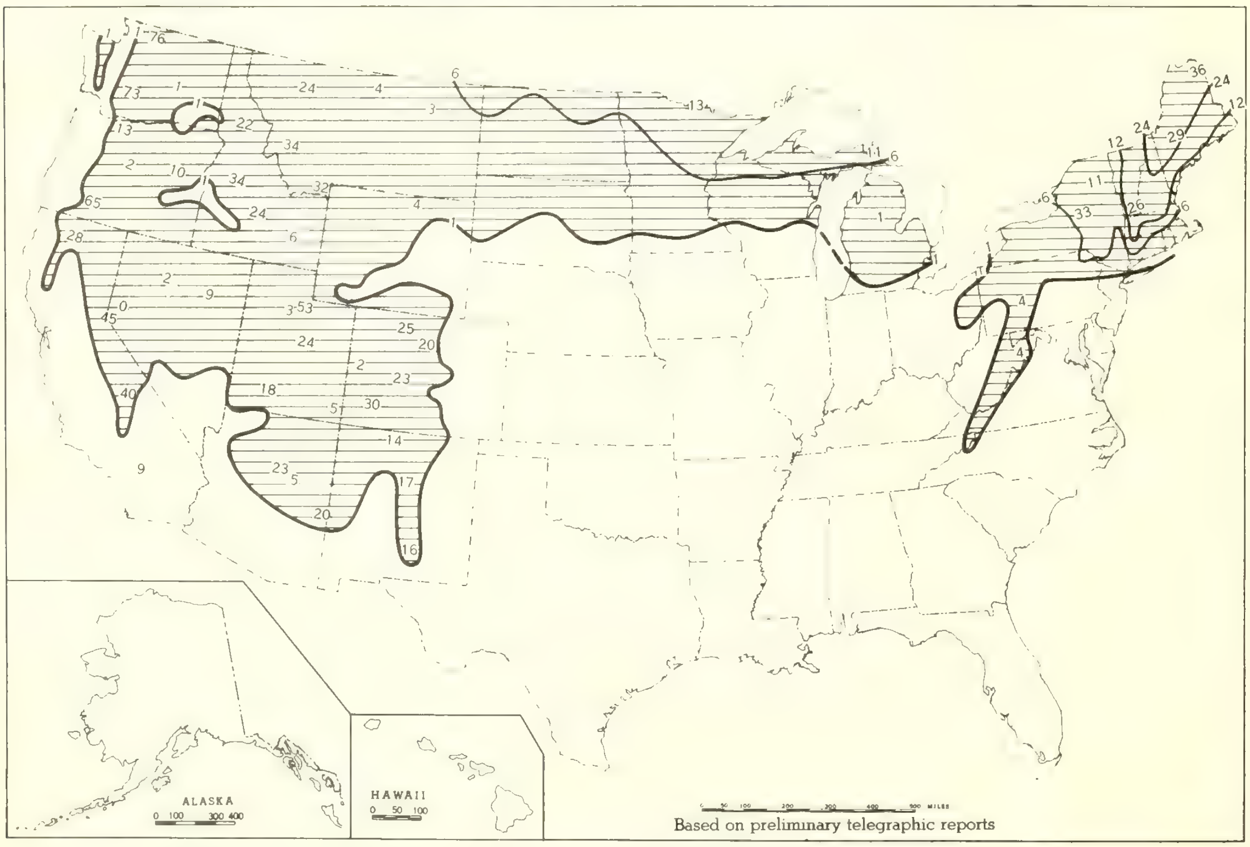


This is the total of unmelted snowfall recorded during the month at Weather Bureau and selected cooperative stations. This Chart and Chart V are published only for the months of November through April, although of course there is some snow at higher elevations, particularly in the far West, earlier and later in the year.

Chart V. A. Percentage of Mean Monthly Snowfall, January 1968.

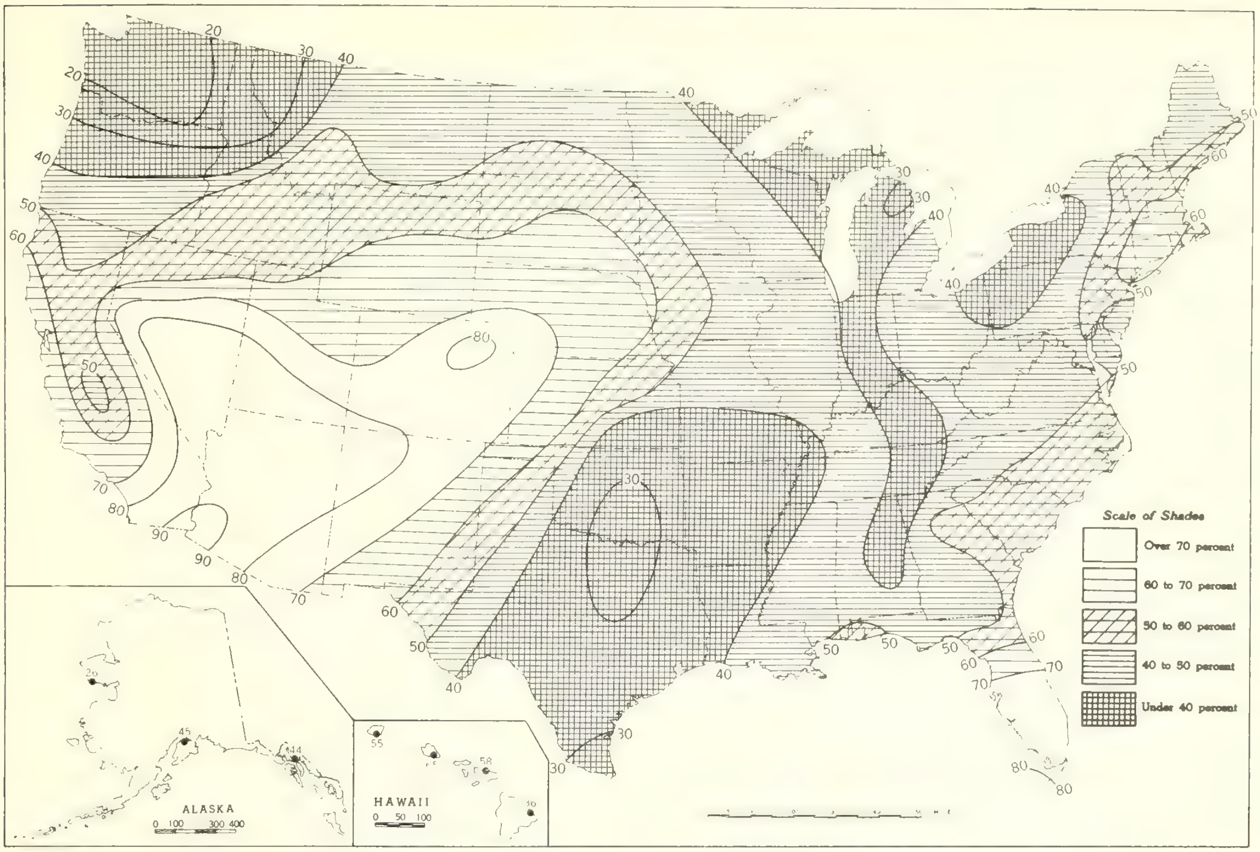


B. Depth of Snow on Ground (Inches), 7:00 a.m. E. S. T., January 29, 1968.

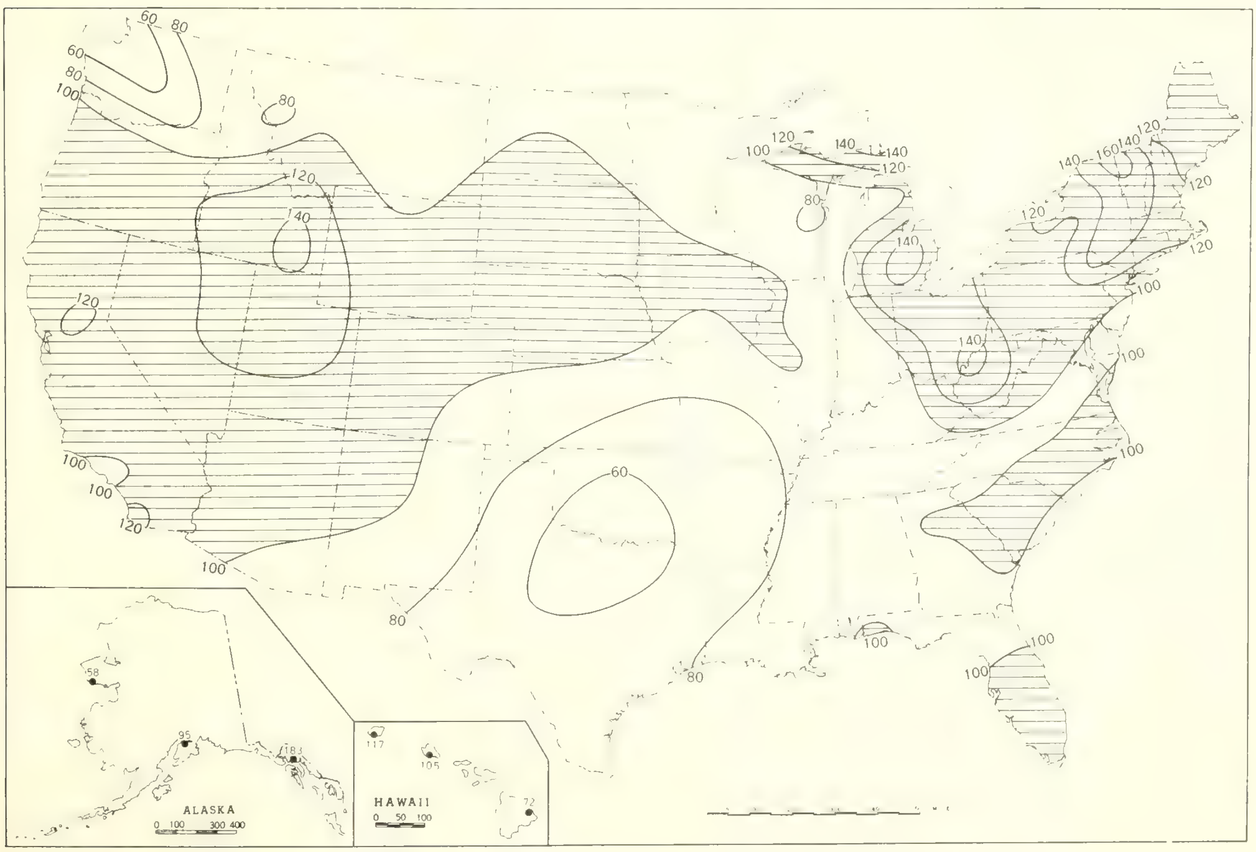


A. Amount of mean monthly snowfall is computed for Weather Bureau stations having at least 10 years of record.
B. Shows depth currently on ground at 7:00 a.m. E.S.T., of the Monday nearest the end of the month.
It is based on reports from Weather Bureau and selected cooperative stations.

Chart VI. A. Percentage of Possible Sunshine, January 1968.

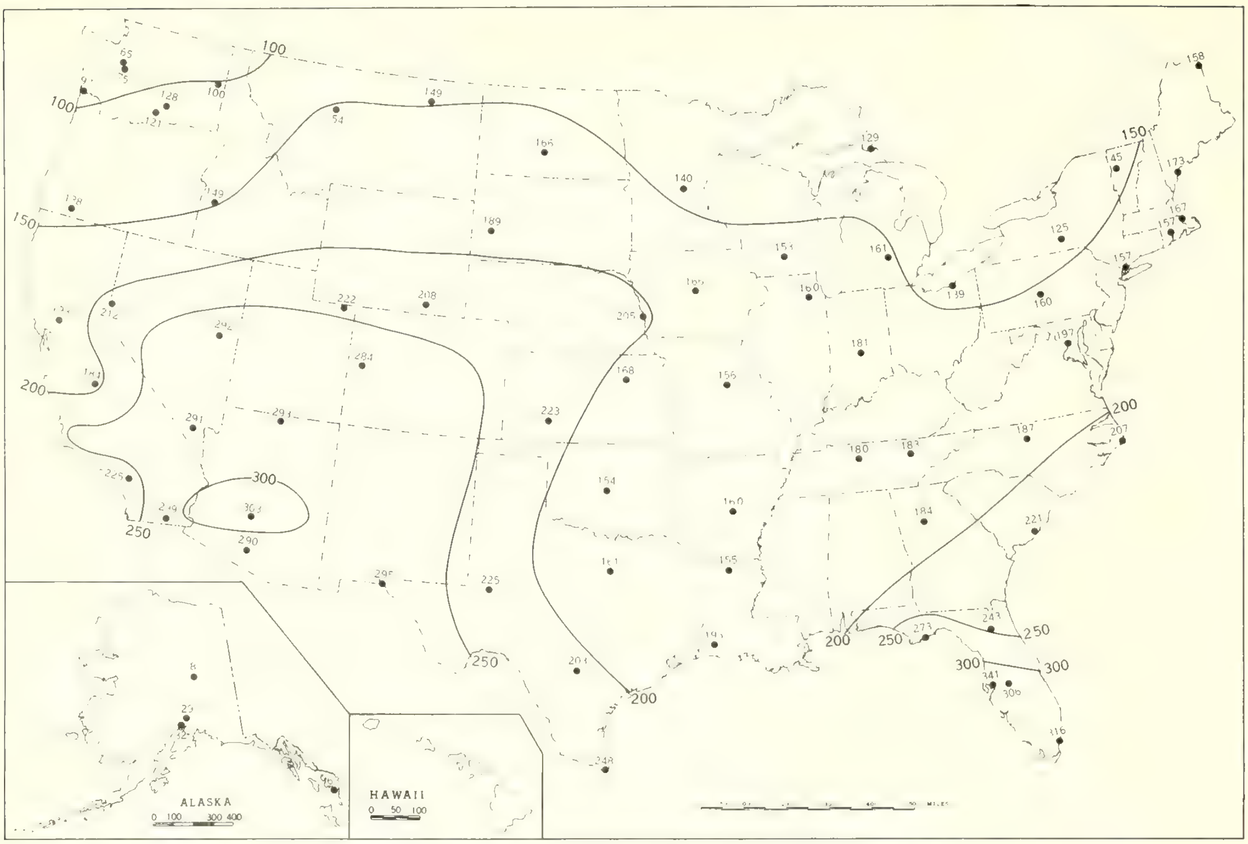


B. Percentage of Mean Monthly Sunshine, January 1968.

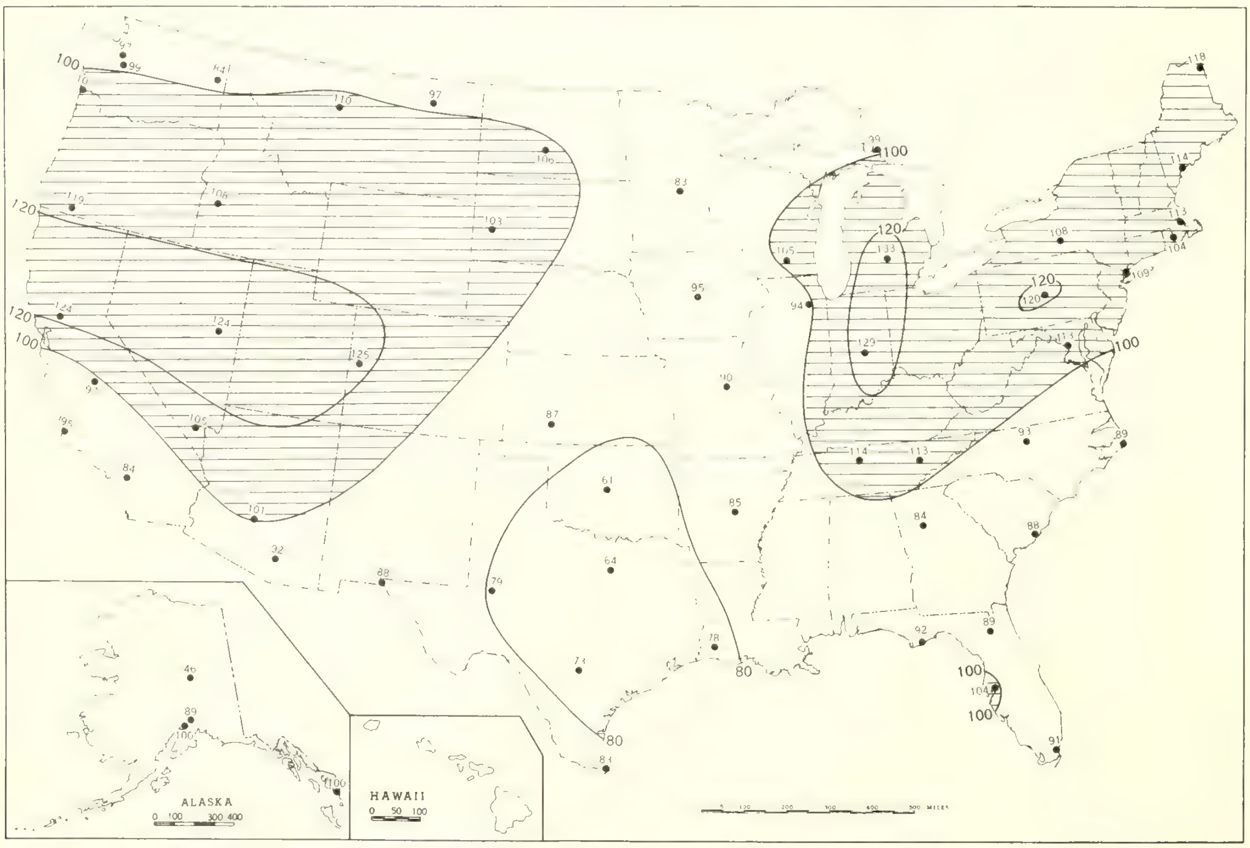


A. Computed from total number of hours of observed sunshine in relation to total number of possible hours of sunshine during month. B. Means are computed for stations having at least 10 years of record.

Chart VII. A. Average Daily Values of Solar Radiation, Langleys, January 1968.

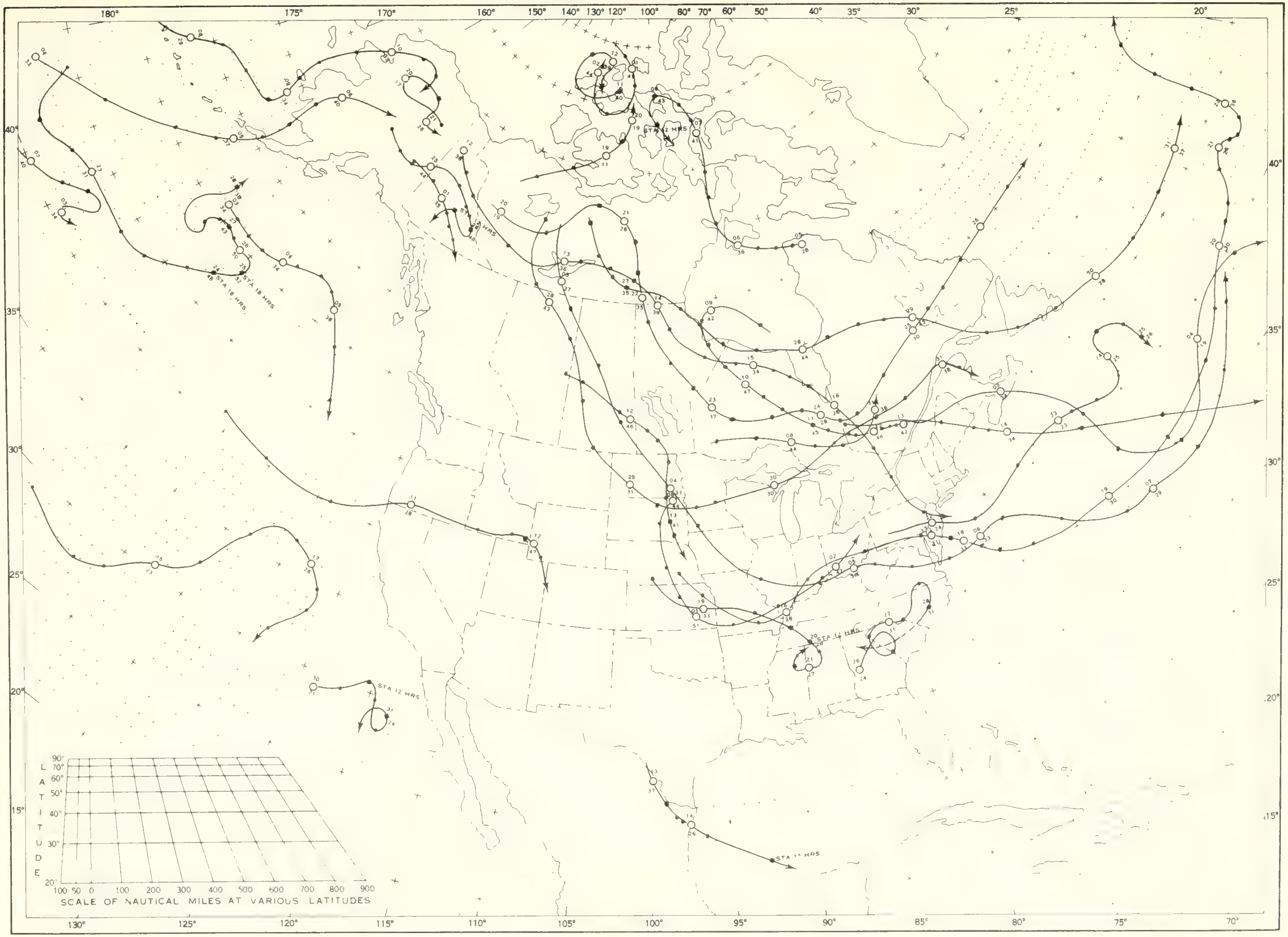


B. Percentage of Mean Daily Solar Radiation, January 1968.



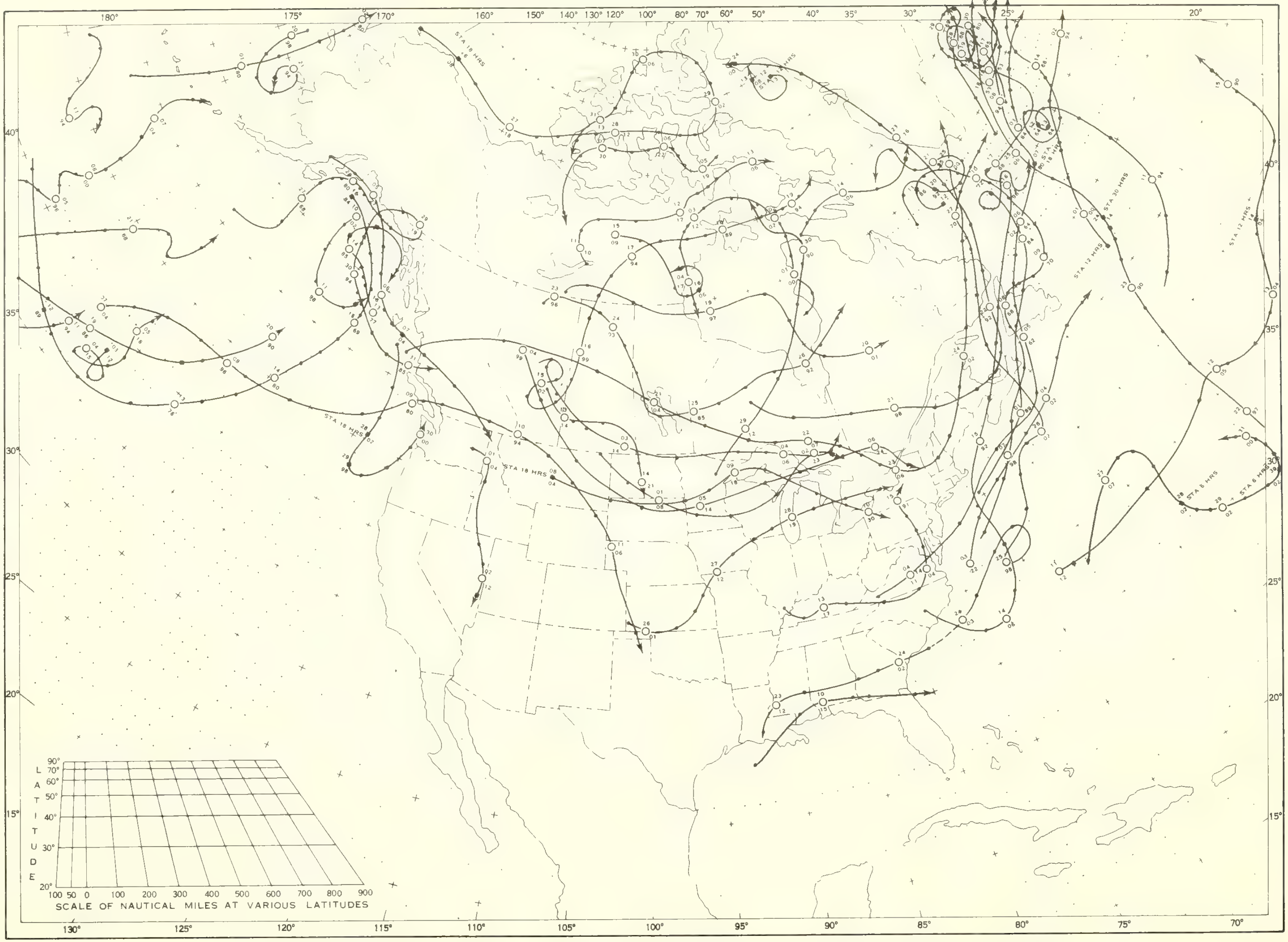
A. Mean daily solar radiation, direct + diffuse, received on a horizontal surface in langleys (1 langley = 1 gm. cal. cm.$^{-2}$) and recorded in International Pyrheliometer Scale of 1956. B. Percentage of the mean based on at least 5 years of record during the period 1950-60, and corrected to the International Pyrheliometer Scale of 1956.

Chart VIII. Tracks of Centers of Anticyclones at Sea Level, January 1968.



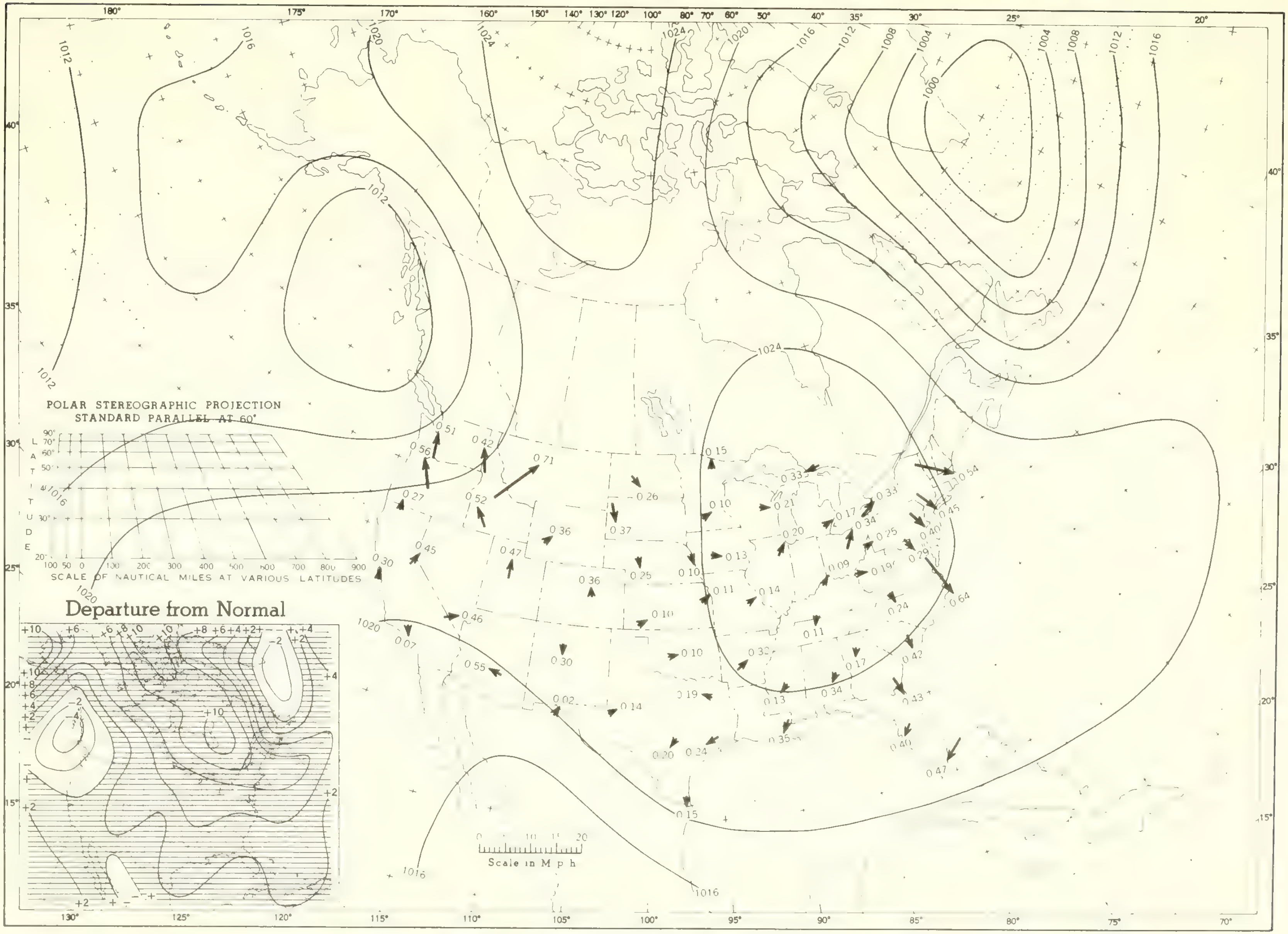
Circle indicates position of center at 7:00 a.m. E.S.T. Figure above circle indicates date, figure below, pressure to nearest millibar. Dots indicate intervening 6-hourly positions. Squares indicate position of stationary center for period shown. Dashed line in track indicates reformation at new position. Only those centers which could be identified for 24 hours or more are included.

Chart IX. Tracks of Centers of Cyclones at Sea Level, January 1968.



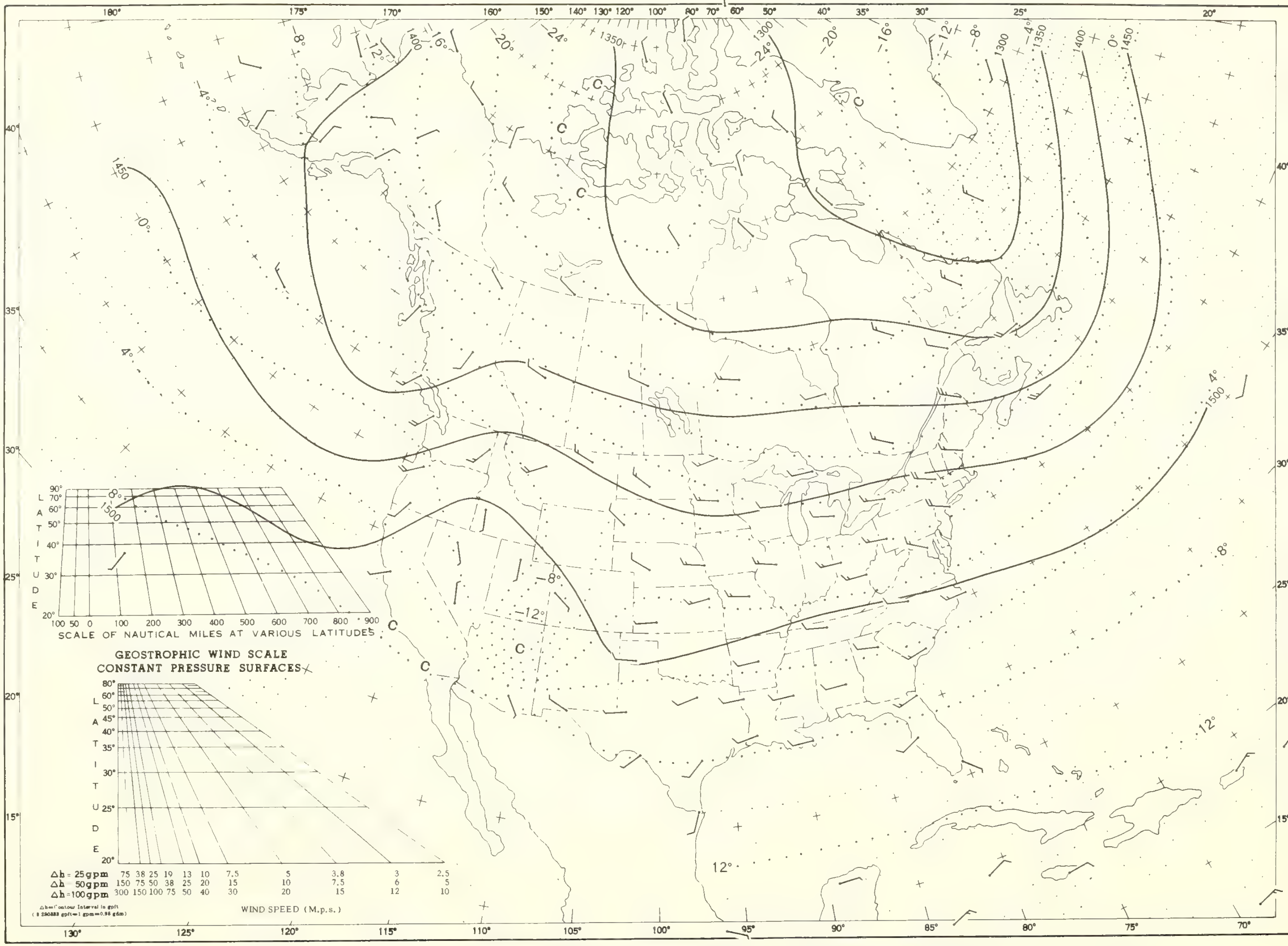
Circle indicates position of center at 7:00 a.m. E.S.T. Figure above circle indicates date, figure below, pressure to nearest millibar. Dots indicate intervening 6-hourly positions. Squares indicate position of stationary center for period shown. Dashed line in track indicates reformation at new position. Only those centers which could be identified for 24 hours or more are included.

Chart X. Average Sea Level Pressure (mb) and Resultant Surface Wind, January 1968. Inset: Departure of Average Pressure (mb) from Normal, January 1968.



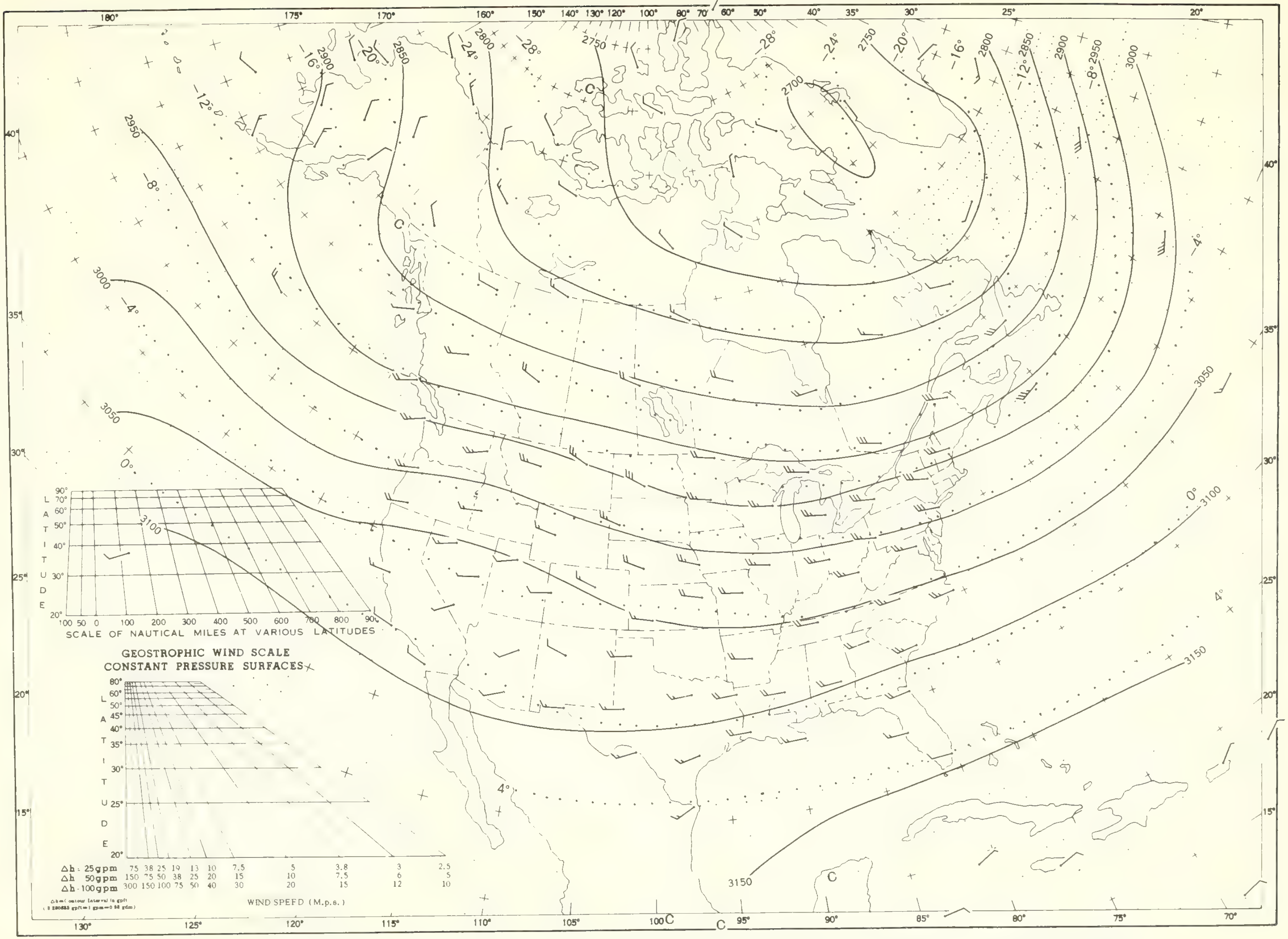
Average sea level pressures are obtained from eight daily 3-hourly observations. Resultant wind directions and speeds are shown by arrows. Constancy ratios (resultant speed÷average speed) are shown to two decimal places. Pressure normals are computed for stations having at least 10 years of record and for 10° intersections in a diamond grid over the oceans.

Chart XI. 850-mb Surface, 1200 GMT, January 1968. Average Height and Temperature, and Resultant Winds.



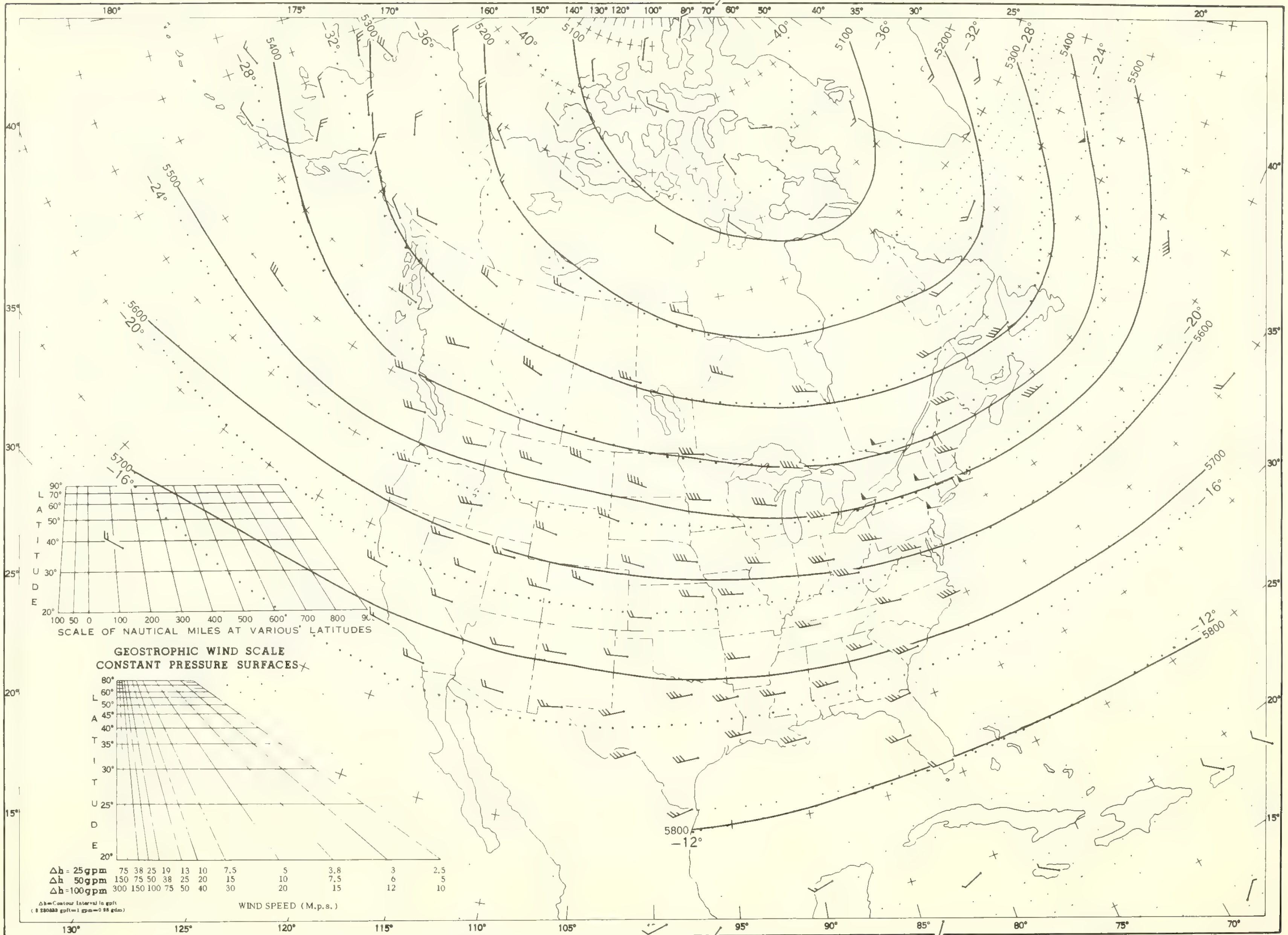
Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XII. 700-mb. Surface, 1200 GMT, January 1968 Average Height and Temperature, and Resultant Winds.



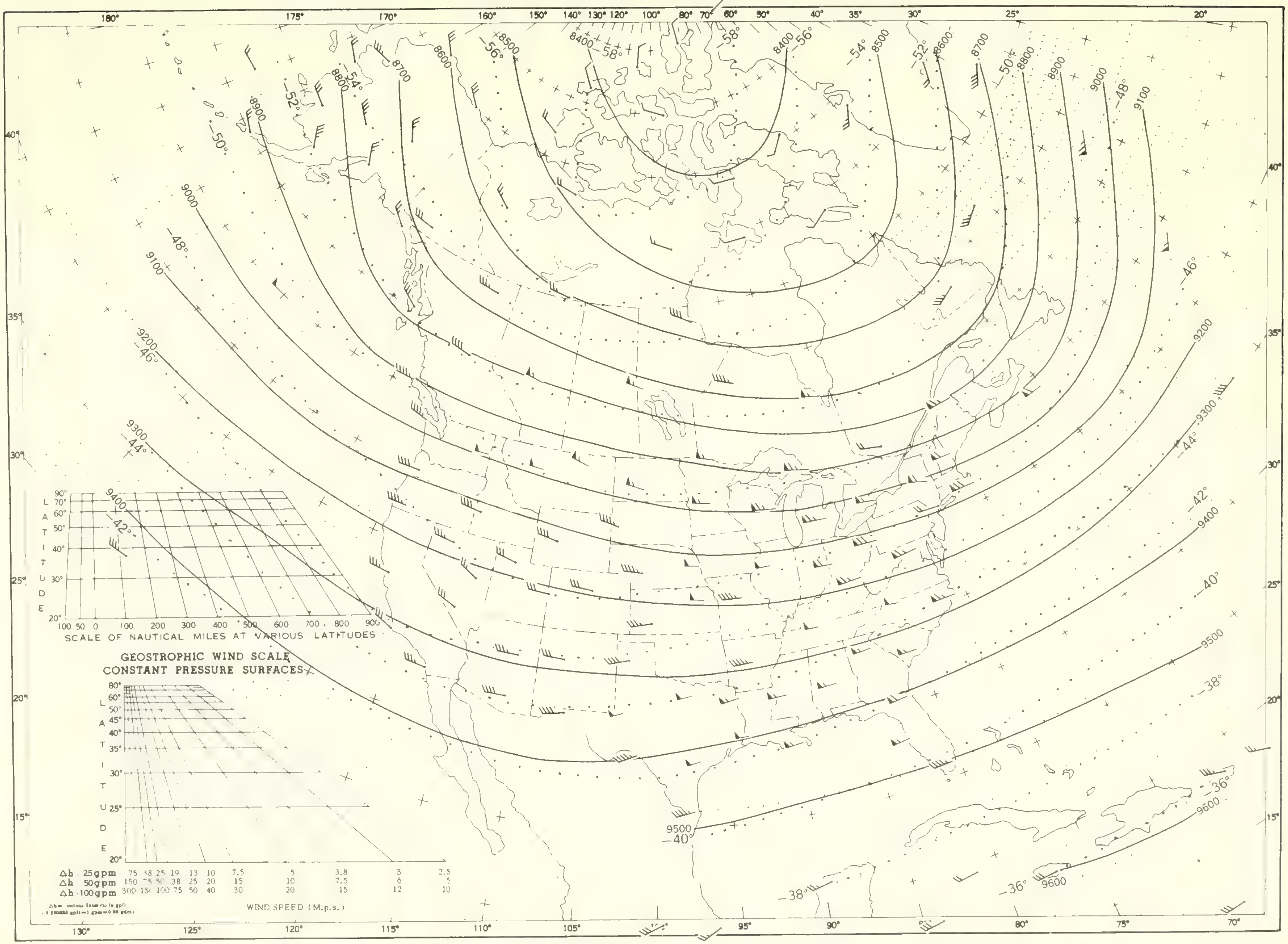
Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XIII. 500-mb. Surface, 1200 GMT, January 1968. Average Height and Temperature, and Resultant Winds.



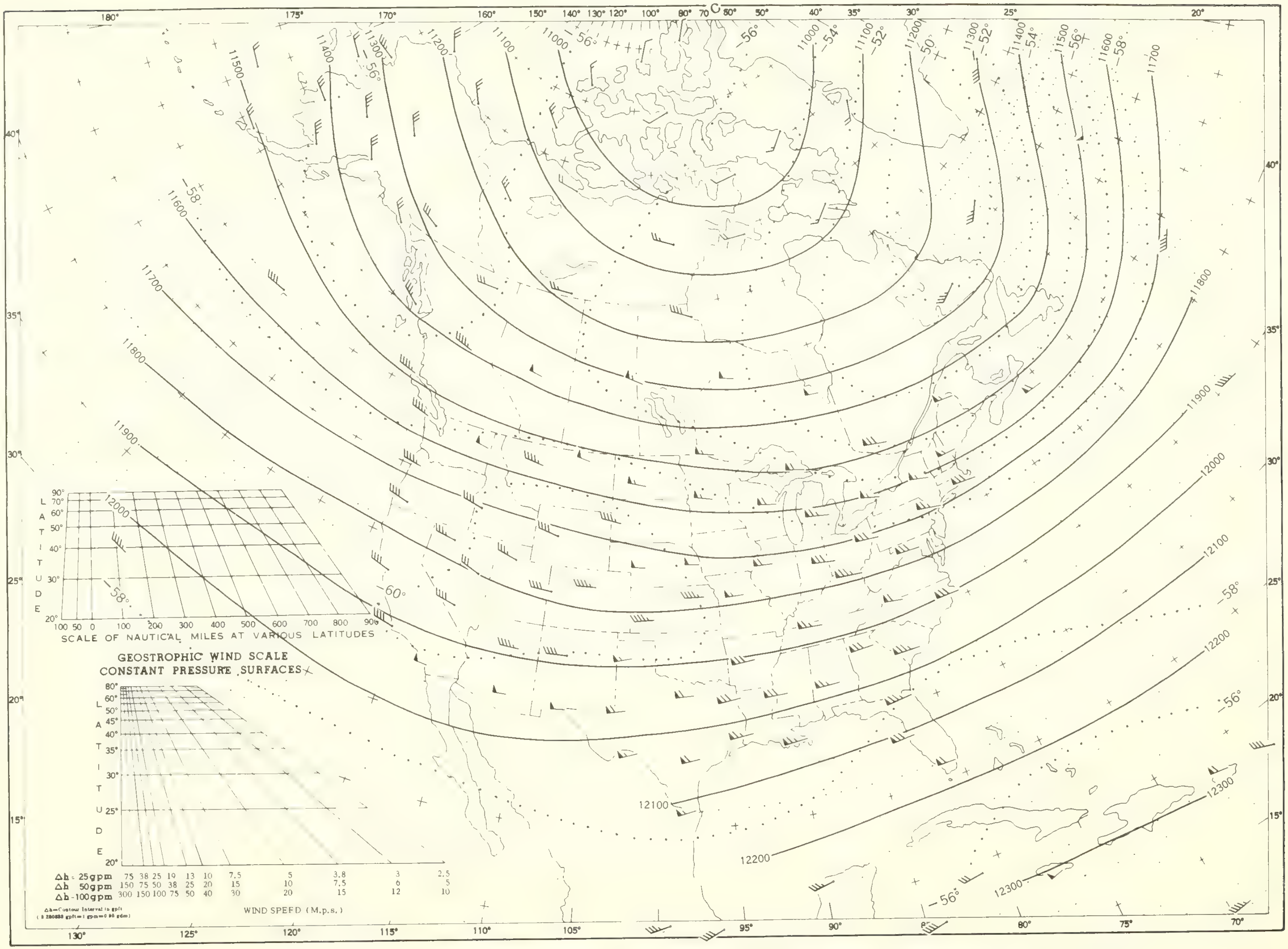
Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XIV. 300-mb. Surface, 1200 GMT, January 1968. Average Height and Temperature, and Resultant Winds.



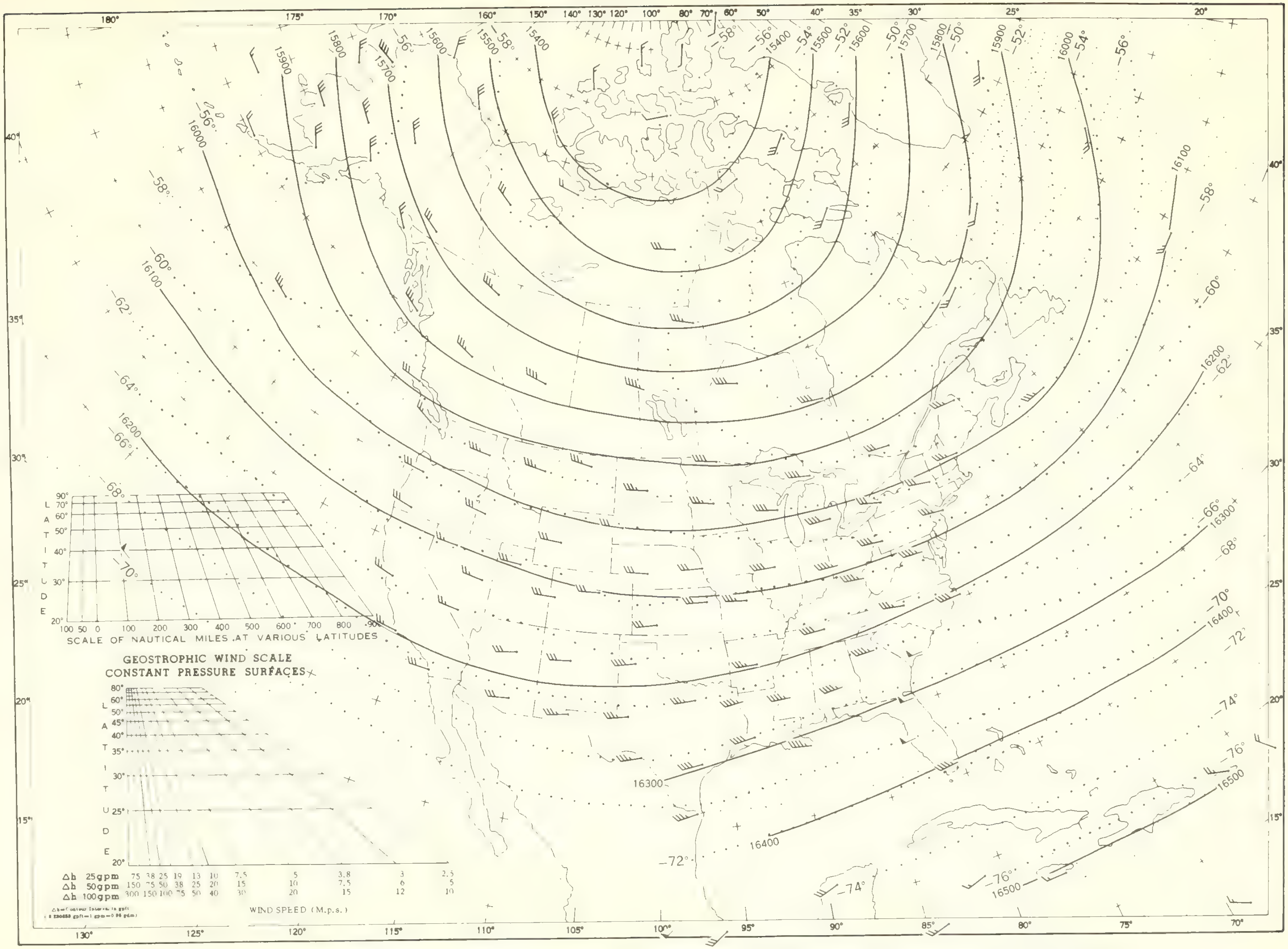
Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XV. 200-mb. Surface, 1200 GMT, January 1968. Average Height and Temperature, and Resultant Winds.



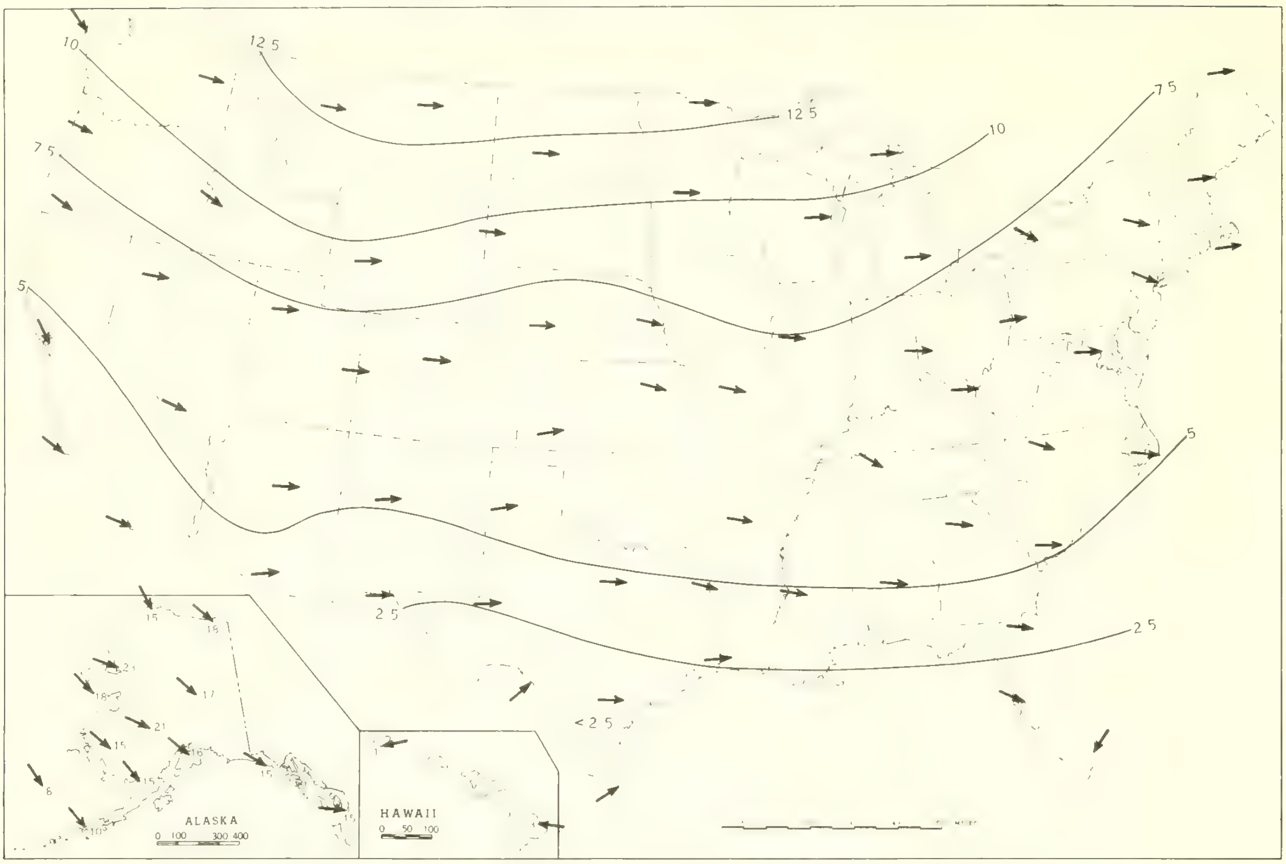
Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XVI. 100-mb. Surface, 1200 GMT, January 1968. Average Height and Temperature, and Resultant Winds.

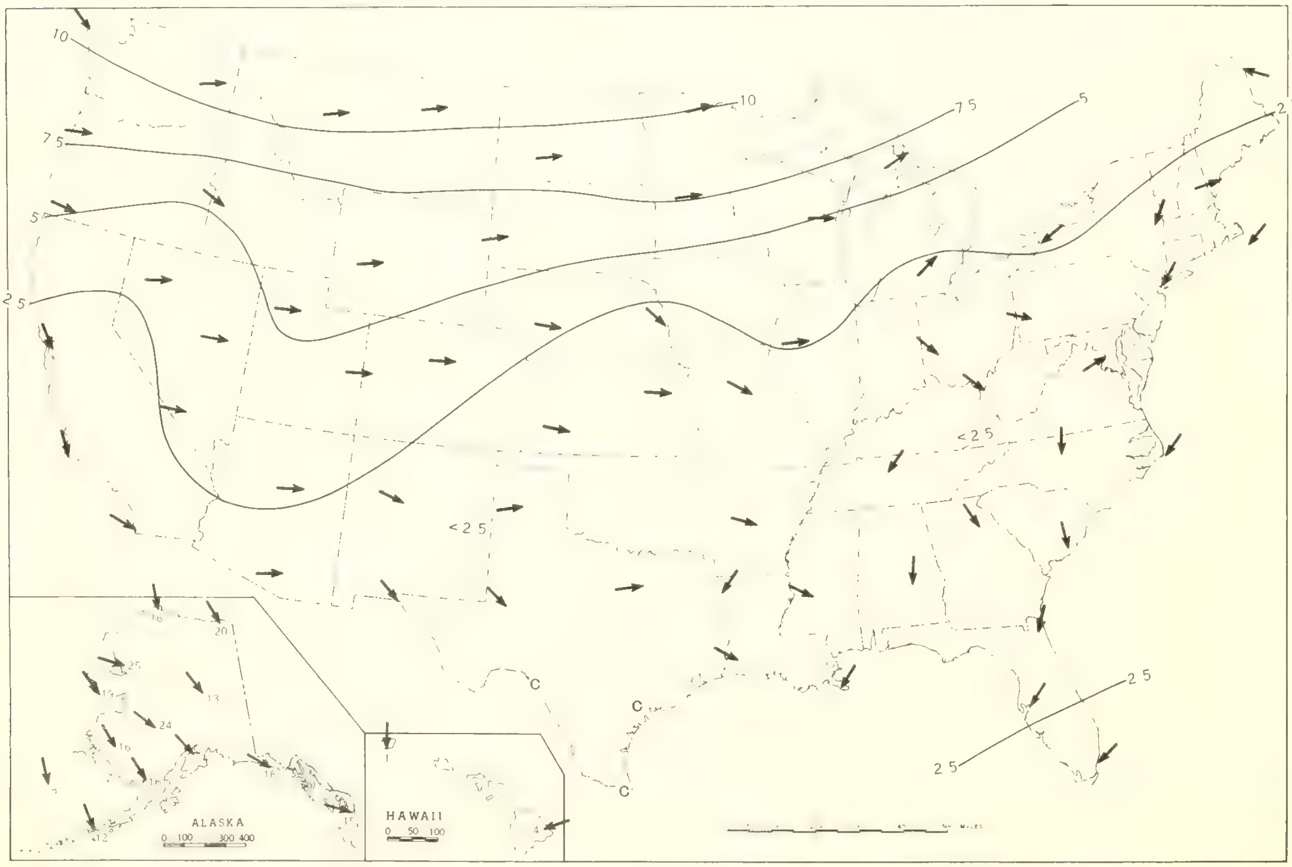


Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XVII. A. 50-mb. Surface, 1200 GMT, January 1968. Resultant Winds.



B. 30-mb. Surface, 1200 GMT, January 1968. Resultant Winds.



Wind speed (isotachs) in meters per second. Arrows show resultant wind direction. All wind data are based on rawin observations.

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ENVIRONMENTAL SCIENCE SERVICES ADMINISTRATION
ENVIRONMENTAL DATA SERVICE

CLIMATOLOGICAL DATA

NATIONAL SUMMARY

FEBRUARY 1968
Volume 19 No. 2

ASHEVILLE: 1968

CONTENTS

NOTE: Delayed data and corrections will be carried in the June and December issues of this publication.

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CLIMATOLOGICAL DATA

NATIONAL SUMMARY

Volume 19 No. 2 FEBRUARY 1968

GENERAL SUMMARY OF WEATHER CONDITIONS

HIGHLIGHTS:

1. West--Warm and wet. The warmest February of record at many stations; the wettest at a few.
2. East--Mild first week, followed by persistent cold weather to the end of the month.
3. Two storms brought heavy snow to the Southland.
4. A threat of drought over the northern Great Plains.

TEMPERATURE.--Mild temperature prevailed over almost the entire Nation during the first week of February. It was especially warm over a large area extending from South Dakota to Arkansas and northeastward to New England where temperatures averaged 8° to 15° above the weekly normals. In the West, the mild weather persisted throughout the month. Portions of the Great Basin averaged 8° or more above the monthly normals. Numerous stations in the Far West averaged warmer than in any previous February and many areas west of the Rockies enjoyed the warmest February in many years.

In sharp contrast, February temperatures from Minnesota to Texas and eastward to the Atlantic Ocean averaged below normal.

Near the end of the first week of February strong northerly winds whistled across the Great Plains from the upper Midwest to the Gulf of Mexico, sending a blast of freezing weather and bone-chilling, subzero temperatures as far southward as the Ohio River where Cincinnati registered -6° on February 21.

Cooler-than-normal weather continued over the East to the end of the month. Much of the southeast averaged 8° or more below normal. Many stations from Texas to the Carolinas set new record-low temperatures for the month of February. Floridians were glad that such a cold, unpleasant February comes only about three times in a century.

The Northeast suffered through some cold weather also. It was especially cold about the end of the 3d week when temperatures plunged to about 20° below zero in the mountains of West Virginia and Pennsylvania and to about 30° below zero in the colder parts of Minnesota, New York, and New England. Mt. Washington, N. H., registered -39° on the 21st. Midday temperatures along the Canadian border hovered near zero on the 21st and 22d. Monthly temperatures over the Northeast averaged mostly from 2° to 6° below normal.

PRECIPITATION.--Early in February, a storm off the northern Pacific coast brought heavy rains to coastal areas and snow from the Cascades and Sierras to the Rocky Mountains. The rains in the Pacific Northwest were followed by a dry spell which lasted from the 5th to the 12th. This period was also dry over a 300-mile-wide band extending from northeastern Montana to the Mississippi Delta. Other parts of the Nation received only light precipitation in the 2d week. On the 7th a band of snow 200 miles wide extended from Michigan to Alabama and Georgia. By the weekend snow had fallen along the Atlantic coast from northern and central Florida, which received only flurries, to New England.

Shortly before midmonth, another storm dumped snow, sleet, and freezing rain from the eastern plains of New Mexico across southern Oklahoma, northern Texas, Arkansas, central Mississippi, and Alabama. Snow accumulated to 2 to 6 inches in the Texas Panhandle and to 5 to 9 inches in southwestern Texas. The snow ended by the 15th but general rains continued along the Gulf until the 18th and in Florida to the 19th.

A blizzard in North Dakota made driving hazardous and closed many schools on the 16th. By the 17th, heavy snow had fallen in the lee of the Great Lakes with 14 inches falling at Boonville, N. Y., on that date. Another weekend storm, with moderate to heavy rains and gale-force winds, ended a long, mild, dry spell in the Pacific Northwest. Widespread rains, mostly light to moderate but locally heavy, fell over California, the Great Basin, and parts of the Desert Southwest.

Early in the last week of February winter whitened a broad band across the South from Texas to the Carolinas. Snow accumulated to several inches in Texas, Oklahoma, Arkansas, interior parts of Louisiana, Mississippi, Alabama, and Georgia, the Florida Panhandle, and the coastal portions of the Carolinas. Along the southern edge of the snow belt, the snow was mixed with sleet and freezing rain. No doubt, this caused some surprise to northern tourists who drove south to escape the rigors of winter.

Another storm dumped snow and cold rain across the South at the end of the month. Five to 7 inches fell in northeastern Georgia Thursday morning, February 29. Lesser amounts fell in parts of several nearby States. The storm moved up the coast, bringing snow to the Middle Atlantic States and to New England as the month ended.

A large area from Montana to Wisconsin and southward to Kansas received less than 0.50 inch of precipitation during the entire month. In much of this area, this is less than 50 percent of normal and in the eastern parts of the Dakotas and Nebraska, northern Iowa, and southern Minnesota, it is less than 25% of normal. The significance of so little rain here increased because of the meager rainfall during the previous 6 months--the least of record for some stations. Numerous locations from the northern and central Great Plains eastward to the Atlantic Ocean received less precipitation in February 1968 than in any other February of record. The unusually dry weather, the low humidity, and the high winds from the 15th to the 18th were blamed for the critical fire danger in Maryland and Delaware.

SEVERE STORMS.--Besides the blizzards and heavy snowstorms previously mentioned, six tornadoes occurred in February--2 in Florida, 2 in Louisiana, 1 in Arkansas, and 1 in Texas. The worst of these occurred at North Miami Beach, Fla., at 5:00 a.m., February 19. It injured 21 persons, none seriously, destroyed 2 dwellings, and caused major damage to 4 and minor damage to 86. It destroyed 4 business establishments and caused partial destruction to 40 others. It destroyed 20 automobiles and damaged 80. For more information about this and the other February storms, the reader is referred to the February issue of Storm Data.

CONDENSED CLIMATOLOGICAL SUMMARY

FEBRUARY 1968

Section	Temperature						Precipitation			
	Monthly extremes						Monthly extremes			
	Station	Highest	Date	Station	Lowest	Date	Station	Greatest	Station	Least
		°F			°F			In.		In.
Alabama	2 Stations	75	1	3 Stations	6	22+	Robertsdale 1E	3.64	2 Stations	0.79
Alaska	Data delayed									
Arizona	Yuma Valley	90	26+	Fort Valley	0	1	Oracle 2SE	3.70	do	.00
Arkansas	3 Stations	74	20+	Mammoth Spring	6	22	Arkansas City	3.78	Shirley	.28
California	Brawley 2SW	95	27	Boca	-16	1	Buckhorn	13.29	5 Stations	.00
Colorado	Lamar	71	20	Gunnison	-33	2	Berthoud Pass	5.12	Burlington	.00
Connecticut	Norwich Pub Util Plt	51	3+	West Thompson Dam	-9	14	Norwich Pub Util Plt	1.72	Falls Village	.69
Delaware	2 Stations	56	3+	Milford 2WSW	3	22	Lewes 1SW	1.68	Dover	.81
Florida	Tamiami Trl 40 Mi Bend	86	23+	DeFuniak Springs	20	12	West Palm Beach WBAP	4.44	Myakka River St Park	.85
Georgia	2 Stations	77	2	Blairsville Exp Sta	4	22+	Savannah USDA Pl Grdn	3.32	Winder 1SSE	D .40
Hawaii	Data delayed									
Idaho	Glenns Ferry	70	29	Stanley 1NNE	-24	14	Elk River 1S	7.82	Chilly Barton Flat	.11
Illinois	Harrisburg	63	1	Bloomington Normal	-7	21	Gibson City	2.51	Gladstone Dam 18	.07
Indiana	Saint Meinrad	66	1	2 Stations	-14	21	La Porte	4.71	New Castle	.10
Iowa	Sidney	56	5	do	-13	21	Fort Madison	1.33	8 Stations	T
Kansas	5 Stations	72	20+	Blaine	-2	21	Perry Dam	1.50	3 Stations	T
Kentucky	Pikeville	71	1	Falmouth 5WNW	-18	21	Murray	2.60	Summer Shade	.05
Louisiana	Westdale 3SW	78	1	Book	14	24	Winona Fire Tower	4.87	Bunkie	1.90
Maine	Brunswick	50	3	Clayton Lake 2	-33	14	Ellsworth	2.96	The Forks	.61
Maryland	2 Stations	58	3+	Sines Deep Creek 2	-16	21	Salisbury FAA AP	1.61	Hancock Fruit Lab	.06
Massachusetts	South Wellfleet	56	3	2 Stations	-9	22+	Nantucket WBAP	2.73	Adams	.43
Michigan	3 Stations	57	2+	Vanderbilt Trout Sta	-28	12	Chatham Exp Farm	4.85	Stambaugh 1S	.32
Minnesota	Winona	50	6	Crane Lake Ranger Sta	-39	10	Mahnomen 1W	..48	Waskish Ranger Sta	.00
Mississippi	2 Stations	76	1	2 Stations	10	12	Belzoni	4.50	Corinth 5WSW	D .80
Missouri	Ozark Beach	69	1	3 Stations	-4	24+	Neosho	3.39	Mercer 6NW	.07
Montana	Roundup	70	29	Wisdom	-24	10	Heron 2NW	5.46	5 Stations	T
Nebraska	2 Stations	69	20+	Northeast Nebr Exp Sta	-14	21	Hastings	1.28	do	T
Nevada	Sunrise Manor	84	26	Rand Ranch Palisade	-18	1	Clover Valley	3.58	Las Vegas WBAP	.22
New Hampshire	Colebrook 2E	56	3	Mount Washington	-39	21	Mount Washington	3.95	Windham	.24
New Jersey	Toms River	57	1	High Point Park	-18	11	Sussex 1SE	2.95	Phillipsburg Bridge	.01
New Mexico	Roswell WBAP	79	20	Gavilan	-19	2	Sandia Crest	2.83	6 Stations	T
New York	Middletown 2NW	57	7	Hinckley	-28	24	Bennett Bridge	5.89	Lindley	.05
North Carolina	New Bern 3NW	79	2	Banner Elk	-5	22	Ocracoke	4.23	Carthage 1SSE	.07
North Dakota	Medora	58	29	Belcourt Indian Res	-30	21	Flasher	.53	18 Stations	T
Ohio	2 Stations	65	2+	2 Stations	-15	22+	Montpelier	1.90	Columbus Valley Cross	.06
Oklahoma	Healdton 2N	74	20	3 Stations	9	29+	Boswell 5NNW	3.40	Hooker 1N	T
Oregon	Powers	81	29	Chemult	-1	14	Valsetz	23.88	Adel	.23
Pennsylvania	2 Stations	58	2	Conneautville	-20	21	Blairsville 6ENE	2.03	2 Stations	T
Puerto Rico	Red Hook Bay	97	13	2 Stations	49	7+	Toa Baja 1SSW	9.05	do	.10
Rhode Island	Greenville	51	3	Kingston	-7	12	Kingston	1.97	Newport	.86
South Carolina	2 Stations	75	2	Ninety Nine Islands	6	12	Loris 1S	3.32	Little Mountain	.26
South Dakota	Oelrichs	63	29	Harrold 12SSW	-23	21	Deadwood	1.06	Canton	.00
Tennessee	Fayetteville 1NE	70	1	Mountain City No 2	-4	22	Palmetto	4.80	Kingston Springs 2NNE	.33
Texas	Presidio	88	25	2 Stations	10	23	Gladewater	4.71	Hitchland	.00
Utah	Saint George	78	28+	Woodruff	-23	15	Alta	9.38	Canyonlands-The Needle	T
Vermont	Rutland	57	2	West Burke	-25	21	Mount Mansfield	D 4.12	Newfane	.37
Virginia	Boykins	65	2	Wise 1SE	-10	22	Norfolk WBAP	2.01	2 Stations	.03
Washington	Startup 1E	77	29	Chesaw 4NNW	-1	16+	Cougar 6E	23.70	Irene Mt. Wauconda	.44
West Virginia	Charleston 1	73	2	Reedsville Exp Farm	-22	21	Pickens 1	1.88	2 Stations	T
Wisconsin	2 Stations	50	1	Gordon 2ESE	-35	10	Racine	1.17	do	.02
Wyoming	Worland FAA AP	65	29	Bondurant 3NW	-30	10	Alta 1NNW	2.96	Heart Mountain	.01

\+ And also on an earlier date or dates.

NOTE: Dates in the above Condensed Climatological Summary apply to the period 24 hours prior to time of observation. In some cases the actual occurrence is on the calendar date preceding that shown. (See individual Climatological Data for times of observations).

D Water equivalent of snowfall wholly or partly estimated, using a ratio of 1 inch water equivalent to every 10 inches of snowfall.

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure		Temperature								No. of days			Average relative humidity	Precipitation			No. of days		Snow, Sleet		Wind		Fastest mile			No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 90° F. or above	Min. 32° F. or below	Average dew point		Total	Departure from normal	Greatest in 24 hours	.01 inch or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	Ft.	Mb.	Mb.	°F.	°F.	°F.	F.	F.		°F.				F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
ALABAMA																																
BIRMINGHAM	620	996.3	1019.6	50	28	38.7	-10.0	66	20	16	22+	0	25	21	53	1.20	-4.08	0.80	6	0	0.7	1	5.2	35	27	NW	29+	9	6	14	5.9	55
HUNTSVILLE	624	995.9	1019.6	45	24	34.6	-10.5	62	1	10	22	0	26	22	66	1.14	-4.08	0.55	6	0	2.7	T	5.5	34	29	32	29	8	7	14	6.0	
MOBILE	211	1010.8	1019.1	58	35	46.7	- 8.5	71	1	26	12+	0	10	30	57	2.88	-1.71	0.97	8	0	1.2	1	4.8	36	30	35	7	12	7	10	4.8	
MONTGOMERY	194	1011.9	1019.1	52	33	42.5	- 7.8	69	1	22	12	0	16	25	54	1.87	-2.49	0.97	9	0	T	T	5.1	31	20	NE	29	9	9	11	5.7	54
ALASKA																																
ANCHORAGE	114	999.3	1004.3	28	18	23.1	4.4	48	27	-18	3	B 0	25	13	66	1.67	0.96	0.43	13	0	26.1	19	2.1	36	25	31	7+	3	4	22	8.3	22
ANNETTE	110	1008.1	1012.3	46	31	38.6	3.5	61	29	6	2	0	16	32	79	5.80	-2.74	1.96	15	0	6.4	4	4.2	13	38	16	4	8	3	18	6.9	
BARROW	31	1023.7	1024.7	-20	-31	-25.3	- 7.0	- 6	15+	-49	7+	0	29	-32	70	0.11	-0.06	0.05	3	0	1.6	16	3.0	9	29	7	14+	9	6	14	5.9	
BARTER ISLAND	39	1022.7	1024.7	-21	-32	-26.7	- 7.1	1	28+	-51	6+	0	29	-34	65	0.23	-0.12	0.14	4	0	2.9	24	0.6	18	28	27	11	10	5	14	5.8	
BETHEL	125	1001.0	1007.0	11	- 3	4.1	- 4.1	44	13	-26	6	0	29	0	82	0.24	-0.88	0.08	7	0	5.9	4	15.0	3	35	4	19	14	3	12	5.1	
COLD BAY	96	994.2	998.0	28	20	24.0	- 4.0	43	14	- 1	10	0	26	21	86	1.29	-1.88	0.52	16	0	10.3	5	8.1	2	53	12	12	2	5	22	8.3	
FAIRBANKS	436	993.9	1012.1	5	-15	- 5.0	- 2.1	42	27	-56	5	0	29	-14	65	0.15	-0.37	0.06	5	0	4.8	31	2.1	1	21	5	17	7	8	14	6.4	
JUNEAU	12	1011.2	1012.1	35	22	28.8	2.0	50	27+	-22	2	0	19	23	81	5.30	2.24	1.95	17	0	17.0	7	8.4	12	39	12	6	5	2	22	7.9	35
KING SALMON	49	999.3	1001.3	20	6	12.8	- 4.6	46	26	-27	4	0	24	5	68	0.57	-0.38	0.21	8	0	5.3	4	8.1	2	41	9	12	10	2	17	6.4	
KOTZEBUE	10	1016.9	1017.4	- 8	-27	-17.5	-13.5	29	13	-52	24+	0	29	-24	69	0.37	0.07	0.14	7	0	9.8	25	1.1	3	24	27	28	14	6	9	4.1	
MC GRATH	344	996.6	1010.1	7	-14	- 3.3	- 3.4	40	28	-52	6+	0	29	-10	68	0.76	-0.38	0.29	8	0	12.6	21	3.0	36	21	1	17+	11	2	16	5.8	
NOME	13	1012.5	1013.4	8	-14	- 3.1	- 8.6	38	13	-37	4	0	29	-11	64	0.46	-0.48	0.28	7	0	4.4	19	5.4	3	40	3	18	17	1	11	4.0	72
ST. PAUL ISLAND	22	1003.7	1004.9	21	14	17.6	- 5.7	39	14+	3	23+	0	27	13	81	0.49	-0.74	0.18	17	0	3.9	3	19.6	3	51	10	12	0	6	23	8.7	
SHEMYA	122	998.6	1002.5	33	27	29.8	- 1.0	39	16+	21	29	0	27	24	80	0.73	-1.55	0.26	17	0	4.5	1	19.2	5	53	15	16+	0	8	21	8.6	
YAKUTAT	28	1006.4	1007.6	35	23	29.1	0.5	47	28	-15	2	0	22	26	90	18.11	9.91	3.68	19	0	23.3	24	6.5	11	53	12	5	3	3	23	8.6	
ARIZONA																																
FLAGSTAFF	6993	788.0	1019.6	48	23	35.8	6.2	62	24	7	1	0	29	25	70	1.29	-0.49	0.46	6	1	9.3	19	0.8	4	22	22	21	5	8	16	6.9	
PHOENIX	1117	976.6	1015.9	72	47	59.7	6.2	84	26	35	1	0	0	44	61	1.20	0.35	0.59	6	3	0.0	0	2.1	11	24Y	S	12	6	10	13	6.7	81
TUCSON	2584	927.2	1015.4	71	47	59.1	6.2	85	26	30	1	0	1	38	54	0.99	0.15	0.58	5	0	0.0	0	3.1	13	29	E	29	8	8	13	6.3	72
WINSLOW	4895	853.7	1020.8	51	29	40.3	2.8	66	27+	13	5	0	16	28	67	0.27	-0.21	0.15	4	1	0.0	4	3.2	24	38	26	27	6	10	13	6.2	
YUMA	194	1008.5	1015.7	77	51	64.3	7.0	89	25	41	1	0	0	41	49	0.27	-0.09	0.27	1	1	0.0	0	2.1	1	26	SW	13	5	8	16	6.9	83
ARKANSAS																																
FORT SMITH	447	1005.1	1022.1	51	28	39.5	- 4.2	70	1	20	12	0	24	25	60	1.11	-2.32	0.60	6	1	3.0	2	2.6	33	35	W	1	9	5	15	6.3	62
LITTLE ROCK	257	1011.5	1021.5	48	28	38.0	- 6.4	67	1	15	22	0	22	24	59	1.08	-3.25	0.38	6	0	4.3	2	4.2	34	28	NW	7	8	9	12	6.1	73
TEXARKANA	391	1008.1	1021.6	54	32	42.8	- 5.7	71	20	18	22	0	16	27	56	1.19	-2.83	0.56	5	0	1.3	T	1.3	1	23	33	29	9	4	16	6.2	
CALIFORNIA																																
BAKERSFIELD	475	1001.0	1018.6	68	50	58.9	6.9	80	29	38	1	0	0	48	71	0.56	-0.58	0.24	4	0	0.0	0	1.4	1	16	18	16	3	5	21	7.8	
BISHOP	4108	875.4		64	31	47.3	6.1	74	26+	18	1	0	17			0.03	-0.95	0.03	2		0.0	0						5	12	12	6.0	
BLUE CANYON	5280			48	37	42.3	5.2	62	27+	22	1	0	7			10.45	0.26	2.85	15		5.2	51			22	16	21+	3	5	21	7.9	
EUREKA U	43			58	48	53.2	5.0	70	26+	39	1	0	0			2.93	-2.60	1.11	11		0.0	0			34	S	1	3	2	24	8.6	35
FRESNO	328	1006.8	1018.7	64	47	55.8	5.3	75	29+	37	11	0	0	49	82	1.10	-1.09	0.63	6	0	0.0	0	0.4	4	18	E	17	2	5	22	8.2	40
LONG BEACH	34	1016.3	1017.7	70	51	60.4	6.0	84	24	43	1	0	0	48	69	0.38	-1.93	0.25	4	1	0.0	0	1.1	19	16	27	29	3	7	19	7.8	
LOS ANGELES	97	1013.5	1017.1	67	54	60.8	5.6	80	4	49	1	0	0	50	73	0.44	-2.44	0.21	5	0	0.0	0	1.6	23	29Y	N	22	4	5	20	7.8	
LOS ANGELES U	270			72	55	63.8	6.7	87	24	48	1	0	0			0.49	-2.84	0.24	4		0.0	0			18	NW	22	5	6	18	7.3	46
MT SHASTA R	3544			51	33	42.0	5.0	68	27	20	13	0	16			3.45	-2.46	0.93	12		2.5	29										
OAKLAND	6	1018.6	1018.9	60	51	55.5	4.8	74	25	43	11+	0	0	51	87	1.82	-1.39	0.84	9	0	0.0	0	1.2	27	2'	16	16	2	4	23	8.6	
RED BLUFF	342	1006.1	1018.8	63	46	54.8	5.1	82	27	34	1	0	0	47	82	3.65	0.34	1.27	15	0	0.0	0	0.9	27	26	SE	21	7	4	18	7.3	47
SACRAMENTO	17	1018.0	1018.6	62	47	54.5	5.3	73	27+	33	1	0	0	49	87	2.13	-0.86	0.74	10	0	0.0	0	1.7	20	24	SW	21	3	4	22	8.1	52
SANDBERG R	4517	863.9		53	40	46.4	5.0	68	19	29	12	0	3	32	64	1.46	-1.12	0.63	5		0.0	0			71	34	2	4	6	19	7.7	
SAN DIEGO	13	1016.3	1017.2	68	54	60.7	4.5	79	4	48	3+	0	0	50	71	0.22	-1.93	0.17	3	0	0.0	0	1.8	30	18	NW	28+	5	7	17	7.3	63
SAN FRANCISCO	8	1018.3	1018.8	61	49	54.5	3.6	72	26	38	1	0	0	49	84	1.44	-2.04	0.75	9	0	0.0	0	1.3	28	28	SSW	17	1	3	25	8.9	
SAN FRANCISCO U	52			61	52	56.7	3.7	73	26+	46	1	0	0			2.28	-1.38	0.69	11		0.0	0			23	SW	21					55
SANTA CATALINA	1568	961.1		64	52	58.1	4.1	79	26+	46	12+	0	0			0.67	-2.49	0.23	9		0.0	0										
SANTA MARIA	236			66	47	56.8	5.0	81	25+	36	1	0	0			0.90	-1.60	0.49	7		0.0	0						4	2	23	8.1	
STOCKTON	22	1018.3	1019.2	61	47	53.9	4.9	71	23	35	1	0	0	46	77	1.74	-0.72	0.98	10	0	0.0	0	1.0	19	23	16	17	0	4	25	8.7	
COLORADO																																
ALAMOSA	7536	772.1		38	7	22.6	- 0.9	49	25+	- 9	2	0	29			0.42	0.25	0.26	5		6.4	3						7	12	10	5.8	
COLORADO SPRINGS	6145	811.7	1021.9	44	21	32.6	1.1	60	20	9	13	0	29	16	58	0.22	-0.11	0.09	6	0	4.8	4	3.7	2	28	35	27+	7	4	18	6.9	
DENVER	5283	837.5	1019.7	47	21	34.2	2.7	61	24+	5	14	0	29	20	62	0.74	0.05	0.35	6	0	7.3	5	0.6	24	38	NW	24	7	8	14	6.3	73
GRAND JUNCTION	4855	855.1	1021.8	46	28	37.0	4.4	57	26	19	2	0	26	27	73	1.13	0.44	0.43	8	0	0.9	T	1.3	11	17	NE	27	3	5	21	8.0	46

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	No. of days: Max. 90 F. or above	No. of days: Min. 32 F. or below	Average dew point	Average relative humidity	Precipitation: Total	Departure from normal	Greatest in 24 hours	No. of days: .01 inch or more	No. of days: With thunderstorms	Snow, Sleet: Total	Snow, Sleet: Maximum depth on ground	Wind: Resultant speed	Resultant direction	Fastest mile: Speed	Fastest mile: Direction	Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	Ft.	Mb.	Mb.	F.	F.	F.	F.	F.		F.				F	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
COLORADO																																
PUEBLO	4684	857.4	1020.6	47	23	35.3	1.4	62	20	16	15	0	29	20	59	0.54	0.06	0.20	7	0	6.6	3	1.3	1	36	N	27	7	3	19	6.9	66
CONNECTICUT																																
BRIDGEPORT	7	1010.2	1010.7	36	20	27.9	-2.6	44	3+	6	21	0	26	12	54	1.50	-1.46	0.87	5	0	1.0	1	10.5	30	47	32	17	11	8	10	5.3	
HARTFORD	169	1003.1	1009.7	34	18	25.8	-1.3	46	28	4	21	0	27	10	53	1.14	-1.80	0.86	7	0	1.6	1	6.2	31	38	NW	17	8	9	12	5.8	76
NEW HAVEN	6	1010.2		37	19	27.5	-2.1	47	29+	6	22+	0	27			1.49	-1.70	0.96	7		2.5	1			35	NW	17	12	6	11	5.4	73
DELAWARE																																
WILMINGTON	74	1009.8	1013.0	40	21	30.5	-3.3	48	28+	6	21	0	26	12	50	1.52	-1.43	0.97	2	0	0.9	T	7.4	29	35	29	17	10	8	11	5.3	
DIST.OF COLUMBIA																																
WASH NATL AP	14	1011.5	1013.9	44	25	34.3	-3.5	53	27+	9	21	0	22	12	42	0.80	-1.67	0.39	3	0	2.4	2	6.6	30	35	NW	17	13	7	9	4.8	61
FLORIDA																																
APALACHICOLA U	13			58	40	49.1	-7.7	68	21	30	8	0	3			1.96	-1.95	0.56	7	2	0.0	0			32	NW	29	13	7	9	4.5	62
DAYTONA BEACH	31	1015.2	1016.7	64	42	52.9	-7.7	79	2	32	13	0	1	39	64	1.73	-1.02	1.17	9	2	0.0	0	5.7	31	29	27	29	13	5	11	4.9	
FORT MYERS	15	1016.6	1016.9	71	49	59.9	-5.3	80	2+	36	9	0	0	50	75	2.08	-0.13	1.22	8	1	0.0	0	3.1	32	33	24	29	12	9	8	4.8	
JACKSONVILLE	20	1015.9	1016.9	61	40	50.4	-7.1	79	2	31	12	0	2	34	60	3.05	0.14	1.11	9	1	0.0	0	5.1	31	38	SW	29	14	4	11	5.1	62
KEY WEST	4	1015.9	1016.5	74	63	68.5	-1.9	80	23+	57	9+	0	0	58	72	3.46	1.48	1.25	10	2	0.0	0	4.3	36	32	NW	24	10	13	6	4.5	74
LAKELAND U	214			66	46	55.9	-7.2	77	2	38	25+	0	0			2.10	-0.41	1.28	4		0.0	0						13	7	9	4.8	63
MIAMI	7	1015.9	1016.1	72	54	62.7	-5.2	82	23	43	28+	0	0	52	71	2.77	0.90	1.09	8	2	0.0	0	3.3	30	33	31	24	13	8	8	4.7	
ORLANDO	108	1012.5	1016.9	66	44	54.8	-7.1	79	2	33	25	0	0	41	67	2.76	0.34	1.64	6	2	0.0	0	5.7	32	30	28	29	13	4	12	4.9	
PENSACOLA	112	1014.2	1018.5	57	36	46.5	-9.6	68	1	27	9	0	7	33	61	2.78	-1.47	0.84	8		T	0	4.7	35	36	NW	29	10	9	10	5.1	67
TALLAHASSEE	55	1015.6	1017.8	61	33	47.0	-8.6	75	2+	23	13	0	13	34	67	3.76	-0.42	1.15	11	2	T	0	3.8	34	23	17	29	14	7	8	4.8	
TAMPA	19	1016.6	1016.9	65	43	54.3	-8.4	77	1	34	25+	0	0	44	72	1.52	-1.32	0.70	7	0	0.0	0	3.8	33	28	30	29	11	5	13	5.4	69
WEST PALM BEACH	15	1015.6	1016.1	72	49	60.1	-7.5	84	23	38	28+	0	0	47	67	4.44	2.09	1.86	11	1	0.0	0	4.2	28	32	29	29+	11	8	10	5.0	
GEORGIA																																
ATHENS	802	986.5	1016.1	50	28	39.3	-6.8	63	20	17	12	0	25	18	48	1.45	-3.25	1.20	4	0	2.1	2	5.6	30	25	30	29	16	5	8	4.3	
ATLANTA	1010	979.3	1017.2	49	27	38.3	-7.8	63	20	15	22+	0	26	19	51	1.40	-3.11	0.95	8	0	3.5	1	6.9	32	27	NW	29	9	11	9	5.3	71
AUGUSTA	145	1010.8	1016.1	56	27	41.4	-7.9	66	20	16	12	0	23	22	53	0.69	-2.83	0.40	6	0	1.4	1	4.2	29	32	27	29	14	5	10	4.9	
COLUMBUS	385			54	30	42.0	-7.7	63	4	18	12	0	22	26	58	1.54	-3.09	0.91	7		T	T	4.6	33	29	30	8	11	7	11	5.3	
MACON	354	1003.7	1017.1	53	28	40.8	-10.3	63	20	17	14+	0	25	22	52	1.39	-2.87	0.79	10	0	2.9	2	5.2	31	28	W	7	12	9	8	4.8	68
ROME	637			49	24	36.4	-8.0	62	20	11	12	0	26			1.22	-4.08	0.95	5		6.8	4										
SAVANNAH	46	1014.2	1016.1	57	32	44.6	-8.5	77	2	22	14+	0	18	28	59	1.16	-2.52	0.41	8	0	3.6	4	3.9	30	35	NW	29	12	4	13	5.4	62
HAWAII																																
HILO	27	1011.2	1012.3	84	65	74.9	4.3	92	20	60	11	3	0	65	77	11.46	-1.48	9.10	12	0	0.0	0	1.0	18	22	SE	20	7	14	8	5.6	42
HONOLULU	7	1011.5	1012.1	81	66	73.4	1.0	83	25	62	26+	0	0	64	75	2.91	-0.39	0.74	8	1	0.0	0	3.2	22	32	SW	15	12	11	6	4.5	75
KAHULUI	48	1009.5	1011.9	78	63	70.5	-1.2	81	29+	55	10	0	0	66	86	5.19	2.65	2.34	13	0	0.0	0	4.1	19	30	SW	15	13	7	9	4.6	60
LIHUE	103	1006.8	1012.0	77	61	68.9	-1.8	81	28+	56	10	0	0	63	82	3.69	-1.63	2.08	11	0	0.0	0	6.2	23	38	SW	20	10	13	6	4.7	63
IDAHO																																
BOISE	2838	919.7	1021.6	50	32	41.1	6.6	66	29	21	14	0	14	30	68	1.86	0.53	0.47	10	0	0.1	T	5.5	13	31	SE	1	8	5	16	6.5	60
LEWISTON	1413			51	36	43.1	7.2	66	23	20	14	0	10			1.42	0.45	0.37	10		T	T						7	4	18	7.1	
POCATELLO	4454	866.6	1023.2	43	22	32.6	5.4	57	29	8	14	0	22	24	74	1.11	0.19	0.32	11	0	4.7	7	1.5	21	28	S	2	7	5	17	6.9	56
ILLINOIS																																
CAIRO U	314			40	27	33.5	-7.2	62	1	14	22+	0	23			2.33	-1.34	2.27	3		0.4	T			29	SW	1	8	8	13	6.3	55
CHICAGO O HARE	658	993.2	1018.8	33	14	23.6	-2.6	54	1	-1	21	0	28	11	61	0.87	-0.64	0.70	9	1	3.8	2	7.8	29	37	29	16	11	10	8	4.6	
CHICAGO MIDWAY	607	995.3		33	17	25.1	-2.6	56	1	1	21	0	28	10	55	1.10	-0.50	0.92	8	1	4.9	1	8.4	29	32	W	16	11	8	10	5.2	65
MOLINE	582	998.3	1020.9	32	13	22.7	-3.0	52	1	-2	22	0	29	7	53	0.32	-1.03	0.10	7	1	2.8	1	7.8	29	34	NW	16+	16	5	8	4.1	71
PEORIA	652	995.6	1020.6	34	14	23.7	-4.7	54	1	-5	21	0	29	10	59	1.55	-0.16	1.49	7	1	1.6	1	7.0	31	30	NW	9+	15	2	12	4.8	68
ROCKFORD	724	990.9	1019.2	31	11	21.2	-3.2	48	1	-4	21	0	28	9	63	0.37	-1.07	0.42	5	1	2.3	1	7.7	31	30	30	16	16	5	8	4.0	
SPRINGFIELD	588	997.6	1020.7	35	17	25.6	-6.0	59	1	-1	22	0	28	13	61	1.15	-0.67	1.08	6	1	1.7	1	7.4	29	32	NW	16	15	3	11	4.7	66
INDIANA																																
EVANSVILLE	381	1005.8	1020.4	39	22	30.4	-7.2	62	1	6	22	0	26	18	61	1.76	-1.42	1.54	3	1	0.7	1	4.3	30	27	W	2	8	8	13	5.8	65
FORT WAYNE	791	986.1	1017.2	33	14	23.4	-4.9	57	1	-6	21	0	28	13	66	1.41	-0.83	1.21	8	0	2.7	1	9.8	28	32	NW	17	10	5	14	5.6	65
INDIANAPOLIS	792	988.5	1018.7	36	17	26.4	-4.7	60	1	2	21	0	28	13	62	1.51	-0.77	1.29	6	0	1.1	T	6.4	28	30	W	2	15	2	12	4.8	66

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	No. of days: Max. 90° F. or above	No. of days: Min. 32° F. or below	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	No. of days: .01 inch or more	No. of days: With thunderstorms	Snow, Sleet: Total	Snow, Sleet: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Fastest mile: Speed	Fastest mile: Direction	Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	Ft.	Mb.	Mb.	F.	F.	F.	F.	F.		F.				F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
INDIANA																																
SOUTH BEND	773	988.2	1017.4	30	14	22.3	- 4.5	55	1	- 1	21	0	28	15	74	3.21	1.33	1.95	14	0	20.1	11	6.7	29	24	28	17	8	3	18	6.7	
IOWA																																
BURLINGTON	692			34	14	24.2	- 3.6	54	1	- 3	21	0	29	9	55	0.39	- 1.00		5	1	1.1		7.4	32	29	32	16	15	4	10	4.3	
DES MOINES	938	986.5	1023.0	33	15	23.9	0.5	49	5	- 2	21	0	29	12	64	0.13	- 0.97	0.06	5	0	2.1	1	7.0	33	33	NW	16	14	3	12	4.6	64
DUBUQUE	1056			30	11	20.6	- 1.4	46	1	- 5	21	0	29			0.23	- 1.17	0.10	7		1.6	1						14	7	8	4.2	
SIOUX CITY	1095	982.1	1023.9	34	14	23.9	1.7	49	5	- 8	21	0	29	10	58	0.15	- 0.74	0.10	2	0	1.2	1	5.7	33	40	NW	16	10	6	13	5.8	56
WATERLOO	868	988.5	1021.8	30	9	19.3	- 2.1	47	5	- 7	22	0	29	6	60	0.04	- 0.88	0.03	2	0	0.6	T	7.4	33	32	35	16	14	6	9	4.6	
KANSAS																																
CONCORDIA	1470	967.8	1022.8	40	19	29.8	- 1.8	62	19	3	21	0	29	19	67	0.44	- 0.47	0.25	6	0	5.1	3	3.7	34	42	NW	28	7	12	10	6.1	53
DODGE CITY	2582	928.2	1021.8	47	20	33.4	- 1.6	70	19	5	13	0	27	17	57	0.41	- 0.29	0.17	8	0	3.7	2	2.5	32	36	N	6	11	7	11	5.5	73
GOODLAND	3650	890.6	1020.8	49	18	33.5	2.6	69	19	8	29+	0	29	18	61	0.12	- 0.39	0.06	6	0	2.1	1	4.1	28	31	31	1	10	9	10	5.5	
TOPEKA	876	990.2	1023.1	41	22	31.6	- 1.5	59	19+	5	21	0	26	18	62	0.56	- 0.49	0.29	6	1	5.7	3	4.0	33	38	NW	28	8	6	15	6.3	55
WICHITA	1321	972.9	1022.4	45	22	33.8	- 2.5	63	25	10	21	0	28	19	58	0.20	- 0.72	0.09	7	0	1.0	1	3.4	34	37	NE	26	8	11	10	5.8	69
KENTUCKY																																
COVINGTON	869	985.8	1018.3	38	18	28.1	- 5.0	62	1	- 6	21	0	27	14	58	0.64	- 2.27	0.29	6	0	3.6	3	5.7	29	25	30	2	11	7	11	5.2	
LEXINGTON	966	982.1	1019.0	38	18	28.0	- 7.8	63	1	- 1	22	0	27	15	61	0.71	- 2.71	0.43	5	0	3.1	2	4.7	26	25	17	2	11	6	12	5.4	
LOUISVILLE	477	1001.0	1019.3	39	21	30.1	- 5.7	62	1	8	22	0	27	16	59	0.80	- 2.49	0.53	6	0	1.8	T	5.7	30	30	NW	2	10	8	11	5.5	62
LOUISIANA																																
ALEXANDRIA	92	1016.6	1020.9	53	29	41.4	-11.4	69	1	16	24	0	23			3.26	- 1.71	1.20	7	1	3.1	3	4.2	36	28	33	29	12	5	12	5.3	
BATON ROUGE	64	1017.3	1020.0	57	34	45.2	-10.2	75	1	24	12	0	13	32	64	2.72	- 1.70	0.83	7	1	1.0	1	3.7	36	29	32	29	14	3	12	5.0	
LAKE CHARLES	9	1019.3	1020.4	56	37	46.6	- 9.7	74	1	28	24+	0	7	37	74	2.68	- 1.83	1.00	8	4	0.3	T	4.2	2	23	1	29+	10	8	11	5.4	
NEW ORLEANS	3	1018.6	1019.6	58	37	47.2	- 9.9	73	1	27	9	0	8	34	61	3.02	- 0.97	1.13	7	0	T	0	5.2	35	27	31	29	15	2	12	4.8	
SHREVEPORT	254	1011.5	1021.0	54	33	43.6	- 6.7	69	27	21	22	0	15	31	64	2.22	- 1.87	0.97	6	0	0.4	T	2.6	35	23	32	29	11	3	15	5.9	60
MAINE																																
CARIBOU	624	981.7		20	0	9.9	- 2.6	46	3	-21	21	0	28			1.46	- 0.56	1.14	7		5.3	31						10	7	12	5.7	
PORTLAND	47	1005.8	1008.1	29	9	19.2	- 3.6	45	3	- 7	14	0	28	6	58	1.26	- 2.54	0.88	7	0	4.5	8	4.7	27	40	W	17	10	10	9	5.1	68
MARYLAND																																
BALTIMORE	148	1007.8	1013.5	42	23	32.2	- 3.5	52	28	8	22	0	25	11	45	0.72	- 2.17	0.39	3	0	2.6	2	8.7	29	47	NW	17	12	7	10	5.1	73
MASSACHUSETTS																																
BLUE HILL OBS R	629			31	15	22.9	- 4.5	51	3	0	21	0	28			1.77	- 1.96	0.91	5		5.7	8			58	NW	17					65
BOSTON	15	1008.1	1009.1	33	19	26.1	- 4.2	48	3+	5	21	0	27	10	52	1.15	- 2.17	0.59	5	0	3.4	2	8.9	28	47	NW	17	10	8	11	5.6	69
NANTUCKET	43	1008.8	1009.2	35	20	27.5	- 3.9	54	3	7	13	0	26	18	67	2.73	- 1.03	0.78	11	0	13.5	5	8.9	30	63	NE	8	7	7	15	6.3	57
PITTSFIELD	1170			29	9	19.0	- 3.3	48	2	- 7	21	0	28			1.25	- 1.26	0.60	12		10.7	5										
WORCESTER	986	967.2	1008.8	29	11	20.0	- 4.9	46	2	- 5	21	0	29	8	61	1.26	- 1.66	0.77	7	0	6.4	11	9.0	28	47	29	17	11	7	11	5.2	
MICHIGAN																																
ALPENA	689	987.1	1013.7	25	4	14.4	- 4.2	44	6	-14	12	0	28	6	71	1.75	0.14	0.77	11	0	15.2	7	5.3	29	33	NW	16	4	13	12	6.4	50
DETROIT	619			32	18	25.2	- 2.0	54	1	1	21	0	28			1.63	- 0.45	1.34	6	0	2.7		9.7	29	35	29	17					
DETROIT M WAYNE CO	633	989.8	1014.9	33	15	24.3	- 2.4	53	1	0	21	0	28	12	63	1.40	- 0.47	1.15	7	0	2.8	1	8.5	28	36	W	17	8	9	12	5.8	60
DETROIT WILLOW RUN	711	986.1	1015.3	33	15	23.7	- 3.7	54	1	- 1	21	0	28	10	59	1.44	- 0.51	1.19	6	1	2.5	2	9.8	28	35	29	17	8	8	13	5.8	
FLINT	770	985.8	1014.7	29	12	20.8	- 4.0	50	1	- 2	21	0	28	10	64	2.12	0.36	1.48	10	0	7.1	3	8.9	28	30	27	17	7	8	14	6.5	
GRAND RAPIDS	784	985.4	1015.9	30	12	21.4	- 2.9	51	1	- 8	21	0	28	13	69	2.12	0.37	1.33	11	1	8.5	2	8.0	28	45	NW	3	6	9	14	6.4	51
HOUGHTON LAKE	1149	970.9	1014.8	26	4	14.8	- 4.0	42	6+	-13	10	0	29	8	73	1.57	0.28	0.71	11	1	14.7	6	6.5	30	26	35	9	9	7	13	6.0	
LANSING	841	982.7	1015.6	30	12	21.2	- 3.0	52	1	- 5	21	0	28	12	71	1.56	- 0.39	0.97	8	0	2.9	1	8.6	29	47	W	17	7	9	13	6.5	55
MARQUETTE U	677			24	8	16.2	- 3.5	43	4	-11	17	0	29			3.08	1.43	0.65	18		44.4	31			34	NW	2	4	9	16	7.2	50
MUSKEGON	627	992.2	1016.3	29	15	22.1	- 3.6	52	1	0	13	0	28	14	71	2.44	0.64	1.04	17	0	21.2	6	8.3	32	35	33	2	5	8	16	7.1	
SAULT STE MARIE	721	986.1	1014.1	21	1	10.8	- 4.9	36	1	-16	10	0	29	6	80	3.25	1.75	0.87	22	0	39.5	32	7.5	32	47	W	22	5	7	17	7.3	50
MINNESOTA																																
DULUTH	1428	966.8	1021.5	21	- 3	9.3	- 1.5	40	5	-21	10	0	29	- 3	57	0.22	- 0.74	0.08	6	0	2.7	8	8.1	31	42	NW	16	11	10	8	4.7	71
INTERNATIONAL FALLS	1179	977.7	1023.5	19	- 8	5.4	- 1.7	41	5+	-26	10	0	29	- 7	54	0.19	- 0.52	0.13	5	0	3.0	14	5.2	30	30	29	16	11	8	10	4.8	
MINNEAPOLIS	834	990.9	1023.0	24	6	15.2	- 0.5	42	5	-11	21	0	29	3	59	0.13	- 0.65	0.05	5	0	2.2	3	7.2	33	44	NW	16	13	10	6	4.4	75
ROCHESTER	1297	971.9	1022.1	25	5	14.9	- 1.3	43	5	-13	21	0	29	3	62	0.14	- 0.66	0.04	5	0	2.4	1	9.0	32	35	31	16	16	4	9	4.4	

See footnotes at end of table

CLIMATOLOGICAL DATA
ENGLISH UNITS

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	No. of days: Max. 90° F. or above	No. of days: Min. 32° F. or below	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	No. of days: .01 inch or more	No. of days: With thunderstorms	Snow, Sleet: Total	Snow, Sleet: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Fastest mile: Speed	Fastest mile: Direction	Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	Ft.	Mb.	Mb.	F.	F.	F.	F.	F.		F.				F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
MINNESOTA																																
ST CLOUD	1034	983.1	1023.1	22	- 1	10.6	- 2.8	40	5	-18	21	0	29		60	0.21	- 0.59	0.11	3		3.3	5						12	10	7	4.3	
MISSISSIPPI																																
JACKSON	310	1008.1	1020.6	53	27	39.9	-10.6	71	1	14	12	0	25	29	69	2.54	- 2.42	0.93	7	0	3.6	3	4.3	35	30	NW	29	12	5	12	5.5	65
MERIDIAN	290	1008.8	1020.3	55	30	42.3	- 8.3	71	1	18	24	0	23	29	67	2.21	- 2.88	0.98	9	0	3.0	3	4.0	34	21	1	21+	11	7	11	5.3	
MISSOURI																																
COLUMBIA	778	992.2	1021.6	39	20	29.6	- 4.2	61	1	6	21	0	26	16	60	1.35	- 0.46	1.18	5	1	3.5	3	5.3	32	36	NW	16	8	6	15	6.2	66
KANSAS CITY	742	994.6	1022.7	42	23	32.3	- 3.5	60	1	7	21	0	26	16	56	1.20	- 0.04	0.97	7	1	2.7	1	3.7	33	28	NW	28	9	6	14	6.2	61
ST JOSEPH	811			42	21	31.6	0.5	59	3	2	21	0	27	16	60	0.26	- 0.83	0.15	3	0	2.5		5.1	32	29	34	29+	12	5	12	5.6	
ST LOUIS	535	1000.3	1021.6	39	20	29.3	- 5.4	61	1	7	21	0	27	16	60	1.09	- 0.95	0.98	4	1	0.4	T	6.1	31	31	NW	16	9	6	14	6.0	65
SPRINGFIELD	1268	974.9	1022.0	41	22	31.5	- 5.6	59	1	9	22+	0	27	17	60	1.84	- 0.28	1.46	8	1	3.5	2	3.5	32	30	N	6	6	9	14	6.5	49
MONTANA																																
BILLINGS	3567	894.0	1021.4	43	26	34.5	8.8	63	29	8	17+	0	22	20	59	0.58	- 0.02	0.40	6	0	1.6	3	4.9	26	32	NW	24	5	7	17	7.0	49
GLASGOW	2284	938.0		28	9	18.5	4.9	57	29	-15	17	0	28			0.15	- 0.26	0.09	5		2.1	3						7	6	16	6.9	
GREAT FALLS	3662	891.0	1022.3	43	23	33.2	9.4	64	29	- 1	14	0	21	19	58	0.24	- 0.50	0.09	6	0	1.9	2	5.2	23	38	SW	3	7	8	14	6.3	55
HAVRE	2582	927.2	1022.9	36	13	24.3	8.0	63	29	- 6	17	0	28	17	78	0.35	- 0.08	0.19	8	0	5.8	5	2.3	22	30	NW	3	8	8	13	6.1	70
HELENA	3828	884.5	1024.3	38	20	28.9	5.7	58	29+	- 9	15	0	23	21	74	0.16	- 0.27	0.12	4	0	0.9	4	3.5	26	34	W	24+	6	4	19	7.1	51
KALISPELL	2965	915.3		40	24	31.9	7.4	54	29	6	15	0	21			1.00	0.00	0.22	10	0	3.0	3						10	3	16	6.2	
MILES CITY	2629	926.5	1023.2	34	15	24.1	3.8	59	29	- 9	17	0	29	17	75	0.77	0.40		11	0	7.2		2.9	34								
MISSOULA	3190	908.9	1024.1	40	24	32.4	7.4	56	29	5	15	0	22	24	77	0.73	- 0.14	0.42	10	0	2.8	4	1.3	12	24	E	12	5	11	13	6.9	50
NEBRASKA																																
GRAND ISLAND	1841	954.3	1023.3	37	17	27.0	0.9	56	19	- 1	21	0	29	17	69	0.32	- 0.42	0.17	5	0	3.5	3	3.7	33	36	35	28	5	9	15	6.7	
LINCOLN U	1150			37	19	28.2	- 0.5	53	19+	0	21	0	28			0.09	- 1.00	0.09	2		1.0	1			34	NW	16	9	6	14	6.2	58
NORFOLK	1544			32	15	23.6	0.7	46	2	- 5	21	0	29			0.06	- 0.72	0.05	2		0.5	T						8	6	15	6.3	
NORTH PLATTE	2775	920.8	1022.5	42	12	27.1	- 0.8	64	19	- 2	13	0	29	14	64	0.36	- 0.16	0.14	4	0	3.0	2	2.8	35	32	N	28	11	6	12	5.7	63
OMAHA	977	986.1	1023.1	37	17	27.3	0.8	56	5	- 2	21	0	28	13	59	0.10	- 0.85	0.09	2	0	1.1	1	6.1	34	36	NW	16	10	6	13	5.9	54
SCOTTSBLUFF	3957	881.8	1021.5	46	20	33.1	4.1	61	29+	10	15+	0	29	20	65	0.23	- 0.17	0.13	5	0	2.1	1	5.4	33	35	28	19	11	4	14	5.7	
VALENTINE	2587			37	13	25.0	2.0	56	29	- 5	17	0	29			0.33	- 0.23	0.08	9		3.2	2			31	NW	16	6	7	16	7.0	59
NEVADA																																
ELKO	5050	846.6	1019.8	50	30	39.8	11.8	64	25	- 1	1	0	15	28	66	1.45	0.56	0.46	9	2	0.5	6	0.5	28	21	24	21	3	8	18	7.4	
ELY	6253	810.4	1020.4	47	25	35.8	9.2	60	26	0	1	0	28	27	77	0.92	0.22	0.31	10	2	8.6	3	2.3	20	34	NW	21	4	3	22	7.9	65
LAS VEGAS	2162	941.1	1018.1	67	44	55.7	7.9	78	27+	31	1	0	1	33	47	0.22	- 0.22	0.16	2	0	0.0	0	2.2	27	34	N	21	9	6	14	6.3	74
RENO	4404	867.6	1019.2	55	30	42.4	6.8	69	26	0	1	0	18	27	60	0.92	- 0.10	0.38	6	0	2.2	7	1.0	26	42	S	21	4	6	19	7.4	50
WINNEMUCCA	4299	870.0	1019.4	54	31	42.4	10.1	67	26	5	1	0	18	32	71	0.92	- 0.02	0.30	11	0	T	5	1.9	13	25	W	21	5	3	21	7.4	42
NEW HAMPSHIRE																																
CONCORD	342	995.6	1008.8	30	6	18.0	- 4.7	45	2	-15	14	0	28	5	55	0.93	- 1.55	0.59	5	0	6.7	8	5.2	29	36	W	17	8	10	11	5.9	65
MT WASHINGTON OBS	6262			5	-11	- 3.4	- 9.0	34	2	-39	21	0	29					1.11	7	0		6			133Y	W	17	5	1	23	8.1	26
NEW JERSEY																																
ATLANTIC CITY	64	1010.5	1012.8	36	18	27.1	- 7.6	50	17	2	22	0	27	12	56	1.69	- 1.44	0.82	6	0	4.2	2	7.6	29	33	27	17	11	11	7	5.0	61
ATLANTIC CITY U	11			40	25	32.5	- 3.2	52	17	11	21	0	24			1.41	- 1.97	0.74	3						44	W	17					
NEWARK	7	1010.8	1011.7	38	22	29.9	- 2.8	49	2	7	21	0	25	12	51	1.22	- 1.58	0.69	5	0	0.6	T	8.4	28	37	28	17	12	9	8	5.0	
TRENTON U	56			38	23	30.5	- 2.9	49	28+	8	21	0	25			1.15	- 1.44	0.60	3		2.4	T			34	NW	17	10	10	9	5.3	72
NEW MEXICO																																
ALBUQUERQUE	5311	839.8	1018.9	55	32	43.3	3.4	68	25+	24	14+	0	17	23	49	0.98	0.60	0.40	5	0	2.0	2	3.6	2	36	NW	22	7	7	15	6.6	66
CLAYTON	4969			51	21	35.9	- 0.1	66	24	9	13	0	29			0.08	- 0.29	0.03	4		1.6	1						5	10	14	6.6	
RATON	6379			50	18	34.2	1.5	66	20	10	2	0	29			0.11	- 0.31	0.06	4		1.7	1						4	8	17	7.1	
ROSWELL	3617	893.7		59	29	43.7	1.6	79	20	19	2	0	22	29	66	1.17	0.75	0.68	8	0	4.0	1	0.9	32	41	NW	22	8	6	15	6.0	68
SILVER CITY	5373			58	33	45.3	1.9	71	25+	23	2	0	12			1.42	0.73	0.71	5		3.0	3						10	9	10	5.7	
NEW YORK																																
ALBANY	275	1000.0	1011.2	31	11	21.1	- 2.6	46	2	- 3	21	0	28	7	56	0.36	- 1.84	0.18	10	0	1.8	T	6.9	29	43	W	17	4	8	17	7.3	64
BINGHAMTON	1590	949.9	1011.0	24	10	17.3	- 6.5	41	2	- 6	21	0	28	10	74	0.51	- 1.67	0.13	17	0	11.7	3	9.0	28	35	W	17	1	8	20	8.1	44
BUFFALO	705	985.8	1012.6	27	14	20.7	- 3.4	50	2	1	21	0	28	14	76	0.81	- 1.91	0.20	18	0	11.7	5	10.0	25	38	SW	22	4	8	17	7.5	51

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	No. of days: Max. 90° F. or above	No. of days: Min. 32° F. or below	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	No. of days: .01 inch or more	No. of days: With thunderstorms	Snow, Sleet: Total	Snow, Sleet: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Fastest mile: Speed	Fastest mile: Direction	Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	Ft.	Mb.	Mb.	°F.	°F.	°F.	°F.	F.		F.				°F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
NEW YORK																																
J.F. KENNEDY	13	1010.8	1011.5	35	21	27.9	-3.7	45	2	5	21	0	26	9	47	1.73	-1.20	0.94	5	0	1.7	1	9.9	30	35	30	17	10	11	8	5.2	
NEW YORK U	132	1007.5	1010.9	37	21	28.9	-4.5	49	2	5	21	0	26	10	49	1.13	-1.71	0.60	3	1	1.1	T	6.1	29	33	NW	17					73
NEW YORK LA GUARDIA	11	1010.2	1011.9	36	22	29.1	-4.5	48	17+	6	21	0	27	10	46	1.37	-1.72	0.71	4	0	1.5	1	9.8	30	42	NW	21+	10	9	10	5.3	
ROCHESTER	547	991.9	1013.0	28	13	20.8	-4.1	49	2	-1	24	0	28	12	67	0.74	-1.79	0.26	13	0	20.4	5	10.6	26	43	W	18+	4	9	16	7.2	61
SYRACUSE	410	996.3	1011.6	28	14	21.1	-3.2	48	2	-2	24	0	27	12	68	1.10	-2.03	0.37	17	0	23.2	12	9.9	26	36	W	17	3	7	19	7.5	43
NORTH CAROLINA																																
ASHEVILLE	2140	937.4	1015.3	43	22	32.4	-6.5	58	20	11	22+	0	27	13	53	0.62	-3.41	0.41	5	0	6.0	5	9.2	35	35	35	29	14	5	10	4.6	71
CAPE HATTERAS R	7	1013.9	1014.1	46	31	38.7	-7.8	63	2	23	19	0	20	26	64	4.06	0.13	2.77	6	1	3.5	3	8.0	33	38	W	29+	13	3	13	5.2	71
CHARLOTTE	736	987.1	1015.2	51	27	38.7	-5.5	62	20	16	12	0	25	17	45	0.87	-2.68	0.66	2	0	2.4	2	3.4	33	22	SW	20	13	6	10	4.9	74
GREENSBORO	897	982.4	1014.9	49	24	36.3	-4.7	61	20	11	22	0	27	15	46	0.88	-2.42	0.52	2	0	3.2	2	4.5	31	30	NW	17	14	6	9	4.7	73
RALEIGH	434	998.6	1014.7	50	23	36.4	-6.6	64	2	8	12	0	27	14	44	1.00	-2.23	0.68	2	0	1.3	1	5.0	31	26	34	13	13	6	10	4.8	68
WILMINGTON	28	1013.9	1015.1	52	29	40.3	-8.4	75	2	18	14	0	23	21	51	1.44	-1.98	0.84	4	0	3.3	2	4.3	32	33	W	29	11	8	10	5.0	71
NORTH DAKOTA																																
BISMARCK	1647	962.1	1025.5	23	1	11.9	-1.6	43	29	-23	21+	0	29	4	69	0.12	-0.31	0.05	5	0	1.8	2	2.6	33	38	N	16	5	5	19	7.2	48
FARGO	896	990.5	1025.6	19	1	9.9	-0.8	33	29+	-18	21	0	29	2	70	0.27	-0.24	0.22	4	0	2.4	3	6.5	34	51	N	16	7	9	13	6.1	61
WILLISTON	1899	952.3	1024.5	27	4	15.6	3.2	54	29	-19	18	0	29	9	78	0.16	-0.32	0.07	3	0	1.2	4	1.3	33	36	N	16	4	10	15	7.1	58
OHIO																																
AKRON	1208	969.2	1015.4	33	14	23.4	-5.3	55	2+	-4	21	0	28	13	66	0.48	-1.82	0.13	13	0	6.6	3	7.8	27	27	30	17	7	11	11	5.9	
CINCINNATI OBS	761			37	19	27.8	-7.3	60	1	1	21	0	28			0.45	-2.35	0.23	5		2.6	2			22	W	17+					63
CLEVELAND	777	985.4	1015.8	31	14	22.6	-5.9	60	2	-3	20	0	28	13	68	0.79	-1.54	0.16	16	0	8.9	4	8.2	26	35	SW	2	10	5	14	6.3	54
COLUMBUS	812	986.5	1017.5	36	16	25.7	-5.4	58	1	0	21	0	28	12	59	0.38	-1.93	0.16	7	0	2.8	2	7.0	27	31	W	2	9	12	8	5.1	62
DAYTON	1002	980.0	1017.6	36	15	25.5	-5.4	59	1	-1	21	0	28	11	57	0.27	-2.05	0.14	6	0	2.4	1	7.1	28	30	W	2	12	6	11	5.2	66
MANSFIELD	1295			32	15	23.4	-4.4	56	1	-4	21	0	28	13	68	0.48	-2.12	0.22	8	0	8.1	3	9.1	26	28	23	16	9	8	12	5.9	
TOLEDO	669	990.5	1016.5	34	15	24.5	-2.8	58	1	-1	21	0	28	12	63	1.29	-0.59	0.86	11	0	5.6	1	8.5	28	38	W	17	10	5	14	6.0	62
YOUNGSTOWN	1178	970.5	1015.1	28	11	19.5	-8.1	51	2	-9	21	0	28	13	76	0.71	-1.79	0.15	12	0	10.1	3	8.4	27	25	26	16+	7	8	14	6.3	
OKLAHOMA																																
OKLAHOMA CITY	1285	974.6	1022.3	47	26	36.4	-4.9	66	20	16	21	0	25	26	69	1.02	-0.35	0.36	9	2	7.7	4	3.6	36	47	NE	26	7	8	14	6.2	65
TULSA	650	997.6	1022.7	48	26	37.0	-3.6	67	10	15	22	0	23	21	55	1.08	-0.69	0.63	7	1	2.1	1	3.0	35	34	NW	28	7	9	13	5.9	61
OREGON																																
ASTORIA	8	1015.6	1016.4	56	39	47.5	4.7	72	28	26	13	0	7	39	76	9.57	-0.32	1.99	14	0	0.0	0	4.8	14	38	19	3	12	2	15	5.7	
BURNS U	4151	875.0	1020.3	50	28	38.9	9.2	63	29	15	14	0	25	29	74	1.63	0.36	0.50	10		2.2	1	0.8	35				6	8	15	6.5	
EUGENE	359	1003.7	1017.3	58	39	48.9	6.3	71	29	27	14	0	9	42	81	6.32	1.35	1.46	12	0	0.0	0	1.1	20	24	20	2	6	7	16	6.8	
MEACHAM	4050	878.4	1020.8	41	29	35.1	6.0	61	28	14	13	0	20	29	84	5.55	1.55	1.17	13		1.9	4	1.2	17	25	29	23	4	5	20	7.7	
MEDFORD	1298	970.2	1018.3	60	35	47.6	7.5	77	28	22	13	0	12	38	77	2.95	0.55	1.17	9	0	0.0	0	1.1	17	30	16	1	6	5	18	7.0	
PENDLETON	1482	966.5	1021.2	50	36	42.8	5.4	66	29	22	14	0	11	36	78	1.82	0.64	0.59	11	0	T	T	1.3	22	29	24	3+	4	4	21	7.9	
PORTLAND	21	1016.6	1017.7	58	39	48.2	6.2	70	28	26	13+	0	7	36	65	6.64	2.42	2.00	11	0	0.0	0	6.5	13	33	E	12	11	1	17	6.1	63
SALEM	196	1009.8	1017.0	58	38	48.1	6.2	72	28	20	14	0	8	38	72	7.73	2.42	2.84	12	0	0.0	0	1.5	22	20	17	2	9	4	16	6.2	
SEXTON SUMMIT R	3836	883.5	1016.7	50	38	44.0	7.9	64	28	27	1	0	6	34	74	4.23	0.11	1.19	10		T	18			45	17	2	10	4	15	6.2	
PACIFIC AREA																																
JOHNSTON	7	1011.9	1012.3	82	72	77.1	0.1	85	19	69	28	0	0	65	69	0.36	-1.17	0.29	7	0	0.0	0	3.9	6	22	E	1	20	8	1	3.1	77
KOROR R	94	1006.1	1009.6	85	75	80.0	-0.3	91	4	72	24+	1	0	74	85	15.54	8.41	3.95	21	2	0.0	0	5.7	6	30	SE	27	0	0	29	9.9	64
KWAJALEIN	8	1008.8	1009.7	86	76	81.2	1.2	88	22+	72	4	0	0	71	74	3.12	0.97	1.38	11	0	0.0	0	14.4	5	29	4	16+	0	7	22	8.9	
MAJURO	10	1009.1	1009.6	85	78	81.4	1.0	86	25+	74	21	0	0	72	75	3.49	-5.06	1.73	11	0	0.0	0	11.4	6	27	E	23	2	7	20	8.3	58
MARCUS ISLAND	20			74	64	68.9	-2.3	81	1	59	14	0	0			1.76	-0.95	0.48	11		0.0	0			38	W	12					51
PAGO PAGO	12	1007.5	1007.7	86	74	80.1		90	21+	70	22	4	0	75	85	32.66		9.01	23	1	0.0	0	3.2	32	56	NW	10	1	7	21	8.8	32
PONAPE R	123	1003.7	1009.2	86	75	80.6	0.1	88	26+	71	27+	0	0	73	78	13.60	3.86	8.91	17	1	0.0	0	8.7	7	22	NE	12	0	3	26	9.4	33
TAGUAC GUAM R	361			82	69	75.6	-2.7	85	18+	62	18+	0	0			8.48	4.99	1.83	18		0.0	0			27	E	12	1	8	20	8.5	51
TRUK MOEN ISLAND	5	1009.1	1009.4	85	77	81.0	0.3	87	26	73	24	0	0	73	78	9.23	2.94	4.02	16	0	0.0	0	11.4	5	26	NE	14	0	2	27	9.3	58
WAKE	11	1013.2	1013.4	82	70	75.9	-1.2	85	26+	67	15	0	0	61	63	0.15	-1.20	0.09	2	0	0.0	0	6.2	2	34	N	14	8	12	9	5.6	67
YAP R	62	1007.5	1009.4	85	75	80.0	-0.4	87	29+	72	29	0	0	74	82	8.04	3.40	2.15	20	1	0.0	0	9.4	5	31	NE	24	0	2	27	9.5	43
PENNSYLVANIA																																
ALLENTOWN	387	997.6	1012.1	35	16	25.5	-3.7	48	28	2	22+	0	28	8	52	1.31	-1.33	0.84	4	0	0.6	T	9.5	28	36	29	17	10	9	10	5.5	
ERIE	731	986.8	1014.7	28	13	20.7	-5.7	52	2	-1	25+	0	28	13	71	1.13	-1.19	0.25	18	0	24.6	5	8.9	26	30	27	17	3	11	15	7.1	

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	No. of days: Max. 90° F. or above	No. of days: Min. 32° F. or below	Average dew point	Average relative humidity	Precipitation: Total	Departure from normal	Greatest in 24 hours	No. of days: .01 inch or more	No. of days: With thunderstorms	Snow, Sleet: Total	Snow, Sleet: Maximum depth on ground	Wind: Resultant speed	Resultant direction	Fastest mile: Speed	Fastest mile: Direction	Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	Ft.	Mb.	Mb.	F.	F.	F.	F.	F.		F.				F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
PENNSYLVANIA																																
HARRISBURG	338	999.7	1013.0	38	20	29.2	- 3.4	49	28	5	22	0	27	10	49	0.53	- 1.78	0.34	3	0	1.8	2	9.7	29	43	NW	17	10	6	13	5.7	69
PHILADELPHIA	5	1011.5	1012.6	39	21	30.4	- 2.8	51	28	6	21	0	26	12	50	1.40	- 1.40	0.68	5	0	1.7	T	7.8	30	34	NW	17	13	5	11	5.2	61
PITTSBURGH	1137	970.2	1015.9	31	13	22.2	- 7.0	51	2	- 6	21	0	28	10	60	0.79	- 1.40	0.19	11	0	6.1	2	9.0	27	32	29	17	6	13	10	6.2	59
READING U	266			39	22	30.6	- 2.8	50	28	6	21	0	25			1.25	- 1.39	0.65	4		0.6	T			50	W	17	13	7	9	4.7	66
SCRANTON	930	977.0	1012.2	32	16	24.1	- 4.2	45	28+	2	21+	0	28	10	56	0.30	- 1.69	0.13	6	0	2.9	1	5.8	26	36	W	17	5	11	13	6.6	65
WILLIAMSPORT	524	993.2	1012.9	35	18	26.4	- 2.8	46	7+	3	21	0	27	13	61	0.57	- 1.94	0.26	6	0	3.0	1	8.6	28	32	29	17	10	6	13	6.1	
RHODE ISLAND																																
BLOCK ISLAND	110			33	20	26.5	- 4.4	47	3+	5	21	0	26			1.20	- 2.09	0.67	6		2.8	1						8	12	9	6.0	
PROVIDENCE	51	1007.5	1009.9	34	16	24.6	- 5.1	48	3+	3	22+	0	28	8	50	1.31	- 1.79	0.82	6	0	4.6	3	6.6	28	36	30	17	10	11	8	5.1	71
SOUTH CAROLINA																																
CHARLESTON	40	1013.9	1015.4	55	29	41.8	- 9.7	72	2	18	14+	0	21	24	54	1.27	- 2.02	0.63	4	0	1.3	1	3.5	31	44Y	W	29	13	6	10	5.0	65
CHARLESTON U	9			54	37	45.1	- 7.2	68	2	28	12	0	5			1.64	- 1.43	0.99	5		0.5	1			38	W	29					
COLUMBIA	213	1007.8	1015.9	54	26	40.1	- 8.3	65	20+	15	14+	0	25	21	54	1.14	- 2.60	0.82	6	0	1.0	1	2.8	30	25	32	29	15	5	9	4.5	73
GNVLE-SPARTANBURG	957	980.7	1015.9	51	25	38.3	- 6.8	64	20	13	12	0	27	14	42	1.00	- 3.07	0.69	3	0	1.8	1	2.9	34	27	W	10	14	7	8	4.8	66
SOUTH DAKOTA																																
ABERDEEN	1296	975.6	1025.1	25	7	15.8	0.8	43	29	-16	21	0	29	5	66	0.10	- 0.55	0.04	4	0	1.4	1	5.1	35	37	36	28	8	6	15	6.5	
HURON	1282	975.6	1024.6	29	10	19.3	2.7	43	29	-14	21	0	29	6	58	0.03	- 0.57	0.02	2	0	0.7	1	3.7	35	34	NW	16	6	10	13	6.4	64
RAPID CITY	3162	907.6	1022.5	38	17	27.4	3.3	60	29	0	17+	0	28	15	64	0.35	- 0.13	0.15	7	0	3.4	2	5.0	35	40	NW	16	8	9	12	6.1	63
SIOUX FALLS	1418	969.9	1023.8	29	9	18.9	- 0.2	42	3	-12	21	0	29	9	68	0.09	- 0.84	0.03	5	0	0.9	T	5.0	34	29	32	28	10	7	12	5.6	
TENNESSEE																																
BRISTOL	1507	961.4	1017.4	41	19	30.1	- 9.9	64	1	4	22	0	27	13	52	0.75	- 2.81	0.45	5	0	6.3	5	4.7	28	21	30	21+	8	11	10	5.7	
CHATTANOOGA	665	993.2	1018.6	45	24	34.4	-10.0	61	1	10	12	0	26	18	55	0.94	- 4.43	0.50	7	0	4.9	3	4.1	33	23	NW	29	9	7	13	6.0	59
KNOXVILLE	980	981.7	1017.6	44	23	33.3	- 9.8	57	6	8	22	0	26	17	55	0.74	- 4.07	0.45	5	0	4.7	2	2.9	30	26	SW	20	8	6	15	6.3	55
MEMPHIS	258	1010.5	1021.2	46	29	37.3	- 6.8	65	1	16	22	0	21	22	56	1.98	- 2.71	1.24	5	1	4.5	2	3.5	34	27	N	7	7	7	15	6.8	49
NASHVILLE	590	997.3	1019.8	43	22	32.4	- 9.6	63	1	7	22	0	27	17	56	0.64	- 3.87	0.37	5	0	2.9	2	5.2	32	27	S	1	7	9	13	6.3	54
OAK RIDGE R	905			43	23	32.7	- 8.4	57	6	10	22+	0	26			0.84	- 4.96	0.52	4		2.7	1			34Y		9	10	5	14	5.8	
TEXAS																																
ABILENE	1762	958.0	1020.7	54	33	43.6	- 4.8	69	20	22	22+	0	12	31	69	1.93	0.84	0.57	10	1	1.6	1	1.4	3	38	N	21	10	4	15	6.0	59
AMARILLO	3604	893.3	1019.3	50	26	38.0	- 3.3	67	20	16	23+	0	22	24	63	0.73	0.11	0.33	6	1	8.0	4	0.9	36	34	NE	20	9	6	14	6.2	62
AUSTIN	597	999.0	1021.5	57	38	47.2	- 6.6	74	27+	25	24	0	6	36	69	1.64	- 0.94	0.39	8	1	0.0	0	3.6	2	34	NW	21	11	4	14	5.6	55
BROWNSVILLE	19	1019.0	1019.5	67	48	57.5	- 6.5	82	21	32	24	0	1	51	80	0.80	- 0.68	0.39	7	0	0.0	0	3.7	1	30	NE	28	10	4	15	6.2	45
CORPUS CHRISTI	41	1019.0	1020.4	62	43	52.4	- 8.0	76	1	29	24	0	2	45	79	2.42	0.72	1.34	8	0	0.0	0	6.2	4	33	NW	21	6	7	16	6.6	45
DALLAS	481	1004.1	1021.8	55	35	44.8	- 4.7	70	26	24	23	0	11	32	64	1.69	- 0.86	0.50	11	3	0.4	T	2.6	1	30	NW	1	9	6	14	6.0	59
DEL RIO	1026	983.4	1020.3	61	40	50.4	- 5.8	77	25	30	23+	0	3	37	66	1.53	0.65	0.59	7	1	0.0	0	2.6	8	29	35	21	10	4	15	5.9	
EL PASO	3918	883.5	1016.8	62	38	50.4	1.3	74	20	27	2	0	4	31	53	1.11	0.70	0.39	6	0	2.3	1	1.6	34	61	W	20	11	5	13	5.4	72
FORT WORTH	537	1001.0	1021.9	55	33	44.2	- 5.0	70	26	25	24+	0	13	34	72	1.48	- 0.76	0.46	9	2	2.6	3	2.8	1	26	1	29+	10	4	15	6.2	
GALVESTON U	7			56	45	50.8	- 6.0	71	26	33	23+	0	0			1.70	- 1.18	0.67	9		0.0	0			32	NW	21					46
HOUSTON	50	1018.6	1020.8	61	40	50.4	- 5.4	77	27+	29	24	0	2	37	66	1.99	- 1.45	0.61	10	1	0.0	0	3.7	36	29	34	29	7	7	15	6.4	53
LUBBOCK	3254	906.2	1019.9	51	26	38.5	- 4.6	72	20	16	14	0	24	26	69	0.82	0.25	0.30	9	1	3.8	3	1.9	2	30	2	28+	9	5	15	6.2	
MIDLAND	2851	918.7	1018.9	57	33	44.7	- 3.6	74	24	19	14	0	12	31	67	1.06	0.46	0.45	6	0	1.7	2	1.7	5	37	1	21	10	5	14	5.9	
PORT ARTHUR	16	1020.3	1020.9	59	37	48.0	- 8.0	76	1	25	24	0	6	38	74	2.56	- 1.89	0.93	9	4	T	T	3.5	35	38	N	21+	9	9	11	5.6	63
SAN ANGELO	1903	952.3	1020.2	58	34	45.8	- 4.7	77	20	24	23	0	14	36	74	1.58	0.68	0.74	9	1	0.7	1	0.1	1	26	20	27+	12	4	13	5.5	
SAN ANTONIO	788	992.6	1021.1	59	38	48.3	- 7.1	75	1	25	24	0	7	37	70	1.85	0.20	0.74	9	0	T	0	3.4	2	34	N	21	11	5	13	5.8	54
VICTORIA	104	1016.6	1020.7	60	41	50.7	- 7.3	75	26	28	24	0	2	41	72	2.03	- 0.31	0.98	6	0	0.0	0	4.9	3	46Y	N	21	21	4	18	6.9	
WACO	501	1003.1	1021.4	56	38	47.0	- 4.5	73	27	26	23+	0	6	38	75	1.78	- 0.64	0.55	10	1	1.0	1	2.7	31	30	32	21	11	6	12	5.5	
WICHITA FALLS	994	984.4	1022.1	52	30	41.0	- 5.8	71	20	18	23+	0	16	30	69	1.08	- 0.30	0.32	8	1	8.6	4	3.9	1	40	36	21	8	6	15	6.6	
UTAH																																
MILFORD	5028	848.6		52	27	39.5	9.8	65	26	16	1	0	27			0.87	0.17	0.29	6		3.8	2						6	4	19	7.1	
SALT LAKE CITY	4220	875.0	1021.7	48	28	38.2	5.7	58	26+	5	15	0	21	28	70	2.32	1.14	0.49	14	0	13.6	7	0.6	17	24	NW	3	5	7	17	7.1	56
WENDOVER	4237	874.4	1021.9	47	31	38.7	5.9	61	23	18	1	0	18	27	64	0.81	0.51	0.17	10		1.9	1										
VERMONT																																
BURLINGTON	332	996.6	1009.8	20	2	11.0	- 6.4	46	2	-13	20+	0	28	1	61	1.28	- 0.51	0.44	15	0	24.8	10	1.5	31	35	W	17	3	7	19	7.7	62

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	No. of days: Max. 90° F. or above	No. of days: Min. 32 F. or below	Average dew point	Average relative humidity	Precipitation: Total	Departure from normal	Greatest in 24 hours	No. of days: .01 inch or more	No. of days: With thunderstorms	Snow, Sleet: Total	Snow, Sleet: Maximum depth on ground	Wind: Resultant speed	Resultant direction	Fastest mile: Speed	Fastest mile: Direction	Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	Ft.	Mb.	Mb.	°F.	°F.	°F.	F.	°F.		°F.				F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
VIRGINIA																																
LYNCHBURG	916			43	21	32.4	- 6.5	54	5	3	22	0	26			0.64	- 2.01	0.37	3		3.6	4			28	W	17	15	7	7	4.2	75
NORFOLK	22	1013.2	1014.1	43	25	34.0	- 7.6	62	2	14	11	0	25	14	46	2.01	- 1.20	1.06	5	0	2.9	2	5.1	30	31	NW	13	16	4	9	4.5	72
RICHMOND	164	1008.5	1014.5	47	22	34.2	- 5.7	57	6+	6	22	0	27	13	47	0.98	- 1.92	0.68	2	0	2.4	2	4.0	30	28	NW	17	16	3	10	4.4	70
ROANOKE	1149	971.6	1014.6	45	23	33.8	- 5.4	56	5	8	22	0	25	8	37	0.56	- 2.30	0.42	2	0	3.8	2	8.7	30	29	32	29+	16	6	7	3.8	
WALLOPS ISLAND	9			40	24	32.2		55	17	13	22	0	26			1.26		0.62	5		3.8	2			49Y	NW	13	15	5	9	4.3	
WASHINGTON																																
OLYMPIA	195	1009.8	1017.2	55	33	43.9	3.0	72	29	18	14	0	16	36	82	7.83	1.21	2.35	11	0	0.0	1	2.4	19	26	22	23+	9	7	13	5.7	
QUILLAYUTE	179	1008.5	1015.9	54	36	44.7	4.3	72	28	23	15	0	12	39	85	12.89	0.61	3.96	12	0	0.0	0	4.3	13	27	SE	3+	11	3	15	5.8	49
SEATTLE TACOMA	400	1000.7	1017.3	56	41	48.5	7.7	70	27	30	11	0	1	36	68	6.08	1.84	1.66	11	0	0.0	0	1.4	12	33	18	2	12	1	16	5.6	54
SPOKANE	2356	934.6	1020.2	46	30	37.8	7.8	60	29	19	9	0	17	29	74	2.12	0.26	0.47	10	0	0.4	7	2.9	17	33	SW	3	14	4	11	4.8	64
STAMPEDE PASS R	3958	880.1		39	29	33.6	7.1	49	28	15	15	0	19			9.19	- 0.96	2.81	12		21.9	55										
WALLA WALLA U	949			50	37	43.8	5.4	63	29+	22	14+	0	10			2.42	0.90	0.57	10		T	T			27	S	1	6	4	19	7.6	32
YAKIMA	1052	981.7	1021.1	51	29	40.0	6.0	64	28	18	15	0	19	29	71	0.88	0.01	0.44	8	0	0.4	2	3.7	27	29	25	23+	10	5	14	5.8	
WEST INDIES																																
SAN JUAN P.R.	13	1013.9	1016.4	84	69	76.5	2.1	92	22	62	7+	5	0	65	71	1.60	- 1.30	0.72	8	0	0.0	0	4.4	9	27	S	20+	9	13	7	5.0	59
SWAN ISLAND	28			81	73	76.9	- 1.5	84	20+	69	11+	0	0			0.28	- 0.88	0.13	7		0.0	0						7	15	7	5.3	
WEST VIRGINIA																																
BECKLEY	2504	924.5	1017.2	32	13	22.9	-11.4	49	2	- 6	22	0	28	10	61	0.94	- 3.12	0.43	9	0	11.8	5	7.2	29	32	30	17	10	9	10	5.2	
CHARLESTON	939	982.1	1017.3	37	17	27.1	-10.4	67	1	- 6	22	0	27	10	52	0.64	- 2.89	0.29	7	0	9.2	4	5.4	25	24	23	17	12	9	8	5.0	
ELKINS	1970	942.1	1015.8	33	11	22.0	-11.0	59	1	- 5	23+	0	29	11	63	1.80	- 1.47	0.69	11	0	24.1	10	5.7	28	29	31	17	7	9	13	6.3	
HUNTINGTON	827	986.8	1018.1	38	17	27.4	-10.3	66	1	- 5	22	0	27	14	60	0.53	- 2.51	0.27	6	0	4.1	3	4.5	26	25	25	2	13	7	9	5.0	
PARKERSBURG U	615			37	17	27.1	- 8.4	61	1	4	22	0	27			0.58	- 2.25	0.20	4		3.0	2			34	SW	17					66
WISCONSIN																																
GREEN BAY	682	991.5	1018.2	26	8	16.7	- 1.4	40	1	-10	17	0	29	7	65	0.45	- 0.63	0.28	5	0	3.0	2	9.3	31	37	W	17+	16	3	10	4.4	63
LA CROSSE	651	995.9	1021.7	29	10	19.5	0.1	47	5	- 4	22+	0	29	6	58	0.06	- 0.99	0.04	4	0	0.8	T	7.1	32	29	30	16	17	6	6	3.8	
MADISON	858	986.5	1019.4	30	8	19.0	- 0.5	47	1	- 5	21+	0	29	8	65	0.49	- 0.64	0.25	6	1	3.9	1	7.9	31	35	NW	9	15	4	10	4.6	67
MILWAUKEE	672	991.9	1018.4	30	12	20.7	- 1.7	49	1	- 3	17	0	28	7	57	0.56	- 0.84	0.44	8	0	3.5	1	9.6	30	36	W	16	15	3	11	4.6	70
WYOMING																																
CASPER	5338	838.8	1021.4	40	20	30.3	4.0	53	29	0	13	0	28	18	63	0.46	- 0.13	0.18	7	1	5.0	3	7.6	24	35	22	2	11	3	15	6.1	
CHEYENNE	6126	812.1	1020.2	43	22	32.6	5.3	54	7	8	13	0	27	16	55	0.30	- 0.26	0.15	5	0	2.5	1	8.7	31	43	NW	29+	9	6	14	5.9	65
LANDER	5563	830.7	1023.5	35	15	24.7	0.6	55	29	-10	15	0	28	15	71	0.61	- 0.08	0.32	5	0	9.9	16	1.3	24	33	NW	24	8	8	13	6.3	66
SHERIDAN	3964	881.5	1022.8	40	19	29.7	5.9	61	29	- 4	13	0	28			0.75	0.01	0.31	9	0	7.3	3	2.6	31	30	NW	24	5	7	17	7.2	55

Data from airport unless otherwise specified. U indicates Urban, R indicates Rural, sites.

Precipitation data in column headed "Greatest in 24 hours" are computed on a 24-hour basis without regard to calendar day - data may include precipitation with a measurable amount from the last day of the previous month or the first day of the following month.

Wind directions under resultant direction are in tens of degrees.

Value entered in column "Fastest Mile" is the highest observed 1-minute wind speed when the direction is in tens of degrees. These stations are not equipped with a recording anemometer from which "Fastest Mile" data can be evaluated.

A Maximum hourly average.
B Number of days maximum 70°F. or above for Alaskan Stations.
Y Peak Gust.
\+ And also on an earlier date or dates.
Ø Station pressures apply to elevations shown in the "Elevations - Station Pressure" table of the annual issue of this publication.

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure: Station ⊙	Pressure: Sea level	Temperature: Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	No. of days: Max 32.2 °C or above	No. of days: Min 0 C or lower	Average dew point	Average relative humidity	Precipitation: Total	Departure from normal	Greatest in 24 hours	No. of days: .25 mm or more	No. of days: With thunderstorms	Snow, Sleet: Total	Snow, Sleet: Maximum depth on ground	Wind: Resultant speed	Resultant direction	Fastest mile (1.6 kilometers): Speed	Direction	Date	No. of days (sunrise to sunset): Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	M.	Mb.	Mb.	C.	C.	C.	C	C		C.				C.	%	Mm.	Mm.	Mm			Mm.	Mm.	M.p.s.		M.p.s.							%
ALABAMA																																
BIRMINGHAM	189	996.3	1019.6	10.0	- 2.2	3.7	-5.6	18.9	20	- 8.9	22+	0	25	- 6.1	53	30	-104	20	6	0	18	25	2.3	35	12.1	NW	29+	9	6	14	5.9	55
HUNTSVILLE	190	995.9	1019.6	7.2	- 4.4	1.4	-5.8	16.7	1	-12.2	22	0	26	- 5.6	66	29	-104	14	6	0	69	T	2.5	34	13.0	32	29	8	7	14	6.0	
MOBILE	64	1010.8	1019.1	14.4	1.7	8.2	-4.7	21.7	1	- 3.3	12+	0	10	- 1.1	57	73	- 43	25	8	0	30	25	2.1	36	13.4	35	7	12	7	10	4.8	
MONTGOMERY	59	1011.9	1019.1	11.1	0.6	5.8	-4.3	20.6	1	- 5.6	12	0	16	- 3.9	54	47	- 63	25	9	0	T	T	2.3	31	8.9	NE	29	9	9	11	5.7	54
ALASKA												B																				
ANCHORAGE	35	999.3	1004.3	- 2.2	- 7.8	- 4.9	2.4	8.9	27	-27.8	3	0	25	-10.6	66	42	24	11	13	0	663	483	0.9	36	11.2	31	7+	3	4	22	8.3	22
ANNETTE	34	1008.1	1012.3	7.8	- 0.6	3.7	1.9	16.1	29	-14.4	2	0	16	0.0	79	147	- 70	50	15	0	163	102	1.9	13	17.0	16	4	8	3	18	6.9	
BARROW	9	1023.7	1024.7	-28.9	-35.0	-31.8	-3.9	-21.1	15+	-45.0	7+	0	29	-35.6	70	3	- 2	1	3	0	41	406	1.3	9	13.0	7	14+	9	6	14	5.9	
BARTER ISLAND	12	1022.7	1024.7	-29.4	-35.6	-32.6	-3.9	-17.2	28+	-46.1	6+	0	29	-36.7	65	6	- 3	4	4	0	74	610	0.3	18	12.5	27	11	10	5	14	5.8	
BETHEL	38	1001.0	1007.0	-11.7	-19.4	-15.5	-2.3	6.7	13	-32.2	6	0	29	-17.8	82	6	- 22	2	7	0	150	102	6.7	3	15.6	4	19	14	3	12	5.1	
COLD BAY	29	994.2	998.0	- 2.2	- 6.7	- 4.4	-2.2	6.1	14	-18.3	10	0	26	- 6.1	86	33	- 48	13	16	0	262	127	3.6	2	23.7	12	12	2	5	22	8.3	
FAIRBANKS	133	993.9	1012.1	-15.0	-26.1	-20.6	-1.2	5.6	27	-48.9	5	0	29	-25.6	65	4	- 9	2	5	0	122	787	0.9	1	9.4	5	17	7	8	14	6.4	
JUNEAU	4	1011.2	1012.1	1.7	- 5.6	- 1.8	1.1	10.0	27+	-30.0	2	0	19	- 5.0	81	135	57	50	17	0	432	178	3.8	12	17.4	12	6	5	2	22	7.9	35
KING SALMON	15	999.3	1001.3	- 6.7	-14.4	-10.7	-2.6	7.8	26	-32.8	4	0	24	-15.0	68	14	- 10	5	8	0	135	102	3.6	2	18.3	9	12	10	2	17	6.4	
KOTZEBUE	3	1016.9	1017.4	-22.2	-32.8	-27.5	-7.5	- 1.7	13	-46.7	24+	0	29	-31.1	69	9	2	4	7	0	249	635	0.5	3	10.7	27	28	14	6	9	4.1	
MC GRATH	105	996.6	1010.1	-13.9	-25.6	-19.6	-1.9	4.4	28	-46.7	6+	0	29	-23.3	68	19	- 10	7	8	0	320	533	1.3	36	9.4	1	17+	11	2	16	5.8	
NOME	4	1012.5	1013.4	-13.3	-25.6	-19.5	-4.8	3.3	13	-38.3	4	0	29	-23.9	64	12	- 12	7	7	0	112	483	2.4	3	17.9	3	18	17	1	11	4.0	72
ST. PAUL ISLAND	7	1003.7	1004.9	- 6.1	-10.0	- 8.0	-3.2	3.9	14+	-16.1	23+	0	27	-10.6	81	12	- 19	5	17	0	99	76	8.8	3	22.8	10	12	0	6	23	8.7	
SHEMYA	37	998.6	1002.5	0.6	- 2.8	- 1.2	-0.6	3.9	16+	- 6.1	29	0	27	- 4.4	80	19	- 39	7	17	0	114	25	8.6	5	23.7	15	16+	0	8	21	8.6	
YAKUTAT	9	1006.4	1007.6	1.7	- 5.0	- 1.6	0.3	8.3	28	-26.1	2	0	22	- 3.3	90	460	252	93	19	0	592	610	2.9	11	23.7	12	5	3	3	23	8.6	
ARIZONA																																
FLAGSTAFF	2131	788.0	1019.6	8.9	- 5.0	2.1	3.4	16.7	24	-13.9	1	0	29	- 3.9	70	33	- 12	12	6	1	236	483	0.4	4	9.8	22	21	5	8	16	6.9	
PHOENIX	340	976.6	1015.9	22.2	8.3	15.4	3.4	28.9	26	1.7	1	0	0	6.7	61	30	9	15	6	3	0	0	0.9	11	10.7Y	S	12	6	10	13	6.7	81
TUCSON	788	927.2	1015.4	21.7	8.3	15.1	3.4	29.4	26	- 1.1	1	0	1	3.3	54	25	4	15	5	0	0	0	1.4	13	13.0	E	29	8	8	13	6.3	72
WINSLOW	1492	853.7	1020.8	10.6	- 1.7	4.6	1.6	18.9	27+	-10.6	5	0	16	- 2.2	67	7	- 5	4	4	1	0	102	1.4	24	17.0	26	27	6	10	13	6.2	
YUMA	59	1008.5	1015.7	25.0	10.6	17.9	3.9	31.7	25	5.0	1	0	0	5.0	49	7	- 2	7	1	1	0	0	0.9	1	11.6	SW	13	5	8	16	6.9	83
ARKANSAS																																
FORT SMITH	136	1005.1	1022.1	10.6	- 2.2	4.2	-2.3	21.1	1	- 6.7	12	0	24	- 3.9	60	28	- 59	15	6	1	76	51	1.2	33	15.6	W	1	9	5	15	6.3	62
LITTLE ROCK	78	1011.5	1021.5	8.9	- 2.2	3.3	-3.6	19.4	1	- 9.4	22	0	22	- 4.4	59	27	- 83	10	6	0	109	51	1.9	34	12.5	NW	7	8	9	12	6.1	73
TEXARKANA	119	1008.1	1021.6	12.2	0.0	6.0	-3.2	21.7	20	- 7.8	22	0	16	- 2.8	56	30	- 72	15	5	0	33	T	0.6	13	11.3	33	29	9	4	16	6.2	
CALIFORNIA																																
BAKERSFIELD	145	1001.0	1018.6	20.0	10.0	14.9	3.8	26.7	29	3.3	1	0	0	8.9	71	14	- 15	6	4	0	0	0	0.6	1	7.2	18	16	3	5	21	7.8	
BISHOP	1252	875.4		17.8	- 0.6	8.5	3.4	23.3	26+	- 7.8	1	0	17			1	- 24	1	2		0	0						5	12	12	6.0	
BLUE CANYON	1609			8.9	2.8	5.7	2.9	16.7	27+	- 5.6	1	0	7			265	7	72	15		132	1295			9.8	16	21+	3	5	21	7.9	
EUREKA U	13			14.4	8.9	11.8	2.8	21.1	26+	3.9	1	0	0			74	- 66	28	11		0	0			15.2	S	1	3	2	24	8.6	35
FRESNO	100	1006.8	1018.7	17.8	8.3	13.2	2.9	23.9	29+	2.8	11	0	0	9.4	82	28	- 28	16	6	0	0	0	0.2	4	8.0	E	17	2	5	22	8.2	40
LONG BEACH	10	1016.3	1017.7	21.1	10.6	15.8	3.3	28.9	24	6.1	1	0	0	8.9	69	10	- 49	6	4	1	0	0	0.5	19	7.2	27	29	3	7	19	7.8	
LOS ANGELES	30	1013.5	1017.1	19.4	12.2	16.0	3.1	26.7	4	9.4	1	0	0	10.0	73	11	- 62	5	5	0	0	0	0.7	23	13.0Y	N	22	4	5	20	7.8	
LOS ANGELES U	82			22.2	12.8	17.7	3.7	30.6	24	8.9	1	0	0			12	- 72	6	4		0	0			8.0	NW	22	5	6	18	7.3	46
MT SHASTA R	1080			10.6	0.6	5.6	2.8	20.0	27	- 6.7	13	0	16			88	- 62	24	12		64	737										
OAKLAND	2	1018.6	1018.9	15.6	10.6	13.1	2.7	23.3	25	6.1	11+	0	0	10.6	87	46	- 35	21	9	0	0	0	0.5	27	9.4	16	16	2	4	23	8.6	
RED BLUFF	104	1006.1	1018.8	17.2	7.8	12.7	2.8	27.8	27	1.1	1	0	0	8.3	82	93	9	32	15	0	0	0	0.4	27	11.6	SE	21	7	4	18	7.3	47
SACRAMENTO	5	1018.0	1018.6	16.7	8.3	12.5	2.9	22.8	27+	0.6	1	0	0	9.4	87	54	- 22	19	10	0	0	0	0.8	20	10.7	SW	21	3	4	22	8.1	52
SANDBERG R	1377	863.9		11.7	4.4	8.0	2.8	20.0	19	- 1.7	12	0	3	0.0	64	37	- 28	16	5		0	0			31.7	34	2	4	6	19	7.7	
SAN DIEGO	4	1016.3	1017.2	20.0	12.2	15.9	2.5	26.1	4	8.9	3+	0	0	10.0	71	6	- 49	4	3	0	0	0	0.8	30	8.0	NW	28+	5	7	17	7.3	63
SAN FRANCISCO	2	1018.3	1018.8	16.1	9.4	12.5	2.0	22.2	26	3.3	1	0	0	9.4	84	37	- 52	19	9	0	0	0	0.6	28	12.5	SSW	17	1	3	25	8.9	
SAN FRANCISCO U	16			16.1	11.1	13.7	2.1	22.8	26+	7.8	1	0	0			58	- 35	18	11		0	0			10.3	SW	21					55
SANTA CATALINA	478	961.1		17.8	11.1	14.5	2.3	26.1	26+	7.8	12+	0	0			17	- 63	6	9		0	0										
SANTA MARIA	72			18.9	8.3	13.8	2.8	27.2	25+	2.2	1	0	0			23	- 41	12	7		0	0						4	2	23	8.1	
STOCKTON	7	1018.3	1019.2	16.1	8.3	12.2	2.7	21.7	23	1.7	1	0	0	7.8	77	44	- 18	25	10	0	0	0	0.4	19	10.3	16	17	0	4	25	8.7	
COLORADO																																
ALAMOSA	2297	772.1		3.3	-13.9	- 5.2	-0.5	9.4	25+	-22.8	2	0	29			11	6	7	5		163	76						7	12	10	5.8	
COLORADO SPRINGS	1873	811.7	1021.9	6.7	- 6.1	0.3	0.6	15.6	20	-12.8	13	0	29	- 8.9	58	6	- 3	2	6	0	122	102	1.7	2	12.5	35	27+	7	4	18	6.9	
DENVER	1610	837.5	1019.7	8.3	- 6.1	1.2	1.5	16.1	24+	-15.0	14	0	29	- 6.7	62	19	1	9	6	0	185	127	0.3	24	17.0	NW	24	7	8	14	6.3	73
GRAND JUNCTION	1480	855.1	1021.8	7.8	- 2.2	2.8	2.4	13.9	26	- 7.2	2	0	26	- 2.8	73	29	11	11	8	0	23	T	0.6	11	7.6	NE	27	3	5	21	8.0	46
PUEBLO	1428	857.4	1020.6	8.3	- 5.0	1.8	0.8	16.7	20	- 8.9	15	0	29	- 6.7	59	14	2	5	7	0	168	76	0.6	1	16.1	N	27	7	3	19	6.9	66

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Date	Temperature: Lowest	Date	No. of days: Max 32.2 °C or above	No. of days: Min. 0 C or lower	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	No. of days: 25 mm. or more	No. of days: With thunderstorms	Snow, Sleet: Total	Snow, Sleet: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Fastest mile (1.6 kilometers): Speed	Fastest mile: Direction	Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	M.	Mb.	Mb.	C.	C.	C.	C.	C.		C.				C.	%	Mm.	Mm.	Mm.			Mm.	Mm.	M.p.s.		M.p.s.							%
CONNECTICUT																																
BRIDGEPORT	2	1010.2	1010.7	2.2	- 6.7	- 2.3	-1.4	6.7	3+	-14.4	21	0	26	-11.1	54	38	- 37	22	5	0	25	25	4.7	30	21.0	32	17	11	8	10	5.3	
HARTFORD	52	1003.1	1009.7	1.1	- 7.8	- 3.4	-0.7	7.8	28	-15.6	21	0	27	-12.2	53	29	- 46	22	7	0	41	25	2.8	31	17.0	NW	17	8	9	12	5.8	76
NEW HAVEN	2	1010.2		2.8	- 7.2	- 2.5	-1.2	8.3	29+	-14.4	22+	0	27			38	- 43	24	7		64	25			15.6	NW	17	12	6	11	5.4	73
DELAWARE																																
WILMINGTON	23	1009.8	1013.0	4.4	- 6.1	- 0.8	-1.8	8.9	28+	-14.4	21	0	26	-11.1	50	39	- 36	25	2	0	23	T	3.3	29	15.6	29	17	10	8	11	5.3	
DIST.OF COLUMBIA																																
WASH NATL AP	4	1011.5	1013.9	6.7	- 3.9	1.3	-1.9	11.7	27+	-12.8	21	0	22	-11.1	42	20	- 42	10	3	0	61	51	3.0	30	15.6	NW	17	13	7	9	4.8	61
FLORIDA																																
APALACHICOLA U	4			14.4	4.4	9.5	-4.3	20.0	21	- 1.1	8	0	3			50	- 50	14	7	2	0	0			14.3	NW	29	13	7	9	4.5	62
DAYTONA BEACH	9	1015.2	1016.7	17.8	5.6	11.6	-4.3	26.1	2	0.0	13	0	1	3.9	64	44	- 26	30	9	2	0	0	2.5	31	13.0	27	29	13	5	11	4.9	
FORT MYERS	5	1016.6	1016.9	21.7	9.4	15.5	-2.9	26.7	2+	2.2	9	0	0	10.0	75	53	- 3	31	8	1	0	0	1.4	32	14.8	24	29	12	9	8	4.8	
JACKSONVILLE	6	1015.9	1016.9	16.1	4.4	10.2	-3.9	26.1	2	- 0.6	12	0	2	1.1	60	77	4	28	9	1	0	0	2.3	31	17.0	SW	29	14	4	11	5.1	62
KEY WEST	1	1015.9	1016.5	23.3	17.2	20.3	-1.1	26.7	23+	13.9	9+	0	0	14.4	72	88	38	32	10	2	0	0	1.9	36	14.3	NW	24	10	13	6	4.5	74
LAKELAND U	65			18.9	7.8	13.3	-4.0	25.0	2	3.3	25+	0	0			53	- 10	33	4		0	0						13	7	9	4.8	63
MIAMI	2	1015.9	1016.1	22.2	12.2	17.1	-2.9	27.8	23	6.1	28+	0	0	11.1	71	70	23	28	8	2	0	0	1.5	30	14.8	31	24	13	8	8	4.7	
ORLANDO	33	1012.5	1016.9	18.9	6.7	12.7	-3.9	26.1	2	0.6	25	0	0	5.0	67	70	9	42	6	2	0	0	2.5	32	13.4	28	29	13	4	12	4.9	
PENSACOLA	34	1014.2	1018.5	13.9	2.2	8.1	-5.3	20.0	1	- 2.8	9	0	7	0.6	61	71	- 37	21	8		T	0	2.1	35	16.1	NW	29	10	9	10	5.1	67
TALLAHASSEE	17	1015.6	1017.8	16.1	0.6	8.3	-4.8	23.9	2+	- 5.0	13	0	13	1.1	67	96	- 11	29	11	2	T	0	1.7	34	10.3	17	29	14	7	8	4.8	
TAMPA	6	1016.6	1016.9	18.3	6.1	12.4	-4.7	25.0	1	1.1	25+	0	0	6.7	72	39	- 34	18	7	0	0	0	1.7	33	12.5	30	29	11	5	13	5.4	69
WEST PALM BEACH	5	1015.6	1016.1	22.2	9.4	15.6	-4.2	28.9	23	3.3	28+	0	0	8.3	67	113	53	47	11	1	0	0	1.9	28	14.3	29	29+	11	8	10	5.0	
GEORGIA																																
ATHENS	244	986.5	1016.1	10.0	- 2.2	4.1	-3.8	17.2	20	- 8.3	12	0	25	- 7.8	48	37	- 83	30	4	0	53	51	2.5	30	11.2	30	29	16	5	8	4.3	
ATLANTA	308	979.3	1017.2	9.4	- 2.8	3.5	-4.3	17.2	20	- 9.4	22+	0	26	- 7.2	51	36	- 79	24	8	0	89	25	3.1	32	12.1	NW	29	9	11	9	5.3	71
AUGUSTA	44	1010.8	1016.1	13.3	- 2.8	5.2	-4.4	18.9	20	- 8.9	12	0	23	- 5.6	53	18	- 72	10	6	0	36	25	1.9	29	14.3	27	29	14	5	10	4.9	
COLUMBUS	117			12.2	- 1.1	5.6	-4.3	17.2	4	- 7.8	12	0	22	- 3.3	58	39	- 78	23	7		T	T	2.1	33	13.0	30	8	11	7	11	5.3	
MACON	108	1003.7	1017.1	11.7	- 2.2	4.9	-5.7	17.2	20	- 8.3	14+	0	25	- 5.6	52	35	- 73	20	10	0	74	51	2.3	31	12.5	W	7	12	9	8	4.8	68
ROME	194			9.4	- 4.4	2.4	-4.4	16.7	20	-11.7	12	0	26			31	-104	24	5		173	102										
SAVANNAH	14	1014.2	1016.1	13.9	0.0	7.0	-4.7	25.0	2	- 5.6	14+	0	18	- 2.2	59	29	- 64	10	8	0	91	102	1.7	30	15.6	NW	29	12	4	13	5.4	62
HAWAII																																
HILO	8	1011.2	1012.3	28.9	18.3	23.8	2.4	33.3	20	15.6	11	3	0	18.3	77	291	- 38	231	12	0	0	0	0.4	18	9.8	SE	20	7	14	8	5.6	42
HONOLULU	2	1011.5	1012.1	27.2	18.9	23.0	0.6	28.3	25	16.7	26+	0	0	17.8	75	74	- 10	19	8	1	0	0	1.4	22	14.3	SW	15	12	11	6	4.5	75
KAHULUI	15	1009.5	1011.9	25.6	17.2	21.4	-0.7	27.2	29+	12.8	10	0	0	18.9	86	132	67	59	13	0	0	0	1.8	19	13.4	SW	15	13	7	9	4.6	60
LIHUE	31	1006.8	1012.0	25.0	16.1	20.5	-1.0	27.2	28+	13.3	10	0	0	17.2	82	94	- 41	53	11	0	0	0	2.8	23	17.0	SW	20	10	13	6	4.7	63
IDAHO																																
BOISE	865	919.7	1021.6	10.0	0.0	5.1	3.7	18.9	29	- 6.1	14	0	14	- 1.1	68	47	13	12	10	0	T	T	2.5	13	13.9	SE	1	8	5	16	6.5	60
LEWISTON	431			10.6	2.2	6.2	4.0	18.9	23	- 6.7	14	0	10			36	11	9	10		T	T						7	4	18	7.1	
POCATELLO	1358	866.6	1023.2	6.1	- 5.6	0.3	3.0	13.9	29	-13.3	14	0	22	- 4.4	74	28	5	8	11	0	119	178	0.7	21	12.5	S	2	7	5	17	6.9	56
ILLINOIS																																
CAIRO U	96			4.4	- 2.8	0.8	-4.0	16.7	1	-10.0	22+	0	23			59	- 34	58	3		10	T			13.0	SW	1	8	8	13	6.3	55
CHICAGO O HARE	201	993.2	1018.8	0.6	-10.0	- 4.7	-1.4	12.2	1	-18.3	21	0	28	-11.7	61	22	- 16	18	9	1	97	51	3.5	29	16.5	29	16	11	10	8	4.6	
CHICAGO MIDWAY	185	995.3		0.6	- 8.3	- 3.8	-1.4	13.3	1	-17.2	21	0	28	-12.2	55	28	- 13	23	8	1	124	25	3.8	29	14.3	W	16	11	8	10	5.2	65
MOLINE	177	998.3	1020.9	0.0	-10.6	- 5.2	-1.7	11.1	1	-18.9	22	0	29	-13.9	53	8	- 26	3	7	1	71	25	3.5	29	15.2	NW	16+	16	5	8	4.1	71
PEORIA	199	995.6	1020.6	1.1	-10.0	- 4.6	-2.6	12.2	1	-20.6	21	0	29	-12.2	59	39	- 4	38	7	1	41	25	3.1	31	13.4	NW	9+	15	2	12	4.8	68
ROCKFORD	221	990.9	1019.2	- 0.6	-11.7	- 6.0	-1.8	8.9	1	-20.0	21	0	28	-12.8	63	9	- 27	11	5	1	58	25	3.4	31	13.4	30	16	16	5	8	4.0	
SPRINGFIELD	179	997.6	1020.7	1.7	- 8.3	- 3.6	-3.3	15.0	1	-18.3	22	0	28	-10.6	61	29	- 17	27	6	1	43	25	3.3	29	14.3	NW	16	15	3	11	4.7	66
INDIANA																																
EVANSVILLE	116	1005.8	1020.4	3.9	- 5.6	- 0.9	-4.0	16.7	1	-14.4	22	0	26	- 7.8	61	45	- 36	39	3	1	18	25	1.9	30	12.1	W	2	8	8	13	5.8	65
FORT WAYNE	241	986.1	1017.2	0.6	-10.0	- 4.8	-2.7	13.9	1	-21.1	21	0	28	-10.6	66	36	- 21	31	8	0	69	25	4.4	28	14.3	NW	17	10	5	14	5.6	65
INDIANAPOLIS	241	988.5	1018.7	2.2	- 8.3	- 3.1	-2.6	15.6	1	-16.7	21	0	28	-10.6	62	38	- 20	33	6	0	28	T	2.9	28	13.4	W	2	15	2	12	4.8	66
SOUTH BEND	236	988.2	1017.4	- 1.1	-10.0	- 5.4	-2.5	12.8	1	-18.3	21	0	28	- 9.4	74	82	34	50	14	0	511	279	3.0	29	10.7	28	17	8	3	18	6.7	
IOWA																																
BURLINGTON	211			1.1	-10.0	- 4.3	-2.0	12.2	1	-19.4	21	0	29	-12.8	55	10	- 25		5	1	28		3.3	32	13.0	32	16	15	4	10	4.3	
DES MOINES	286	986.5	1023.0	0.6	- 9.4	- 4.5	0.3	9.4	5	-18.9	21	0	29	-11.1	64	3	- 25	2	5	0	53	25	3.1	33	14.8	NW	16	14	3	12	4.6	64
DUBUQUE	322			- 1.1	-11.7	- 6.3	-0.8	7.8	1	-20.6	21	0	29			6	- 30	3	7		41	25						14	7	8	4.2	

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Date	Temperature: Lowest	Date	No. of days: Max 32.2 °C or above	No. of days: Min. 0 C or lower	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	No of days: 25 mm or more	No of days: With thunderstorms	Snow, Sleet: Total	Snow, Sleet: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Fastest mile (1.6 kilometers): Speed	Fastest mile: Direction	Fastest mile: Date	No of days (sunrise to sunset): Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	M.	Mb.	Mb.	C	C.	C.	C.	C		C				C.	%	Mm.	Mm	Mm.			Mm.	Mm	M.p.s.		M.p.s.							%
IOWA																																
SIOUX CITY	334	982.1	1023.9	1.1	-10.0	-4.5	0.9	9.4	5	-22.2	21	0	29	-12.2	58	4	-19	3	2	0	30	25	2.5	33	17.9	NW	16	10	6	13	5.8	56
WATERLOO	265	988.5	1021.8	-1.1	-12.8	-7.1	-1.2	8.3	5	-21.7	22	0	29	-14.4	60	1	-22	1	2	0	15	T	3.3	33	14.3	35	16	14	6	9	4.6	
KANSAS																																
CONCORDIA	448	967.8	1022.8	4.4	-7.2	-1.2	-1.0	16.7	19	-16.1	21	0	29	-7.2	67	11	-12	6	6	0	130	76	1.7	34	18.8	NW	28	7	12	10	6.1	53
DODGE CITY	787	928.2	1021.8	8.3	-6.7	0.8	-0.9	21.1	19	-15.0	13	0	27	-8.3	57	10	-7	4	8	0	94	51	1.1	32	16.1	N	6	11	7	11	5.5	73
GOODLAND	1113	890.6	1020.8	9.4	-7.8	0.8	1.4	20.6	19	-13.3	29+	0	29	-7.8	61	3	-10	2	6	0	53	25	1.8	28	13.9	31	1	10	9	10	5.5	
TOPEKA	267	990.2	1023.1	5.0	-5.6	-0.2	-0.8	15.0	19+	-15.0	21	0	26	-7.8	62	14	-12	7	6	1	145	76	1.8	33	17.0	NW	28	8	6	15	6.3	55
WICHITA	403	972.9	1022.4	7.2	-5.6	1.0	-1.4	17.2	25	-12.2	21	0	28	-7.2	58	5	-18	2	7	0	25	25	1.5	34	16.5	NE	26	8	11	10	5.8	69
KENTUCKY																																
COVINGTON	265	985.8	1018.3	3.3	-7.8	-2.2	-2.8	16.7	1	-21.1	21	0	27	-10.0	58	16	-58	7	6	0	91	76	2.5	29	11.2	30	2	11	7	11	5.2	
LEXINGTON	294	982.1	1019.0	3.3	-7.8	-2.2	-4.3	17.2	1	-18.3	22	0	27	-9.4	61	18	-69	11	5	0	79	51	2.1	26	11.2	17	2	11	6	12	5.4	
LOUISVILLE	145	1001.0	1019.3	3.9	-6.1	-1.1	-3.2	16.7	1	-13.3	22	0	27	-8.9	59	20	-63	13	6	0	46	T	2.5	30	13.4	NW	2	10	8	11	5.5	62
LOUISIANA																																
ALEXANDRIA	28	1016.6	1020.9	11.7	-1.7	5.2	-6.3	20.6	1	-8.9	24	0	23			83	-43	30	7	1	79	76	1.9	36	12.5	33	29	12	5	12	5.3	
BATON ROUGE	20	1017.3	1020.0	13.9	1.1	7.3	-5.7	23.9	1	-4.4	12	0	13	0.0	64	69	-43	21	7	1	25	25	1.7	36	13.0	32	29	14	3	12	5.0	
LAKE CHARLES	3	1019.3	1020.4	13.3	2.8	8.1	-5.4	23.3	1	-2.2	24+	0	7	2.8	74	68	-46	25	8	4	8	T	1.9	2	10.3	1	29+	10	8	11	5.4	
NEW ORLEANS	1	1018.6	1019.6	14.4	2.8	8.4	-5.5	22.8	1	-2.8	9	0	8	1.1	61	77	-25	29	7	0	T	0	2.3	35	12.1	31	29	15	2	12	4.8	
SHREVEPORT	77	1011.5	1021.0	12.2	0.6	6.4	-3.7	20.6	27	-6.1	22	0	15	-0.6	64	56	-47	25	6	0	10	T	1.2	35	10.3	32	29	11	3	15	5.9	60
MAINE																																
CARIBOU	190	981.7		-6.7	-17.8	-12.3	-1.4	7.8	3	-29.4	21	0	28			37	-14	29	7		135	787						10	7	12	5.7	
PORTLAND	14	1005.8	1008.1	-1.7	-12.8	-7.1	-2.0	7.2	3	-21.7	14	0	28	-14.4	58	32	-65	22	7	0	114	203	2.1	27	17.9	W	17	10	10	9	5.1	68
MARYLAND																																
BALTIMORE	45	1007.8	1013.5	5.6	-5.0	0.1	-1.9	11.1	28	-13.3	22	0	25	-11.7	45	18	-55	10	3	0	66	51	3.9	29	21.0	NW	17	12	7	10	5.1	73
MASSACHUSETTS																																
BLUE HILL OBS R	192			-0.6	-9.4	-5.1	-2.5	10.6	3	-17.8	21	0	28			45	-50	23	5		145	203			25.9	NW	17					65
BOSTON	5	1008.1	1009.1	0.6	-7.2	-3.3	-2.3	8.9	3+	-15.0	21	0	27	-12.2	52	29	-55	15	5	0	86	51	4.0	28	21.0	NW	17	10	8	11	5.6	69
NANTUCKET	13	1008.8	1009.2	1.7	-6.7	-2.5	-2.2	12.2	3	-13.9	13	0	26	-7.8	67	69	-26	20	11	0	343	127	4.0	30	28.2	NE	8	7	7	15	6.3	57
PITTSFIELD	357			-1.7	-12.8	-7.2	-1.8	8.9	2	-21.7	21	0	28			32	-32	15	12		272	127										
WORCESTER	301	967.2	1008.8	-1.7	-11.7	-6.7	-2.7	7.8	2	-20.6	21	0	29	-13.3	61	32	-42	20	7	0	163	279	4.0	28	21.0	29	17	11	7	11	5.2	
MICHIGAN																																
ALPENA	210	987.1	1013.7	-3.9	-15.6	-9.8	-2.3	6.7	6	-25.6	12	0	28	-14.4	71	44	4	20	11	0	386	178	2.4	29	14.8	NW	16	4	13	12	6.4	50
DETROIT	189			0.0	-7.8	-3.8	-1.1	12.2	1	-17.2	21	0	28			41	-11	34	6	0	69		4.3	29	15.6	29	17					
DETROIT M WAYNE CO	193	989.8	1014.9	0.6	-9.4	-4.3	-1.3	11.7	1	-17.8	21	0	28	-11.1	63	38	-12	29	7	0	71	25	3.8	28	16.1	W	17	8	9	12	5.8	60
DETROIT WILLOW RUN	217	986.1	1015.3	0.6	-9.4	-4.6	-2.1	12.2	1	-18.3	21	0	28	-12.2	59	37	-13	30	6	1	64	51	4.4	28	15.6	29	17	8	8	13	5.8	
FLINT	235	985.8	1014.7	-1.7	-11.1	-6.2	-2.2	10.0	1	-18.9	21	0	28	-12.2	64	54	9	38	10	0	180	76	4.0	28	13.4	27	17	7	8	14	6.5	
GRAND RAPIDS	239	985.4	1015.9	-1.1	-11.1	-5.9	-1.6	10.6	1	-22.2	21	0	28	-10.6	69	54	9	34	11	1	216	51	3.6	28	20.1	NW	3	6	9	14	6.4	51
HOUGHTON LAKE	350	970.9	1014.8	-3.3	-15.6	-9.6	-2.2	5.6	6+	-25.0	10	0	29	-13.3	73	40	7	18	11	0	373	152	2.9	30	11.6	35	9	9	7	13	6.0	
LANSING	256	982.7	1015.6	-1.1	-11.1	-6.0	-1.7	11.1	1	-20.6	21	0	28	-11.1	71	40	-10	25	8	0	74	25	3.8	29	21.0	W	17	7	9	13	6.5	55
MARQUETTE U	206			-4.4	-13.3	-8.8	-1.9	6.1	4	-23.9	17	0	29			78	36	17	18		1128	787			15.2	NW	2	4	9	16	7.2	50
MUSKEGON	191	992.2	1016.3	-1.7	-9.4	-5.5	-2.0	11.1	1	-17.8	13	0	28	-10.0	71	62	16	26	17	0	538	152	3.7	32	15.6	33	2	5	8	16	7.1	
SAULT STE MARIE	220	986.1	1014.1	-6.1	-17.2	-11.8	-2.7	2.2	1	-26.7	10	0	29	-14.4	80	83	44	22	22	0	1003	813	3.4	32	21.0	W	22	5	7	17	7.3	50
MINNESOTA																																
DULUTH	435	966.8	1021.5	-6.1	-19.4	-12.6	-0.8	4.4	5	-29.4	10	0	29	-19.4	57	6	-19	2	6	0	69	203	3.6	31	18.8	NW	16	11	10	8	4.7	71
INTERNATIONAL FALLS	359	977.7	1023.5	-7.2	-22.2	-14.8	-0.9	5.0	5+	-32.2	10	0	29	-21.7	54	5	-13	3	5	0	76	356	2.3	30	13.4	29	16	11	8	10	4.8	
MINNEAPOLIS	254	990.9	1023.0	-4.4	-14.4	-9.3	-0.3	5.6	5	-23.9	21	0	29	-16.1	59	3	-17	1	5	0	56	76	3.2	33	19.7	NW	16	13	10	6	4.4	75
ROCHESTER	395	971.9	1022.1	-3.9	-15.0	-9.5	-0.7	6.1	5	-25.0	21	0	29	-16.1	62	4	-17	1	5	0	61	25	4.0	32	15.6	31	16	16	4	9	4.4	
ST CLOUD	315	983.1	1023.1	-5.6	-18.3	-11.9	-1.6	4.4	5	-27.8	21	0	29		60	5	-15	3	3		84	127						12	10	7	4.3	
MISSISSIPPI																																
JACKSON	94	1008.1	1020.6	11.7	-2.8	4.4	-5.9	21.7	1	-10.0	12	0	25	-1.7	69	65	-61	24	7	0	91	76	1.9	35	13.4	NW	29	12	5	12	5.5	65
MERIDIAN	88	1008.8	1020.3	12.8	-1.1	5.7	-4.6	21.7	1	-7.8	24	0	23	-1.7	67	56	-73	25	9	0	76	76	1.8	34	9.4	1	21+	11	7	11	5.3	
MISSOURI																																
COLUMBIA	237	992.2	1021.6	3.9	-6.7	-1.3	-2.3	16.1	1	-14.4	21	0	26	-8.9	60	34	-12	30	5	1	89	76	2.4	32	16.1	NW	16	8	6	15	6.2	66
KANSAS CITY	226	994.6	1022.7	5.6	-5.0	0.2	-1.9	15.6	1	-13.9	21	0	26	-8.9	56	30	-1	25	7	1	69	25	1.7	33	12.5	NW	28	9	6	14	6.2	61

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure		Temperature								No. of days			Average relative humidity	Precipitation			No. of days		Snow, Sleet		Wind		Fastest mile (1.6 kilometers)			No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
		Station Θ	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max 32.2 °C or above	Min. 0 C or lower	Average dew point		Total	Departure from normal	Greatest in 24 hours	25 mm or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	M.	Mb.	Mb.	C.	C.	C.	C.	C.		C.				C.	%	Mm.	Mm.	Mm.			Mm.	Mm.	M.p.s.		M.p.s.							%
MISSOURI																																
ST JOSEPH	247			5.6	- 6.1	- 0.2	0.3	15.0	3	-16.7	21	0	27	- 8.9	60	7	- 21	4	3	0	64		2.3	32	13.0	34	29+	12	5	12	5.6	
ST LOUIS	163	1000.3	1021.6	3.9	- 6.7	- 1.5	-3.0	16.1	1	-13.9	21	0	27	- 8.9	60	28	- 24	25	4	1	10	T	2.7	31	13.9	NW	16	9	6	14	6.0	65
SPRINGFIELD	386	974.9	1022.0	5.0	- 5.6	- 0.3	-3.1	15.0	1	-12.8	22+	0	27	- 8.3	60	47	- 7	37	8	1	89	51	1.6	32	13.4	N	6	6	9	14	6.5	49
MONTANA																																
BILLINGS	1087	894.0	1021.4	6.1	- 3.3	1.4	4.9	17.2	29	-13.3	17+	0	22	- 6.7	59	15	- 1	10	6	0	41	76	2.2	26	14.3	NW	24	5	7	17	7.0	49
GLASGOW	696	938.0		- 2.2	-12.8	- 7.5	2.7	13.9	29	-26.1	17	0	28			4	- 7	2	5		53	76						7	6	16	6.9	
GREAT FALLS	1116	891.0	1022.3	6.1	- 5.0	0.7	5.2	17.8	29	-18.3	14	0	21	- 7.2	58	6	- 13	2	6	0	48	51	2.3	23	17.0	SW	3	7	8	14	6.3	55
HAVRE	787	927.2	1022.9	2.2	-10.6	- 4.3	4.4	17.2	29	-21.1	17	0	28	- 8.3	78	9	- 2	5	8	0	147	127	1.0	22	13.4	NW	3	8	8	13	6.1	70
HELENA	1167	884.5	1024.3	3.3	- 6.7	- 1.7	3.2	14.4	29+	-22.8	15	0	23	- 6.1	74	4	- 7	3	4	0	23	102	1.6	26	15.2	W	24+	6	4	19	7.1	51
KALISPELL	904	915.3		4.4	- 4.4	- 0.1	4.1	12.2	29	-14.4	15	0	21			25	0	6	10	0	76	76						10	3	16	6.2	
MILES CITY	801	926.5	1023.2	1.1	- 9.4	- 4.4	2.1	15.0	29	-22.8	17	0	29	- 8.3	75	20	10		11	0	183		1.3	34								
MISSOULA	972	908.9	1024.1	4.4	- 4.4	0.2	4.1	13.3	29	-15.0	15	0	22	- 4.4	77	19	- 4	11	10	0	71	102	0.6	12	10.7	E	12	5	11	13	6.9	50
NEBRASKA																																
GRAND ISLAND	561	954.3	1023.3	2.8	- 8.3	- 2.8	0.5	13.3	19	-18.3	21	0	29	- 8.3	69	6	- 11	4	5	0	89	76	1.7	33	16.1	35	28	5	9	15	6.7	
LINCOLN U	351			2.8	- 7.2	- 2.1	-0.3	11.7	19+	-17.8	21	0	28			2	- 25	2	2		25	25			15.2	NW	16	9	6	14	6.2	58
NORFOLK	471			0.0	- 9.4	- 4.7	0.4	7.8	2	-20.6	21	0	29			2	- 18	1	2		13	T						8	6	15	6.3	
NORTH PLATTE	846	920.8	1022.5	5.6	-11.1	- 2.7	-0.4	17.8	19	-18.9	13	0	29	-10.0	64	9	- 4	4	4	0	76	51	1.3	35	14.3	N	28	11	6	12	5.7	63
OMAHA	298	986.1	1023.1	2.8	- 8.3	- 2.6	0.4	13.3	5	-18.9	21	0	28	-10.6	59	3	- 22	2	2	0	28	25	2.7	34	16.1	NW	16	10	6	13	5.9	54
SCOTTSBLUFF	1206	881.8	1021.5	7.8	- 6.7	0.6	2.3	16.1	29+	-12.2	15+	0	29	- 6.7	65	6	- 4	3	5	0	53	25	2.4	33	15.6	28	19	11	4	14	5.7	
VALENTINE	789			2.8	-10.6	- 3.9	1.1	13.3	29	-20.6	17	0	29			8	- 6	2	9		81	51			13.9	NW	16	6	7	16	7.0	59
NEVADA																																
ELKO	1539	846.6	1019.8	10.0	- 1.1	4.3	6.6	17.8	25	-18.3	1	0	15	- 2.2	66	37	14	12	9	2	13	152	0.2	28	9.4	24	21	3	8	18	7.4	
ELY	1906	810.4	1020.4	8.3	- 3.9	2.1	5.1	15.6	26	-17.8	1	0	28	- 2.8	77	23	6	8	10	2	218	76	1.0	20	15.2	NW	21	4	3	22	7.9	65
LAS VEGAS	659	941.1	1018.1	19.4	6.7	13.2	4.4	25.6	27+	- 0.6	1	0	1	0.6	47	6	- 6	4	2	0	0	0	1.0	27	15.2	N	21	9	6	14	6.3	74
RENO	1342	867.6	1019.2	12.8	- 1.1	5.8	3.8	20.6	26	-17.8	1	0	18	- 2.8	60	23	- 3	10	6	0	56	178	0.4	26	18.8	S	21	4	6	19	7.4	50
WINNEMUCCA	1310	870.0	1019.4	12.2	- 0.6	5.8	5.6	19.4	26	-15.0	1	0	18	0.0	71	23	- 1	8	11	0	T	127	0.8	13	11.2	W	21	5	3	21	7.4	42
NEW HAMPSHIRE																																
CONCORD	104	995.6	1008.8	- 1.1	-14.4	- 7.8	-2.6	7.2	2	-26.1	14	0	28	-15.0	55	24	- 39	15	5	0	170	203	2.3	29	16.1	W	17	8	10	11	5.9	65
MT WASHINGTON OBS	1909			-15.0	-23.9	-19.7	-5.0	1.1	2	-39.4	21	0	29					28	7	0		152			59.5Y	W	17	5	1	23	8.1	26
NEW JERSEY																																
ATLANTIC CITY	20	1010.5	1012.8	2.2	- 7.8	- 2.7	-4.2	10.0	17	-16.7	22	0	27	-11.1	56	43	- 37	21	6	0	107	51	3.4	29	14.8	27	17	11	11	7	5.0	61
ATLANTIC CITY U	3			4.4	- 3.9	0.3	-1.8	11.1	17	-11.7	21	0	24			36	- 50	19	3						19.7	W	17					
NEWARK	2	1010.8	1011.7	3.3	- 5.6	- 1.2	-1.6	9.4	2	-13.9	21	0	25	-11.1	51	31	- 40	18	5	0	15	T	3.8	28	16.5	28	17	12	9	8	5.0	
TRENTON U	17			3.3	- 5.0	- 0.8	-1.6	9.4	28+	-13.3	21	0	25			29	- 37	15	3		61	T			15.2	NW	17	10	10	9	5.3	72
NEW MEXICO																																
ALBUQUERQUE	1619	839.8	1018.9	12.8	0.0	6.3	1.9	20.0	25+	- 4.4	14+	0	17	- 5.0	49	25	15	10	5	0	51	51	1.6	2	16.1	NW	22	7	7	15	6.6	66
CLAYTON	1515			10.6	- 6.1	2.2	-0.1	18.9	24	-12.8	13	0	29			2	- 7	1	4		41	25						5	10	14	6.6	
RATON	1944			10.0	- 7.8	1.2	0.8	18.9	20	-12.2	2	0	29			3	- 8	2	4		43	25						4	8	17	7.1	
ROSWELL	1102	893.7		15.0	- 1.7	6.5	0.9	26.1	20	- 7.2	2	0	22	- 1.7	66	30	19	17	8	0	102	25	0.4	32	18.3	NW	22	8	6	15	6.0	68
SILVER CITY	1638			14.4	0.6	7.4	1.1	21.7	25+	- 5.0	2	0	12			36	19	18	5		76	76						10	9	10	5.7	
NEW YORK																																
ALBANY	84	1000.0	1011.2	- 0.6	-11.7	- 6.1	-1.4	7.8	2	-19.4	21	0	28	-13.9	56	9	- 47	5	10	0	46	T	3.1	29	19.2	W	17	4	8	17	7.3	64
BINGHAMTON	485	949.9	1011.0	- 4.4	-12.2	- 8.2	-3.6	5.0	2	-21.1	21	0	28	-12.2	74	13	- 42	3	17	0	297	76	4.0	28	15.6	W	17	1	8	20	8.1	44
BUFFALO	215	985.8	1012.6	- 2.8	-10.0	- 6.3	-1.9	10.0	2	-17.2	21	0	28	-10.0	76	21	- 49	5	18	0	297	127	4.5	25	17.0	SW	22	4	8	17	7.5	51
J.F. KENNEDY	4	1010.8	1011.5	1.7	- 6.1	- 2.3	-2.1	7.2	2	-15.0	21	0	26	-12.8	47	44	- 30	24	5	0	43	25	4.4	30	15.6	30	17	10	11	8	5.2	
NEW YORK U	40	1007.5	1010.9	2.8	- 6.1	- 1.7	-2.5	9.4	2	-15.0	21	0	26	-12.2	49	29	- 43	15	3	1	28	T	2.7	29	14.8	NW	17					73
NEW YORK LA GUARDIA	3	1010.2	1011.9	2.2	- 5.6	- 1.6	-2.5	8.9	17+	-14.4	21	0	27	-12.2	46	35	- 44	18	4	0	38	25	4.4	30	18.8	NW	21+	10	9	10	5.3	
ROCHESTER	167	991.9	1013.0	- 2.2	-10.6	- 6.2	-2.3	9.4	2	-18.3	24	0	28	-11.1	67	19	- 45	7	13	0	518	127	4.7	26	19.2	W	18+	4	9	16	7.2	61
SYRACUSE	125	996.3	1011.6	- 2.2	-10.0	- 6.1	-1.8	8.9	2	-18.9	24	0	27	-11.1	68	28	- 52	9	17	0	589	305	4.4	26	16.1	W	17	3	7	19	7.5	43
NORTH CAROLINA																																
ASHEVILLE	652	937.4	1015.3	6.1	- 5.6	0.2	-3.6	14.4	20	-11.7	22+	0	27	-10.6	53	16	- 87	10	5	0	152	127	4.1	35	15.6	35	29	14	5	10	4.6	71
CAPE HATTERAS R	2	1013.9	1014.1	7.8	- 0.6	3.7	-4.3	17.2	2	- 5.0	19	0	20	- 3.3	64	103	3	70	6	1	89	76	3.6	33	17.0	W	29+	13	3	13	5.2	71
CHARLOTTE	224	987.1	1015.2	10.6	- 2.8	3.7	-3.1	16.7	20	- 8.9	12	0	25	- 8.3	45	22	- 68	17	2	0	61	51	1.5	33	9.8	SW	20	13	6	10	4.9	74
GREENSBORO	273	982.4	1014.9	9.4	- 4.4	2.4	-2.6	16.1	20	-11.7	22	0	27	- 9.4	46	22	- 61	13	2	0	81	51	2.0	31	13.4	NW	17	14	6	9	4.7	73
RALEIGH	132	998.6	1014.7	10.0	- 5.0	2.4	-3.7	17.8	2	-13.3	12	0	27	-10.0	44	25	- 57	17	2	0	33	25	2.2	31	11.6	34	13	13	6	10	4.8	68

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure: Station	Pressure: Sea level	Temperature: Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	No. of days: Max 32.2 °C or above	No. of days: Min 0 C or lower	Average dew point	Average relative humidity	Precipitation: Total	Departure from normal	Greatest in 24 hours	No of days: 25 mm or more	No of days: With thunderstorms	Snow, Sleet: Total	Snow, Sleet: Maximum depth on ground	Wind: Resultant speed	Resultant direction	Fastest mile (1.6 kilometers): Speed	Fastest mile: Direction	Fastest mile: Date	No of days (sunrise to sunset): Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	M.	Mb.	Mb.	C.	C.	C.	C.	C.		C.				C.	%	Mm.	Mm.	Mm.			Mm.	Mm.	M.p.s.		M.p.s							%
NORTH CAROLINA																																
WILMINGTON	9	1013.9	1015.1	11.1	-1.7	4.6	-4.7	23.9	2	-7.8	14	0	23	-6.1	51	37	-50	21	4	0	84	51	1.9	32	14.8	W	29	11	8	10	5.0	71
NORTH DAKOTA																																
BISMARCK	502	962.1	1025.5	-5.0	-17.2	-11.2	-0.9	6.1	29	-30.6	21+	0	29	-15.6	69	3	-8	1	5	0	46	51	1.2	33	17.0	N	16	5	5	19	7.2	48
FARGO	273	990.5	1025.6	-7.2	-17.2	-12.3	-0.4	0.6	29+	-27.8	21	0	29	-16.7	70	7	-6	6	4	0	61	76	2.9	34	22.8	N	16	7	9	13	6.1	61
WILLISTON	579	952.3	1024.5	-2.8	-15.6	-9.1	1.8	12.2	29	-28.3	18	0	29	-12.8	78	4	-8	2	3	0	30	102	0.6	33	16.1	N	16	4	10	15	7.1	58
OHIO																																
AKRON	368	969.2	1015.4	0.6	-10.0	-4.8	-2.9	12.8	2+	-20.0	21	0	28	-10.6	66	12	-46	3	13	0	168	76	3.5	27	12.1	30	17	7	11	11	5.9	
CINCINNATI OBS	232			2.8	-7.2	-2.3	-4.1	15.6	1	-17.2	21	0	28			11	-60	6	5		66	51			9.8	W	17+					63
CLEVELAND	237	985.4	1015.8	-0.6	-10.0	-5.2	-3.3	15.6	2	-19.4	20	0	28	-10.6	68	20	-39	4	16	0	226	102	3.7	26	15.6	SW	2	10	5	14	6.3	54
COLUMBUS	247	986.5	1017.5	2.2	-8.9	-3.5	-3.0	14.4	1	-17.8	21	0	28	-11.1	59	10	-49	4	7	0	71	51	3.1	27	13.9	W	2	9	12	8	5.1	62
DAYTON	305	980.0	1017.6	2.2	-9.4	-3.6	-3.0	15.0	1	-18.3	21	0	28	-11.7	57	7	-52	4	6	0	61	25	3.2	28	13.4	W	2	12	6	11	5.2	66
MANSFIELD	395			0.0	-9.4	-4.8	-2.4	13.3	1	-20.0	21	0	28	-10.6	68	12	-54	6	8	0	206	76	4.1	26	12.5	23	16	9	8	12	5.9	
TOLEDO	204	990.5	1016.5	1.1	-9.4	-4.2	-1.6	14.4	1	-18.3	21	0	28	-11.1	63	33	-15	22	11	0	142	25	3.8	28	17.0	W	17	10	5	14	6.0	62
YOUNGSTOWN	359	970.5	1015.1	-2.2	-11.7	-6.9	-4.5	10.6	2	-22.8	21	0	28	-10.6	76	18	-45	4	12	0	257	76	3.8	27	11.2	26	16+	7	8	14	6.3	
OKLAHOMA																																
OKLAHOMA CITY	392	974.6	1022.3	8.3	-3.3	2.4	-2.7	18.9	20	-8.9	21	0	25	-3.3	69	26	-9	9	9	2	196	102	1.6	36	21.0	NE	26	7	8	14	6.2	65
TULSA	198	997.6	1022.7	8.9	-3.3	2.8	-2.0	19.4	10	-9.4	22	0	23	-6.1	55	27	-18	16	7	1	53	25	1.3	35	15.2	NW	28	7	9	13	5.9	61
OREGON																																
ASTORIA	2	1015.6	1016.4	13.3	3.9	8.6	2.6	22.2	28	-3.3	13	0	7	3.9	76	243	-8	51	14	0	0	0	2.1	14	17.0	19	3	12	2	15	5.7	
BURNS U	1265	875.0	1020.3	10.0	-2.2	3.8	5.1	17.2	29	-9.4	14	0	25	-1.7	74	41	9	13	10		56	25	0.4	35				6	8	15	6.5	
EUGENE	109	1003.7	1017.3	14.4	3.9	9.4	3.5	21.7	29	-2.8	14	0	9	5.6	81	161	34	37	12	0	0	0	0.5	20	10.7	20	2	6	7	16	6.8	
MEACHAM	1234	878.4	1020.8	5.0	-1.7	1.7	3.3	16.1	28	-10.0	13	0	20	-1.7	84	141	39	30	13		48	102	0.5	17	11.2	29	23	4	5	20	7.7	
MEDFORD	396	970.2	1018.3	15.6	1.7	8.7	4.2	25.0	28	-5.6	13	0	12	3.3	77	75	14	30	9	0	0	0	0.5	17	13.4	16	1	6	5	18	7.0	
PENDLETON	452	966.5	1021.2	10.0	2.2	6.0	3.0	18.9	29	-5.6	14	0	11	2.2	78	46	16	15	11	0	T	T	0.6	22	13.0	24	3+	4	4	21	7.9	
PORTLAND	6	1016.6	1017.7	14.4	3.9	9.0	3.4	21.1	28	-3.3	13+	0	7	2.2	65	169	61	51	11	0	0	0	2.9	13	14.8	E	12	11	1	17	6.1	63
SALEM	60	1009.8	1017.0	14.4	3.3	8.9	3.4	22.2	28	-6.7	14	0	8	3.3	72	196	61	72	12	0	0	0	0.7	22	8.9	17	2	9	4	16	6.2	
SEXTON SUMMIT R	1169	883.5	1016.7	10.0	3.3	6.7	4.4	17.8	28	-2.8	1	0	6	1.1	74	107	3	30	10		T	457			20.1	17	2	10	4	15	6.2	
PACIFIC AREA																																
JOHNSTON	2	1011.9	1012.3	27.8	22.2	25.1	0.1	29.4	19	20.6	28	0	0	18.3	69	9	-30	7	7	0	0	0	1.7	6	9.8	E	1	20	8	1	3.1	77
KOROR R	29	1006.1	1009.6	29.4	23.9	26.7	-0.2	32.8	4	22.2	24+	1	0	23.3	85	395	214	100	21	2	0	0	2.5	6	13.4	SE	27	0	0	29	9.9	64
KWAJALEIN	2	1008.8	1009.7	30.0	24.4	27.3	0.7	31.1	22+	22.2	4	0	0	21.7	74	79	25	35	11	0	0	0	6.4	5	13.0	4	16+	0	7	22	8.9	
MAJURO	3	1009.1	1009.6	29.4	25.6	27.4	0.6	30.0	25+	23.3	21	0	0	22.2	75	89	-129	44	11	0	0	0	5.1	6	12.1	E	23	2	7	20	8.3	58
MARCUS ISLAND	6			23.3	17.8	20.5	-1.3	27.2	1	15.0	14	0	0			45	-24	12	11		0	0			17.0	W	12					51
PAGO PAGO	4	1007.5	1007.7	30.0	23.3	26.7		32.2	21+	21.1	22	4	0	23.9	85	830		229	23	1	0	0	1.4	32	25.0	NW	10	1	7	21	8.8	32
PONAPE R	37	1003.7	1009.2	30.0	23.9	27.0	0.1	31.1	26+	21.7	27+	0	0	22.8	78	345	98	226	17	1	0	0	3.9	7	9.8	NE	12	0	3	26	9.4	33
TAGUAC GUAM R	110			27.8	20.6	24.2	-1.5	29.4	18+	16.7	18+	0	0			215	127	46	18		0	0			12.1	E	12	1	8	20	8.5	51
TRUK MOEN ISLAND	2	1009.1	1009.4	29.4	25.0	27.2	0.2	30.6	26	22.8	24	0	0	22.8	78	234	75	102	16	0	0	0	5.1	5	11.6	NE	14	0	2	27	9.3	58
WAKE	3	1013.2	1013.4	27.8	21.1	24.4	-0.7	29.4	26+	19.4	15	0	0	16.1	63	4	-30	2	2	0	0	0	2.8	2	15.2	N	14	8	12	9	5.6	67
YAP R	19	1007.5	1009.4	29.4	23.9	26.7	-0.2	30.6	29+	22.2	29	0	0	23.3	82	204	86	55	20	1	0	0	4.2	5	13.9	NE	24	0	2	27	9.5	43
PENNSYLVANIA																																
ALLENTOWN	118	997.6	1012.1	1.7	-8.9	-3.6	-2.1	8.9	28	-16.7	22+	0	28	-13.3	52	33	-34	21	4	0	15	T	4.2	28	16.1	29	17	10	9	10	5.5	
ERIE	223	986.8	1014.7	-2.2	-10.6	-6.3	-3.2	11.1	2	-18.3	25+	0	28	-10.6	71	29	-30	6	18	0	625	127	4.0	26	13.4	27	17	3	11	15	7.1	
HARRISBURG	103	999.7	1013.0	3.3	-6.7	-1.6	-1.9	9.4	28	-15.0	22	0	27	-12.2	49	13	-45	9	3	0	46	51	4.3	29	19.2	NW	17	10	6	13	5.7	69
PHILADELPHIA	2	1011.5	1012.6	3.9	-6.1	-0.9	-1.6	10.6	28	-14.4	21	0	26	-11.1	50	36	-36	17	5	0	43	T	3.5	30	15.2	NW	17	13	5	11	5.2	61
PITTSBURGH	347	970.2	1015.9	-0.6	-10.6	-5.4	-3.9	10.6	2	-21.1	21	0	28	-12.2	60	20	-36	5	11	0	155	51	4.0	27	14.3	29	17	6	13	10	6.2	59
READING U	81			3.9	-5.6	-0.8	-1.6	10.0	28	-14.4	21	0	25			32	-35	17	4		15	T			22.4	W	17	13	7	9	4.7	66
SCRANTON	283	977.0	1012.2	0.0	-8.9	-4.4	-2.3	7.2	28+	-16.7	21+	0	28	-12.2	56	8	-43	3	6	0	74	25	2.6	26	16.1	W	17	5	11	13	6.6	65
WILLIAMSPORT	160	993.2	1012.9	1.7	-7.8	-3.1	-1.6	7.8	7+	-16.1	21	0	27	-10.6	61	14	-49	7	6	0	76	25	3.8	28	14.3	29	17	10	6	13	6.1	
RHODE ISLAND																																
BLOCK ISLAND	34			0.6	-6.7	-3.1	-2.4	8.3	3+	-15.0	21	0	26			30	-53	17	6		71	25						8	12	9	6.0	
PROVIDENCE	16	1007.5	1009.9	1.1	-8.9	-4.1	-2.8	8.9	3+	-16.1	22+	0	28	-13.3	50	33	-45	21	6	0	117	76	3.0	28	16.1	30	17	10	11	8	5.1	71
SOUTH CAROLINA																																
CHARLESTON	12	1013.9	1015.4	12.8	-1.7	5.4	-5.4	22.2	2	-7.8	14+	0	21	-4.4	54	32	-51	16	4	0	33	25	1.6	31	19.7Y	W	29	13	6	10	5.0	65
CHARLESTON U	3			12.2	2.8	7.3	-4.0	20.0	2	-2.2	12	0	5			42	-36	25	5		13	25			17.0	W	29					
COLUMBIA	65	1007.8	1015.9	12.2	-3.3	4.5	-4.6	18.3	20+	-9.4	14+	0	25	-6.1	54	29	-66	21	6	0	25	25	1.3	30	11.2	32	29	15	5	9	4.5	73

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	No. of days: Max 32.2 °C or above	No. of days: Min. 0 °C or lower	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	No. of days: .25 mm. or more	No. of days: With thunderstorms	Snow, Sleet: Total	Snow, Sleet: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Fastest mile (1.6 kilometers): Speed	Fastest mile: Direction	Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	M.	Mb.	Mb.	C.	C.	C.	C.	C.		C.				C.	%	Mm.	Mm.	Mm.			Mm.	Mm.	M.p.s.		M.p.s.							%
SOUTH CAROLINA																																
GNVLE-SPARTANBURG	292	980.7	1015.9	10.6	- 3.9	3.5	-3.8	17.8	20	-10.6	12	0	27	-10.0	42	25	- 78	18	3	0	46	25	1.3	34	12.1	W	10	14	7	8	4.8	66
SOUTH DAKOTA																																
ABERDEEN	395	975.6	1025.1	- 3.9	-13.9	- 9.0	0.4	6.1	29	-26.7	21	0	29	-15.0	66	3	- 14	1	4	0	36	25	2.3	35	16.5	36	28	8	6	15	6.5	
HURON	391	975.6	1024.6	- 1.7	-12.2	- 7.1	1.5	6.1	29	-25.6	21	0	29	-14.4	58	1	- 14	1	2	0	18	25	1.7	35	15.2	NW	16	6	10	13	6.4	64
RAPID CITY	964	907.6	1022.5	3.3	- 8.3	- 2.6	1.8	15.6	29	-17.8	17+	0	28	- 9.4	64	9	- 3	4	7	0	86	51	2.2	35	17.9	NW	16	8	9	12	6.1	63
SIOUX FALLS	432	969.9	1023.8	- 1.7	-12.8	- 7.3	-0.1	5.6	3	-24.4	21	0	29	-12.8	68	2	- 21	1	5	0	23	T	2.2	34	13.0	32	28	10	7	12	5.6	
TENNESSEE																																
BRISTOL	459	961.4	1017.4	5.0	- 7.2	- 1.1	-5.5	17.8	1	-15.6	22	0	27	-10.6	52	19	- 71	11	5	0	160	127	2.1	28	9.4	30	21+	8	11	10	5.7	
CHATTANOOGA	203	993.2	1018.6	7.2	- 4.4	1.3	-5.6	16.1	1	-12.2	12	0	26	- 7.8	55	24	-113	13	7	0	124	76	1.8	33	10.3	NW	29	9	7	13	6.0	59
KNOXVILLE	299	981.7	1017.6	6.7	- 5.0	0.7	-5.4	13.9	6	-13.3	22	0	26	- 8.3	55	19	-103	11	5	0	119	51	1.3	30	11.6	SW	20	8	6	15	6.3	55
MEMPHIS	79	1010.5	1021.2	7.8	- 1.7	2.9	-3.8	18.3	1	- 8.9	22	0	21	- 5.6	56	50	- 69	31	5	1	114	51	1.6	34	12.1	N	7	7	7	15	6.8	49
NASHVILLE	180	997.3	1019.8	6.1	- 5.6	0.2	-5.3	17.2	1	-13.9	22	0	27	- 8.3	56	16	- 98	9	5	0	74	51	2.3	32	12.1	S	1	7	9	13	6.3	54
OAK RIDGE R	276			6.1	- 5.0	0.4	-4.7	13.9	6	-12.2	22+	0	26			21	-126	13	4		69	25			15.2Y		9	10	5	14	5.8	
TEXAS																																
ABILENE	537	958.0	1020.7	12.2	0.6	6.4	-2.7	20.6	20	- 5.6	22+	0	12	- 0.6	69	49	21	14	10	1	41	25	0.6	3	17.0	N	21	10	4	15	6.0	59
AMARILLO	1098	893.3	1019.3	10.0	- 3.3	3.3	-1.8	19.4	20	- 8.9	23+	0	22	- 4.4	63	19	3	8	6	1	203	102	0.4	36	15.2	NE	20	9	6	14	6.2	62
AUSTIN	182	999.0	1021.5	13.9	3.3	8.4	-3.7	23.3	27+	- 3.9	24	0	6	2.2	69	42	- 24	10	8	1	0	0	1.6	2	15.2	NW	21	11	4	14	5.6	55
BROWNSVILLE	6	1019.0	1019.5	19.4	8.9	14.2	-3.6	27.8	21	0.0	24	0	1	10.6	80	20	- 17	10	7	0	0	0	1.7	1	13.4	NE	28	10	4	15	6.2	45
CORPUS CHRISTI	12	1019.0	1020.4	16.7	6.1	11.3	-4.4	24.4	1	- 1.7	24	0	2	7.2	79	61	18	34	8	0	0	0	2.8	4	14.8	NW	21	6	7	16	6.6	45
DALLAS	147	1004.1	1021.8	12.8	1.7	7.1	-2.6	21.1	26	- 4.4	23	0	11	0.0	64	43	- 22	13	11	3	10	T	1.2	1	13.4	NW	1	9	6	14	6.0	59
DEL RIO	313	983.4	1020.3	16.1	4.4	10.2	-3.2	25.0	25	- 1.1	23+	0	3	2.8	66	39	17	15	7	1	0	0	1.2	8	13.0	35	21	10	4	15	5.9	
EL PASO	1194	883.5	1016.8	16.7	3.3	10.2	0.7	23.3	20	- 2.8	2	0	4	- 0.6	53	28	18	10	6	0	58	25	0.7	34	27.3	W	20	11	5	13	5.4	72
FORT WORTH	164	1001.0	1021.9	12.8	0.6	6.8	-2.8	21.1	26	- 3.9	24+	0	13	1.1	72	38	- 19	12	9	2	66	76	1.3	1	11.6	1	29+	10	4	15	6.2	
GALVESTON U	2			13.3	7.2	10.4	-3.3	21.7	26	0.6	23+	0	0			43	- 30	17	9		0	0			14.3	NW	21					46
HOUSTON	15	1018.6	1020.8	16.1	4.4	10.2	-3.0	25.0	27+	- 1.7	24	0	2	2.8	66	51	- 37	15	10	1	0	0	1.7	36	13.0	34	29	7	7	15	6.4	53
LUBBOCK	992	906.2	1019.9	10.6	- 3.3	3.6	-2.6	22.2	20	- 8.9	14	0	24	- 3.3	69	21	6	8	9	1	97	76	0.8	2	13.4	2	28+	9	5	15	6.2	
MIDLAND	869	918.7	1018.9	13.9	0.6	7.1	-2.0	23.3	24	- 7.2	14	0	12	- 0.6	67	27	12	11	6	0	43	51	0.8	5	16.5	1	21	10	5	14	5.9	
PORT ARTHUR	5	1020.3	1020.9	15.0	2.8	8.9	-4.4	24.4	1	- 3.9	24	0	6	3.3	74	65	- 48	24	9	4	T	T	1.6	35	17.0	N	21+	9	9	11	5.6	63
SAN ANGELO	580	952.3	1020.2	14.4	1.1	7.7	-2.6	25.0	20	- 4.4	23	0	14	2.2	74	40	17	19	9	1	18	25	0.0	1	11.6	20	27+	12	4	13	5.5	
SAN ANTONIO	240	992.6	1021.1	15.0	3.3	9.1	-3.9	23.9	1	- 3.9	24	0	7	2.8	70	47	5	19	9	0	T	0	1.5	2	15.2	N	21	11	5	13	5.8	54
VICTORIA	32	1016.6	1020.7	15.6	5.0	10.4	-4.1	23.9	26	- 2.2	24	0	2	5.0	72	52	- 8	25	6	0	0	0	2.2	3	20.6Y	N	21	7	4	18	6.9	
WACO	153	1003.1	1021.4	13.3	3.3	8.3	-2.5	22.8	27	- 3.3	23+	0	6	3.3	75	45	- 16	14	10	1	25	25	1.2	31	13.4	32	21	11	6	12	5.5	
WICHITA FALLS	303	984.4	1022.1	11.1	- 1.1	5.0	-3.2	21.7	20	- 7.8	23+	0	16	- 1.1	69	27	- 8	8	8	1	218	102	1.7	1	17.9	36	21	8	6	15	6.6	
UTAH																																
MILFORD	1533	848.6		11.1	- 2.8	4.2	5.4	18.3	26	- 8.9	1	0	27			22	4	7	6		97	51						6	4	19	7.1	
SALT LAKE CITY	1286	875.0	1021.7	8.9	- 2.2	3.4	3.2	14.4	26+	-15.0	15	0	21	- 2.2	70	59	29	12	14	0	345	178	0.3	17	10.7	NW	3	5	7	17	7.1	56
WENDOVER	1291	874.4	1021.9	8.3	- 0.6	3.7	3.3	16.1	23	- 7.8	1	0	18	- 2.8	64	21	13	4	10		48	25										
VERMONT																																
BURLINGTON	101	996.6	1009.8	- 6.7	-16.7	-11.7	-3.6	7.8	2	-25.0	20+	0	28	-17.2	61	33	- 13	11	15	0	630	254	0.7	31	15.6	W	17	3	7	19	7.7	62
VIRGINIA																																
LYNCHBURG	279			6.1	- 6.1	0.2	-3.6	12.2	5	-16.1	22	0	26			16	- 51	9	3		91	102			12.5	W	17	15	7	7	4.2	75
NORFOLK	7	1013.2	1014.1	6.1	- 3.9	1.1	-4.2	16.7	2	-10.0	11	0	25	-10.0	46	51	- 30	27	5	0	74	51	2.3	30	13.9	NW	13	16	4	9	4.5	72
RICHMOND	50	1008.5	1014.5	8.3	- 5.6	1.2	-3.2	13.9	6+	-14.4	22	0	27	-10.6	47	25	- 49	17	2	0	61	51	1.8	30	12.5	NW	17	16	3	10	4.4	70
ROANOKE	350	971.6	1014.6	7.2	- 5.0	1.0	-3.0	13.3	5	-13.3	22	0	25	-13.3	37	14	- 58	11	2	0	97	51	3.9	30	13.0	32	29+	16	6	7	3.8	
WALLOPS ISLAND	3			4.4	- 4.4	0.1		12.8	17	-10.6	22	0	26			32		16	5		97	51			21.9Y	NW	13	15	5	9	4.3	
WASHINGTON																																
OLYMPIA	59	1009.8	1017.2	12.8	0.6	6.6	1.7	22.2	29	- 7.8	14	0	16	2.2	82	199	31	60	11	0	0	25	1.1	19	11.6	22	23+	9	7	13	5.7	
QUILLAYUTE	55	1008.5	1015.9	12.2	2.2	7.1	2.4	22.2	28	- 5.0	15	0	12	3.9	85	327	15	101	12	0	0	0	1.9	13	12.1	SE	3+	11	3	15	5.8	49
SEATTLE TACOMA	122	1000.7	1017.3	13.3	5.0	9.2	4.3	21.1	27	- 1.1	11	0	1	2.2	68	154	47	42	11	0	0	0	0.6	12	14.8	18	2	12	1	16	5.6	54
SPOKANE	718	934.6	1020.2	7.8	- 1.1	3.2	4.3	15.6	29	- 7.2	9	0	17	- 1.7	74	54	7	12	10	0	10	178	1.3	17	14.8	SW	3	14	4	11	4.8	64
STAMPEDE PASS R	1206	880.1		3.9	- 1.7	0.9	3.9	9.4	28	- 9.4	15	0	19			233	- 24	71	12		556	1397										
WALLA WALLA U	289			10.0	2.8	6.6	3.0	17.2	29+	- 5.6	14+	0	10			61	23	14	10		T	T			12.1	S	1	6	4	19	7.6	32
YAKIMA	321	981.7	1021.1	10.6	- 1.7	4.4	3.3	17.8	28	- 7.8	15	0	19	- 1.7	71	22	0	11	8	0	10	51	1.7	27	13.0	25	23+	10	5	14	5.8	
WEST INDIES																																
SAN JUAN P.R.	4	1013.9	1016.4	28.9	20.6	24.7	1.2	33.3	22	16.7	7+	5	0	18.3	71	41	- 33	18	8	0	0	0	2.0	9	12.1	S	20+	9	13	7	5.0	59

See footnotes at end of table

CLIMATOLOGICAL DATA
METRIC UNITS

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	No. of days: Max 32.2 °C or above	No. of days: Min. 0 C or lower	Average dew point	Average relative humidity	Precipitation: Total	Departure from normal	Greatest in 24 hours	No. of days: .25 mm or more	No. of days: With thunderstorms	Snow, Sleet: Total	Snow, Sleet: Maximum depth on ground	Wind: Resultant speed	Resultant direction	Fastest mile (1.6 kilometers): Speed	Fastest mile: Direction	Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	M.	Mb.	Mb.	C.	C.	C.	C	C.		C.				C.	%	Mm.	Mm	Mm			Mm.	Mm.	M.p.s.		M.p.s.							%
WEST INDIES																																
SWAN ISLAND	9			27.2	22.8	24.9	-0.8	28.9	20+	20.6	11+	0	0			7	- 22	3	7		0	0						7	15	7	5.3	
WEST VIRGINIA																																
BECKLEY	763	924.5	1017.2	0.0	-10.6	- 5.1	-6.3	9.4	2	-21.1	22	0	28	-12.2	61	24	- 79	11	9	0	300	127	3.2	29	14.3	30	17	10	9	10	5.2	
CHARLESTON	286	982.1	1017.3	2.8	- 8.3	- 2.7	-5.8	19.4	1	-21.1	22	0	27	-12.2	52	16	- 73	7	7	0	234	102	2.4	25	10.7	23	17	12	9	8	5.0	
ELKINS	600	942.1	1015.8	0.6	-11.7	- 5.6	-6.1	15.0	1	-20.6	23+	0	29	-11.7	63	46	- 37	18	11	0	612	254	2.5	28	13.0	31	17	7	9	13	6.3	
HUNTINGTON	252	986.8	1018.1	3.3	- 8.3	- 2.6	-5.7	18.9	1	-20.6	22	0	27	-10.0	60	13	- 64	7	6	0	104	76	2.0	26	11.2	25	2	13	7	9	5.0	
PARKERSBURG U	187			2.8	- 8.3	- 2.7	-4.7	16.1	1	-15.6	22	0	27			15	- 57	5	4		76	51			15.2	SW	17					66
WISCONSIN																																
GREEN BAY	208	991.5	1018.2	- 3.3	-13.3	- 8.5	-0.8	4.4	1	-23.3	17	0	29	-13.9	65	11	- 16	7	5	0	76	51	4.2	31	16.5	W	17+	16	3	10	4.4	63
LA CROSSE	198	995.9	1021.7	- 1.7	-12.2	- 6.9	0.1	8.3	5	-20.0	22+	0	29	-14.4	58	2	- 25	1	4	0	20	T	3.2	32	13.0	30	16	17	6	6	3.8	
MADISON	262	986.5	1019.4	- 1.1	-13.3	- 7.2	-0.3	8.3	1	-20.6	21+	0	29	-13.3	65	12	- 16	6	6	1	99	25	3.5	31	15.6	NW	9	15	4	10	4.6	67
MILWAUKEE	205	991.9	1018.4	- 1.1	-11.1	- 6.3	-0.9	9.4	1	-19.4	17	0	28	-13.9	57	14	- 21	11	8	0	89	25	4.3	30	16.1	W	16	15	3	11	4.6	70
WYOMING																																
CASPER	1627	838.8	1021.4	4.4	- 6.7	- 0.9	2.2	11.7	29	-17.8	13	0	28	- 7.8	63	12	- 3	5	7	1	127	76	3.4	24	15.6	22	2	11	3	15	6.1	
CHEYENNE	1867	812.1	1020.2	6.1	- 5.6	0.3	2.9	12.2	7	-13.3	13	0	27	- 8.9	55	8	- 7	4	5	0	64	25	3.9	31	19.2	NW	29+	9	6	14	5.9	65
LANDER	1696	830.7	1023.5	1.7	- 9.4	- 4.1	0.3	12.8	29	-23.3	15	0	28	- 9.4	71	15	- 2	8	5	0	251	406	0.6	24	14.8	NW	24	8	8	13	6.3	66
SHERIDAN	1208	881.5	1022.8	4.4	- 7.2	- 1.3	3.3	16.1	29	-20.0	13	0	28			19	0	8	9	0	185	76	1.2	31	13.4	NW	24	5	7	17	7.2	55

Data from airport unless otherwise specified. U indicates Urban, R indicates Rural, sites.

Precipitation data in column headed "Greatest in 24 hours" are computed on a 24-hour basis without regard to calendar day - data may include precipitation with a measurable amount from the last day of the previous month or the first day of the following month.

Wind directions under resultant direction are in tens of degrees.

Value entered in column "Fastest Mile" is the highest observed 1-minute wind speed when the direction is in tens of degrees. These stations are not equipped with a recording anemometer from which "Fastest Mile" data can be evaluated.
A Maximum hourly average.
B Number of days maximum 21.1°C. or above for Alaskan Stations.
Y Peak Gust.
\+ And also on an earlier date or dates.
Ø Station pressures apply to elevations shown in the "Elevations - Station Pressure" table of the annual issue of this publication.

Data in this table are obtained by conversion from data in the English Units table.

HEATING DEGREE DAYS

(Base 65°F.)

FEBRUARY 1968

State and station	Current season: This month	Current season: Period July through this month	Normals July through this month
ALABAMA			
BIRMINGHAM	755	2650	2086
HUNTSVILLE	876	3065	2497
MOBILE	525	1517	1316
MONTGOMERY	645	2114	1898
ALASKA			
ANCHORAGE	1209	7163	7768
ANNETTE	758	4521	4796
BARROW	2628	13774	13442
BARTER ISLAND	2664	13632	13249
BETHEL	1767	8832	9215
COLD BAY	1183	6348	6462
FAIRBANKS	2029	10287	10758
JUNEAU	1043	6368	6247
KING SALMON	1512	8179	7932
KOTZEBUE	2397	10814	10847
MC GRATH	1980	10160	10558
NOME	1976	9749	9643
ST. PAUL ISLAND	1367	6771	7116
SHEMYA	1014	6181	6292
YAKUTAT	1033	6731	6178
ARIZONA			
FLAGSTAFF	839	4794	5006
PHOENIX	151	1125	1482
TUCSON	170	1159	1487
WINSLOW	710	4454	3817
YUMA	69	787	1064
ARKANSAS			
FORT SMITH	734	2895	2688
LITTLE ROCK	778	2976	2668
TEXARKANA	636	2263	2092
CALIFORNIA			
BAKERSFIELD	177	1446	1742
BISHOP	509	2940	3224
BLUE CANYON	651	3231	3568
EUREKA U	337	2777	3060
FRESNO	258	1831	1979
LONG BEACH	135	766	1178
LOS ANGELES	118	738	1192
LOS ANGELES U	70	596	945
MT SHASTA R	661	3792	3978
OAKLAND	272	1660	2005
RED BLUFF	289	1790	1972
SACRAMENTO	296	1894	2102
SANDBERG R	533	2839	2864
SAN DIEGO	119	691	1002
SAN FRANCISCO	297	1833	2046
SAN FRANCISCO U	235	1727	1995
SANTA CATALINA	217	1124	1191
SANTA MARIA	233	1522	1936
STOCKTON	317	1987	2120
COLORADO			
ALAMOSA	1227	6750	6242
COLORADO SPRINGS	932	4563	4576
DENVER	885	4403	4515
GRAND JUNCTION	805	4841	4386
PUEBLO	855	4550	4100
CONNECTICUT			
BRIDGEPORT	1068	4236	4052
HARTFORD	1134	4805	4613
NEW HAVEN	1081	4416	4226
DELAWARE			
WILMINGTON	994	4128	3719
DIST.OF COLUMBIA			
WASH NATL AP	886	3558	3261
FLORIDA			
APALACHICOLA U	456	1287	1103
DAYTONA BEACH	344	757	730
FORT MYERS	153	256	383
JACKSONVILLE	419	1112	1051
KEY WEST	10	16	100
LAKELAND U	263	566	567
MIAMI	101	182	197
ORLANDO	293	593	660
PENSACOLA	531	1548	1251
TALLAHASSEE	518	1422	1256
TAMPA	306	663	586
WEST PALM BEACH	155	267	224
GEORGIA			
ATHENS	735	2723	2353
ATLANTA	769	2826	2359
AUGUSTA	676	2366	1972
COLUMBUS	660	2215	1963
MACON	695	2426	1791
ROME	824	3024	2666
SAVANNAH	582	1843	1531
IDAHO			
BOISE	688	4132	4349
LEWISTON	629	3626	4118
POCATELLO	931	5240	5146
ILLINOIS			
CAIRO U	906	3412	3062
CHICAGO O HARE	1192	5008	4870
CHICAGO MIDWAY	1152	4752	4561
MOLINE	1221	5176	4847
PEORIA	1192	4986	4568
ROCKFORD	1266	5340	5095
SPRINGFIELD	1134	4710	4182
INDIANA			
EVANSVILLE	997	4001	3534
FORT WAYNE	1199	5232	4651
INDIANAPOLIS	1112	4491	4273
SOUTH BEND	1233	5102	4718
IOWA			
BURLINGTON	1178	4916	4652
DES MOINES	1184	5044	5139
DUBUQUE	1282	5600	5509
SIOUX CITY	1187	5335	5265
WATERLOO	1319	5880	5543
KANSAS			
CONCORDIA	1012	4388	4188
DODGE CITY	908	3882	3807
GOODLAND	904	4342	4504
TOPEKA	965	4275	4022
WICHITA	899	3824	3637
KENTUCKY			
COVINGTON	1063	4241	3975
LEXINGTON	1065	4054	3595
LOUISVILLE	1007	3851	3576
LOUISIANA			
ALEXANDRIA	679	2212	1603
BATON ROUGE	569	1686	1328
LAKE CHARLES	528	1489	1234
NEW ORLEANS	511	1446	1162
SHREVEPORT	614	2049	1812
MAINE			
CARIBOU	1594	6869	6999
PORTLAND	1320	5527	5350
MARYLAND			
BALTIMORE	943	3971	3585
MASSACHUSETTS			
BLUE HILL OBS R	1215	4915	4553
BOSTON	1122	4459	4063
NANTUCKET	1082	4195	3894
PITTSFIELD	1326	5745	5464
WORCESTER	1300	5318	5014
MICHIGAN			
ALPENA	1462	6212	5954
DETROIT	1148	4706	4548
DETROIT M WAYNE CO	1173	5140	4728
DETROIT WILLOW RUN	1190	5192	4579
FLINT	1276	5410	4970
GRAND RAPIDS	1255	5341	4988
HOUGHTON LAKE	1453	6255	5927
LANSING	1266	5515	5015
MARQUETTE U	1411	6127	5833
MUSKEGON	1236	5047	4756
SAULT STE MARIE	1570	6873	6330
MINNESOTA			
DULUTH	1611	7179	7167
INTERNATIONAL FALLS	1727	7826	7800
MINNEAPOLIS	1440	6210	6271
ROCHESTER	1446	6305	6165
ST CLOUD	1577	6661	6608
MISSISSIPPI			
JACKSON	721	2388	1830
MERIDIAN	649	2288	1911
MISSOURI			
COLUMBIA	1018	4090	3901
KANSAS CITY	941	3890	3652
ST JOSEPH	959	4257	4249
ST LOUIS	1031	4107	3775
SPRINGFIELD	965	3710	3524
MONTANA			
BILLINGS	880	4862	5158
GLASGOW	1344	6289	6721
GREAT FALLS	914	5027	5513
HAVRE	1171	5888	6360
HELENA	1042	5613	5897
KALISPELL	953	5433	5956
MILES CITY	1180	5781	5752
MISSOULA	941	5362	5960
NEBRASKA			
GRAND ISLAND	1095	4856	4939
LINCOLN U	1060	4608	4459
NORFOLK	1193	5370	5254
NORTH PLATTE	1096	5307	4964
OMAHA	1085	4861	4782
SCOTTSBLUFF	917	5062	4872
VALENTINE	1154	5501	5467
NEVADA			
ELKO	725	4394	5333
ELY	840	5162	5438
LAS VEGAS	265	1881	2271
RENO	650	3990	4574
WINNEMUCCA	648	4214	4864
NEW HAMPSHIRE			
CONCORD	1358	5719	5381
MT WASHINGTON OBS	1986	9715	9430
NEW JERSEY			
ATLANTIC CITY	1094	4517	3531
ATLANTIC CITY U	937	3570	3359
NEWARK	1012	4004	3790
TRENTON U	994	3988	3724
NEW MEXICO			
ALBUQUERQUE	623	3286	3406
CLAYTON	837	3895	3805
RATON	889	4661	4516
ROSWELL	609	3053	3100
SILVER CITY	565	2900	2859
NEW YORK			
ALBANY	1269	5438	5070
BINGHAMTON	1375	5667	5223
BUFFALO	1281	5115	5009
J.F. KENNEDY	1066	4242	3776
NEW YORK U	1042	4040	3606
NEW YORK LA GUARDIA	1034	4008	3546
ROCHESTER	1275	5153	4848
SYRACUSE	1266	5131	4927
NORTH CAROLINA			
ASHEVILLE	939	3777	3424
CAPE HATTERAS R	758	2371	1987
CHARLOTTE	756	2889	2552
GREENSBORO	828	3148	2994
RALEIGH	824	3026	2712
WILMINGTON	709	2266	1909
NORTH DAKOTA			
BISMARCK	1535	6914	6603
FARGO	1592	6899	6892
WILLISTON	1425	6656	6851
OHIO			
AKRON	1198	4837	4470
CINCINNATI OBS	1072	4240	3669
CLEVELAND	1224	4765	4453
COLUMBUS	1133	4794	4259
DAYTON	1139	4597	4218
MANSFIELD	1201	4959	4666
TOLEDO	1168	5150	4760
YOUNGSTOWN	1315	5365	4683
OKLAHOMA			
OKLAHOMA CITY	826	3117	2995
TULSA	803	3195	3082
OREGON			
ASTORIA	500	3126	3497
BURNS U	748	4616	5019
EUGENE	461	2770	3317
MEACHAM	861	4895	5233
MEDFORD	500	3218	3636
PENDLETON	638	3395	3869
PORTLAND	482	2925	3324
SALEM	481	2897	3330
SEXTON SUMMIT R	601	3865	4110
PENNSYLVANIA			
ALLENTOWN	1139	4897	4333
ERIE	1277	4942	4582
HARRISBURG	1032	4438	3982
PHILADELPHIA	995	3907	3870
PITTSBURGH	1232	4847	4433
PITTSBURGH U	1150	4457	4005
READING U	992	4122	3763
SCRANTON	1181	5024	4669
WILLIAMSPORT	1113	4721	4442
RHODE ISLAND			
BLOCK ISLAND	1109	4255	3905
PROVIDENCE	1166	4576	4298
SOUTH CAROLINA			
CHARLESTON	667	2152	1701
CHARLESTON U	572	1730	1491
COLUMBIA	717	2594	2062
GNVLE-SPARTANBURG	769	2835	2452
SOUTH DAKOTA			
ABERDEEN	1421	6402	6385
HURON	1318	5846	6166
RAPID CITY	1083	5224	5265
SIOUX FALLS	1331	5870	5877
TENNESSEE			
BRISTOL	1004	3782	3240
CHATTANOOGA	881	3109	2645
KNOXVILLE	912	3308	2780
MEMPHIS	795	2858	2626
NASHVILLE	941	3473	2858
OAK RIDGE R	930	3369	3003
TEXAS			
ABILENE	611	2369	2647
AMARILLO	777	3261	3152
AUSTIN	510	1765	1446
BROWNSVILLE	218	667	529
CORPUS CHRISTI	362	1114	810
DALLAS	577	2065	1961
DEL RIO	419	1556	1398
EL PASO	415	2286	2289
FORT WORTH	598	2152	2000
GALVESTON U	404	1121	1024
HOUSTON	415	1237	1176
LUBBOCK	762	3050	2881
MIDLAND	582	2352	2193
PORT ARTHUR	485	1409	1224
SAN ANGELO	550	2065	1914
SAN ANTONIO	478	1604	1320
VICTORIA	409	1257	1007
WACO	519	1807	1706
WICHITA FALLS	687	2533	2344
UTAH			
MILFORD	731	4560	4820
SALT LAKE CITY	772	4343	4541
WENDOVER	756	4302	4441
VERMONT			
BURLINGTON	1561	6249	5970
VIRGINIA			
LYNCHBURG	941	3818	3240
NORFOLK	895	3280	2657
RICHMOND	887	3494	3070
ROANOKE	902	3683	3234
WALLOPS ISLAND	945	3771	
WASHINGTON			
OLYMPIA	604	3378	3679
QUILLAYUTE	580	3466	3870
SEATTLE TACOMA	472	2821	3582
SPOKANE	783	4549	4898
STAMPEDE PASS R	904	5623	6242
WALLA WALLA U	607	3153	3674
YAKIMA	721	3987	4530
WEST VIRGINIA			
BECKLEY	1215	4729	4020
CHARLESTON	1095	4136	3448
ELKINS	1239	4937	4224
HUNTINGTON	1085	4157	3430
PARKERSBURG U	1093	4223	3630
WISCONSIN			
GREEN BAY	1395	6169	5844
LA CROSSE	1312	5610	5707
MADISON	1327	5867	5762
MILWAUKEE	1277	5333	5472
WYOMING			
CASPER	999	5467	5259
CHEYENNE	932	4988	5147
LANDER	1165	6015	5702
SHERIDAN	1016	5721	6663

Data from airport unless otherwise specified.
U indicates Urban, R indicates Rural, sites.

STORM SUMMARY

FEBRUARY 1968

STATE	TORNADOES					HAILSTORMS				WINDSTORMS				LIGHTNING				‡ HEAVY SNOWSTORMS AND BLIZZARDS				# ICE STORMS				∅ ALL OTHER			
	NUMBER	DAYS	DEATHS	INJURIES	†DAMAGE	DEATHS	INJURIES	†DAMAGE PROPERTY	†DAMAGE CROPS	DEATHS	INJURIES	†DAMAGE PROPERTY	†DAMAGE CROPS	DEATHS	INJURIES	†DAMAGE PROPERTY	†DAMAGE CROPS	DEATHS	INJURIES	†DAMAGE PROPERTY	†DAMAGE CROPS	DEATHS	INJURIES	†DAMAGE PROPERTY	†DAMAGE CROPS	DEATHS	INJURIES	†DAMAGE PROPERTY	†DAMAGE CROPS
Alabama *																													
Alaska *																													
Arizona *																													
Arkansas	1	1	0	0	4																								
California *																													
Colorado *																													
Connecticut *																													
Delaware																										0	0	4	0
Florida	3	2	0	21	6																								
Georgia																		0	?	4	0								
Hawaii																										0	0	°5	C
Idaho *																													
Illinois N																													
Indiana *																													
Iowa *																													
Kansas						0	0	2	0																				
Kentucky *																													
Louisiana	2	1	0	0	4													1	?	?	0	0	2	?	0				
Maine										0	0	4	0																
Maryland																										0	0	5	0
Massachusetts										1	4	5	0																
Michigan																										0	0	?	0
Minnesota																		0	0	4	0								
Mississippi																		0	0	?	0								
Missouri *																													
Montana *																													
Nebraska *																													
Nevada *																													
New Hampshire										0	0	4	0																
New Jersey *																													
New Mexico *																													
New York												4																	
North Carolina *																													
North Dakota *																													
Ohio *																													
Oklahoma										0	0	5	0					0	0	?	0								
Oregon *																													
Pacific Area																										0	0	°6	C
Pennsylvania										0	0	5	0																
Puerto Rico *																													
Rhode Island																										0	13	5	0
South Carolina *																													
South Dakota *																													
Tennessee *																													
Texas	1	1	0	0	4																								
Utah *																													
Vermont										0	0	4	0																
U. S. Virgin Is. *																													
Virginia *																													
Washington N																													
West Virginia *																													
Wisconsin *																													
Wyoming *																													

C Crop damage
° Includes crop damage
N No report received by printing deadline

* No occurrence of storms or unusual weather phenomena.
‡ Includes heavy sleet storm.
# Freezing drizzle and freezing rain, commonly known as glaze.
∅ For breakdown of "All Others", and for detailed listing of other storms, see the Environmental Data Service, ESSA, monthly publication STORM DATA.

† Storm damages are placed in categories varying from 1 to 9 as follows:
1 Less than $50
2 $50 to $500
3 $500 to $5,000
4 $5,000 to $50,000
5 $50,000 to $500,000
6 $500,000 to $5,000,000
7 $5,000,000 to $50,000,000
8 $50,000,000 to $500,000,000
9 $500,000,000 to $5,000,000,000

GENERAL SUMMARY OF RIVER AND FLOOD CONDITIONS

FEBRUARY 1968

Elmer R. Nelson, Office of Hydrology

The highest crests in 8 to 9 years were reported on the Wabash River in Indiana during February. Crests were mostly 8 to 11 feet above flood stage. One bridge under construction was extensively damaged. A considerable amount of corn in the fields was ruined.

River forecasts issued by the Weather Bureau were accurate and timely. The forecasts were used in planning operations and in reassuring residents that no major disaster threatened.

ST. LAWRENCE DRAINAGE

Lake Michigan.--Ice jams on the Red Cedar River during the first few days of February caused back up water with resultant flooding. At Williamston and East Lansing, Mich., flood stages were exceeded by 1.5 and 0.8 feet, respectively.

The Grand River at Grand Rapids, Mich, exceeded flood stage by nearly 1 foot between the 3d and 8th. The high water surrounded 40 to 60 cottages and homes. There was some flooding of basements. Roads were passable though partially inundated.

Lake Huron.--Ice jams on the Cass River caused serious flooding at Cass City, Mich., and minor flooding at Vassar and Frankenmuth between the 2d and 4th. The Shiawassee River at Owosso, Mich., exceeded flood stage by 0.3 foot on the 2d. The Flint River at Flint, Mich., crested 1.1 feet above flood stage on the 2d.

Lake Erie.--The St. Marys River at Decatur, Ind., exceeded flood stage by 9 feet on the 3d. It went out of its banks on Jan. 29 and continued in flood until Feb. 6. The crest on Jan. 30 was 3.6 feet above flood stage. The St. Joseph River at Montpelier, Ohio, was out of its banks from Jan. 30 to Feb. 8, cresting 4 feet above flood stage on Feb. 3. This was 1.5 feet higher than the first crest on Jan. 31. The Maumee River rose above flood stage on Jan. 30 at all points from Fort Wayne, Ind., to Grand Rapids, Ohio, cresting 6.2 ft. to 1.5 ft. above flood stage. The crests during February were higher than in January except at Defiance, Ohio, where it was 0.6 foot lower. Flooding in the River Haven area just downstream from Fort Wayne caused inconvenience to approximately 50 families and necessitated the evacuation of a few people. Minor flooding occurred on farm ground along the streams, causing additional delay and damage to crops still unharvested.

ATLANTIC SLOPE DRAINAGE

The Lumber River at Lumberton, N. C., continued in flood from Dec. 12 to Feb. 12, a period of 63 days. On 17 of these days, the overflow was 2 feet or more. There were two crests, the first occurred on Jan. 8 and was 2 feet above flood stage and the second occurred on Jan. 16 and was 4.5 feet above flood stage.

The Savannah River at Clyo, Ga., continued in flood from Dec. 12 to Feb. 9, a period of 60 days. The highest stage reported during this period was 14.9 feet on Jan. 21. Flood stage at this point is 11 feet. Damage during February ranged from light to moderate.

EAST GULF OF MEXICO DRAINAGE

The flooding along the Pearl River at Bogalusa, La., which began on Dec. 17 continued until Feb. 6. The crests on Jan. 3 and Jan. 23 averaged 4 feet above flood stage. Two hundred miles upstream at Jackson, Miss., a secondary overflow which began on Jan. 26 continued until Feb. 1. The crest on Jan. 29 was 5.4 feet above flood stage. The U. S. Corps of Engineers estimated the flood damages along the entire length of the Pearl River during December and January at $417 thousand. No additional damage occurred during February.

MISSISSIPPI SYSTEM

Upper Mississippi Basin.--Heavy rainfall and wet soil conditions resulting from snowmelt at the close of January and continuing heavy rains across southeast Missouri and southern Illinois resulted in flooding in the two-state area. In Missouri, rapid rises occurred on the Salt, Meramec, and Big Rivers. Crests on the 3d and 4th ranged from 1 to 5 feet above flood stage. In Illinois, rapid and more sustained rises were noted on the Big Muddy, Kaskaskia, Illinois, Sangamon, Kankakee, and Iroquois Rivers. Crests ranged from slightly over bankfull stage to 10 feet over flood stage between the 2d and 11th. All flood bulletins and advisories were given adequate dissemination over the ESSA Weather Wire Service and through the press, radio, and TV facilities in the area.

Missouri Basin.--Heavy rain on Feb. 1 caused the Blackwater River at Valley City, Mo., to rise nearly 2 feet above flood stage on the 1st. It receded within its banks on the 2d. The Sac River at Stockton, Mo., was in light flood on the 2d and 3d.

Ice bridges on the Missouri River above St. Joseph, Mo., began breaking up on the 4th. Due to warm weather and the ice being rotten, much of the ice melted as it moved downstream. This run of ice caused considerable stage fluctuation on the Missouri River. Floating ice was reported as far downstream as Waverly, Mo., from the 12th through the end of the month, but it had only minor effect on the river stages.

Ohio Basin.--Minor flooding occurred on the Hocking River at Athens, Ohio, on Jan. 31 and Feb. 1. This flooding was due to 0.7 to 0.8 inch of rainfall on the 29th and 30th. The runoff was high as the snow on the ground which averaged about 20 inches, with a water equivalent of 1-1/2 to 2 inches, on Jan. 15 had nearly all melted. Little or no damage resulted from the flooding at Athens, Ohio.

Minor flooding which developed along the Scioto River on Jan. 31 continued to Feb. 4. The crests ranged from 1 to 2 feet on the 1st and 3d. Limited disruptions resulted to local traffic on some secondary roads. No property losses were reported. This flooding was due to rain and snowmelt during the latter part of January. General light rains at the beginning of February helped to hold stages near the flood mark for several days.

Heavy snowmelt during the last decade of January followed by heavy rain on Jan. 29, Feb. 1 and 2 produced the highest crests along the Wabash River at most points from Covington, Ind., downstream to Hutsonville, Ill., in 8 or 9 years. The rainfall amounts on Feb. 1 and 2 averaged about 1.25 to 1.5 inches over most of the Wabash and White River basins to less than an inch over the East Fork. A great amount of overflow occurred along the Wabash and White Rivers. Crests of about 3 feet above flood stage occurred along the Embarrass in Illinois. The Wabash at Lafayette crested more than 11 feet above flood stage. Downstream crests were mostly 8 to 10 feet above flood stage. A considerable amount of corn still in the fields was ruined. One Wabash River bridge under construction near Montezuma was extensively damaged. Numerous roads were inundated.

General moderate to heavy rains on Feb. 1 plus

rising temperature and moist ground caused some flooding on the Ohio River below Newburgh, Ind., during the first half of February. Crests ranged from slightly over bankfull stage to nearly 6 feet over flood stage on the 7 - 10th. There was minor flooding on the upper Ohio River at Wellsburg, W. Va., on Jan 31 and Feb. 1.

White Basin.--Heavy rains (2 to 3 inches) during the last week of January and the first 2 days of February caused flooding on the Black at Black Rock, Ark., and the White River at Clarendon, Ark. The Black River overflowed for 10 days cresting 5.1 feet above flood stage on the 2d. The White River remained near bankfull stage a good portion of February and overflowed slightly for 16 days at Clarendon, Ark. The Cache River at Patterson, Ark., rose above flood stage on Jan. 29 and continued in flood to Feb. 26. It crested on the 5th nearly 2 feet above flood stage.

Arkansas Basin.--The Elk River at Tiff City, Mo., rose 3.2 feet above flood stage on the 2d and receded within its banks on the same date. The minor flooding which began on the Illinois River at Tahlequah, Okla., on Jan. 31 continued into the second week of February. It crested 4.4 feet above flood stage on the 3d. Upstream at Watts, Okla., the river crested 3.1 feet above flood stage on the 2d. Due to the season of the year, damages were nominal.

Red Basin.--Clear Boggy Creek at Caney, Okla., rose above flood stage on Jan. 29 and continued in flood to Feb. 1. It crested on Jan. 30 nearly 2 feet above flood stage. The upper Sulphur River at Hagansport, Tex., was in flood from Jan. 29 to Feb. 4. It crested nearly 6 feet above flood stage on Jan. 31. Downstream at Naples, Tex., the river was out of its banks from the 2d to the 9th. It crested nearly 4 feet above flood stage on the 4th. This flooding was due to heavy rain during the latter part of January. The Sulphur River rose slightly above flood stage at Hagansport on the 16th and receded within its banks on the same date.

Lower Mississippi Basin.--The second flood on the St. Francis River this winter began at Fisk, Mo., on the 4th. The flood moved downstream to St. Francis, Ark., on the 6th. It crested 3.4 ft. above flood stage at Fisk on the 8th and 1.5 feet above flood stage at St. Francis on the 9th and 10th. It was back within its banks by the 14th. This flood was of shorter duration than the one in December and the crests were more than 1 foot lower. There were no reports of any flood damage.

WEST GULF OF MEXICO DRAINAGE

Minor flooding occurred on the upper Sabine River in Texas from Jan. 30 to Feb. 18. The crests ranged from 1 to 2.5 feet above flood stage on the 2d - 4th. This flooding was due to heavy rains during the latter part of January.

The Trinity River at Moss Bluff, Tex., was in flood from Jan. 8 to Feb. 16. There were two crests; the one on Jan. 18 was 2.9 ft. above flood stage and the one on Feb. 11, 2.6 feet above flood stage. The minor flooding at Long Lake, Tex., on the 3d - 6th was due to heavy rains during the last few days of January. The San Jacinto at Lake Houston, Tex., was in flood from Jan. 11 to Feb. 7. The crest on Jan. 22 was 1 foot above flood stage. Warnings were issued by the Weather Bureau for the flooding at Long Lake, Tex., on Jan. 31.

GULF OF CALIFORNIA DRAINAGE

Colorado Basin.--Ice jam flooding was reported on the Little Colorado River in Arizona on Feb. 1 - 4. Six homes were affected by the high water in the Winslow area. Minor flooding was reported between Leupp and Holbrook, Ariz. Some flooding was reported on tributaries of the Salt, Santa Cruz (Tucson), and San Pedro Rivers on the 12 - 13th. Only minor damage resulted. Some flooding and damage resulted to highway crossings from the Salt River in the Phoenix, Ariz. metropolitan area on the 14 - 20th.

PACIFIC SLOPE DRAINAGE

Sacramento Basin.--Several storms during February caused rises along the main stem of the Sacramento River in California with overflow at all of the fixed-sill weirs of the Sacramento Flood Control bypass system. Agricultural land in the bypasses were flooded. Releases for flood control were made from the Shasta and Black Butte Reservoirs. Oroville Reservoir had a peak inflow of 45,126 c.f.s. on Feb. 21, but only 820 c.f.s. passed downstream.

Coquille and Rogue Basins.--Minor flooding occurred on the South Fork Coquille River at Myrtle Point, Oreg., on the 23d. There was also some minor creek flooding in the Rogue River drainage early on the 23d. This flooding was due to precipitation from the 19th to the 23d. Warnings issued by the Weather Bureau were timely and flooding minimal. There were no reports of damage, injuries, or loss of life.

Columbia Basin.--Local flooding occurred along the Weiser River near Cambridge, Idaho, and in low-lying areas near Weiser, Idaho, on the 19th through early on the 21st. Most of the flooding in the Cambridge area resulted from trees and brush piling up against the bridge over highway 95 at the east side of Cambridge. The heavy rain amounting to more than 1 inch, that fell over the Weiser Basin on the 17 - 19th plus snowmelt resulting from the warm temperatures accounted for the local flooding.

The monthly mean flow on the Clearwater River at Spalding in northwest central Idaho was the maximum for February in 57 years of record; however, flood stage was not reached.

Mild weather and heavy rain during the first few days of February resulted in flooding along some of the Willamette tributaries in Oregon. Coast Range stations reported 4 to 5 inches of rain; northern Willamette Valley stations, 1.5 inches; Cascade Slope stations, 2 to 3 inches and upper Willamette Valley, 1 inch. The Luckiamute, South Yamhill, Pudding, and Tualatin Rivers exceeded flood stage and crested between the 4th and 6th. All streams in the Willamette Basin had receded to base flow levels prior to the beginning of heavy rains on the 18th. During the 5-day period from the 18th to the 23d, 8 to 9 inches of rain was reported at Coast and Cascade Range locations, 3 to 5 inches in the northern Willamette Valley and 2 to 3 inches in the upper Willamette Valley. The only Willamette tributaries to overflow their banks were those heading in the Coast Range and low elevation streams in the northern end of the Willamette Valley. The main stem of the Willamette at Harrisburg, Oreg., was slightly above flood stage from the 22d to the 24th. The Umatilla River at Pendleton, Oreg., had three distinct peaks, the 20th, 22d, and 23d, with the latter two creasting 0.2 to 0.3 foot above flood stage. Crest stage and daily stage forecasts were issued by the Weather Bureau to the three news media via the Oregon ESSA Weather Wire Service and by direct telephone call. The County Civil Defense Directors notified residents in low-lying areas directly or by radio broadcast. The Corps of Engineers estimated damages of $449

thousand due to bank erosion, debris removal, gravel deposition, and time-loss in the Willamette tributary basins that were flooded.

Chehalis and Snohomish Basins.--Minor flooding occurred on the Chehalis River at Centralia, Wash., on the 4th and 5th and on the Snohomish River at Snohomish, Wash., on the 20th. This flooding was due to heavy rain and snowmelt. Forecasts and warnings issued by the Weather Bureau were adequate. Flood damage was negligible.

FLOOD STAGE DATA

(All dates in February unless otherwise specified)

River and station	Flood stage	Above flood stages -dates		Crest *	
		From—	To—	Stage	Date
ST. LAWRENCE DRAINAGE	Ft.			Ft.	
Lake Michigan					
Red Cedar: Williamston, Mich.	7	1	4	8.5	3
East Lansing, Mich.	7	2	4	7.8	3
Grand: Grand Rapids (Comstock Park), Mich.	12	3	8	12.95	6
Lake Huron					
Shiawassee: Owosso, Mich.	7	2	2	7.3	2
Flint: Flint, Mich.	11	2	3	12.1	2
Cass: Cass City, Mich.	14	2	3	14.9	2
Vassar, Mich.	14	2	4	16.95	3
Lake Erie					
St. Marys: Decatur, Ind.	13	Jan. 29	6	18.6 22.0	Jan. 30 3
St. Joseph: Montpelier, Ohio	10	Jan. 30	8	12.5 14.05	Jan. 31 3
Maumee: Fort Wayne, Ind.	15	Jan. 30	7	(17.7 (21.2	Jan. 30 4
Defiance, Ohio	10	Jan. 30	5	(13.2 (12.6	Jan. 30 2
Napoleon, Ohio	10	Jan. 30	4	(11.1 (11.5	Jan. 30 2
Grand Rapids, Ohio	15	Jan. 30	4	(16.3 (16.5	Jan. 31 2
ATLANTIC SLOPE DRAINAGE					
Lumber: Lumberton, N. C.	8	Dec. 12	12	(10.0 (12.5	Jan. 8 Jan. 16
Savannah: Clyo, Ga.	11	Dec. 12	9	#14.9	Jan. 21
EAST GULF OF MEXICO DRAINAGE					
Pearl: Jackson, Miss.	18	Jan. 26	1	23.2	Jan. 29
Bogalusa, La.	15	Dec. 17	6	(19.2 (18.8	Jan. 3 Jan. 23
Pearl River, La.	12	Dec. 20	Jan. 31	(13.5 (14.4	Dec. 21 Jan. 5
MISSISSIPPI SYSTEM					
Upper Mississippi Basin					
Salt: New London, Mo.	19	2	3	20.8	3
Iroquois: Chebanse, Ill.	14	2	5	15.3	3
Kankakee: Momence, Ill.	4	2	3	4.2	2
Sangamon: Monticello, Ill.	13	Jan. 30	6	16.5	3
Riverton, Ill.	13	Jan. 28	13	22.9	5
Petersburg, Ill.	497	3	10	501.1	6
Oakford, Ill.	471	4	10	473.2	7
Illinois: Morris, Ill.	13	2	7	17.8	3
La Salle, Ill.	20	2	10	24.4	3
Peoria, Ill.	18	5	12	19.6	7
Havana, Ill.	14	2	22	17.8	10
Beardstown, Ill.	14	2	23	19.8	11
Meredosia, Ill.	10	1	29	18.3	11
Big: Byrnsville, Mo.	16	3	3	18.4	3
Meramec: Pacific, Mo.	11	2	4	15.8	4
Eureka, Mo.	16	3	4	17.3	4
Valley Park, Mo.	16	3	4	17.15	4
Kaskaskia: Shelbyville, Ill.	13	Jan. 31	8	18.3	3
Vandalia, Ill.	18	Jan. 31	11	23.1	4
Carlyle Dam, Ill.	21	Dec. 14	1/	23.8	Dec. 23
New Athens, Ill.	25	4	7	25.2	6
Big Muddy: Murphysboro, Ill.	16	Jan. 31	13	24.7	7
Missouri Basin					
Blackwater: Valley City, Mo.	20	1	2	21.85	1
Sac: Stockton, Mo.	19	2	3	20.6	2
Ohio Basin					
Hocking: Athens, Ohio	17	Jan. 31	1	17.1	1
MISSISSIPPI SYSTEM	Ft.			Ft.	
Scioto: Prospect, Ohio	10	Jan. 31	2	11.1	1
Circleville, Ohio	14	Jan. 31	3	15.6	1
Piketon, Ohio	16	Jan. 31	4	17.9	3
Vermillion: Danville, Ill.	18	3	4	#19.0	3
Embarrass: Ste Marie, Ill.	18	Jan. 31	8	20.1	2
Lawrenceville, Ill.	15	Jan. 31	11	18.05	11
Eagle Creek: Zionsville, Ind.	T 7	2	2	9.4	2
Eel: Bowling Green, Ind.	17	3	3	#17.1	3
Muscatatuck: Austin, Tex.	16	(Jan. 31 (3	1 3	#17.6 16.5	1 3
East Fork: Seymour, Ind.	14	1	6	16.1	4
White: Anderson, Ind.	10	Jan. 30	3	12.3	2
Noblesville, Ind.	14	3	4	15.1	3
Centerton, Ind.	603	Jan. 31	5	607.6	2
Spencer, Ind.	14	Jan. 31	7	21.1	4
Elliston, Ind.	18	Jan. 31	9	25.8	5
Newberry, Ind.	18	2	7	20.1	5
Edwardsport, Ind.	15	Jan. 31	11	22.4	5
Petersburg, Ind.	16	2	12	#22.6	7
Hazelton, Ind.	16	5	13	23.4	9
Skillet Fork: Wayne City, Ill.	15	Jan. 30	4	18.2	3
Little Wabash: Wilcox, Ill.	16	Jan. 30	8	#21.3	3
Carmi, Ill.	27	1	14	#30.2	7-8
Wabash: Bluffton, Ind.	10	1	5	#12.5	2
Wabash, Ind.	12	Jan. 30	6	16.5	2
La Fayette, Ind.	11	Jan. 29	14	#22.4	3
Covington, Ind.	16	Jan. 30	13	26.2	4
Montezuma, Ind.	14	Jan. 31	16	28.3	5
Clinton, Ind.	18	Jan. 31	11	#27.4	5
Terre Haute, Ind.	14	Jan. 30	15	23.0	5
Hutsonville, Ill.	T20	Jan. 30	15	#26.2	7
Riverton, Ind.	18	Jan. 30	15	#22.75	8
Vincennes, Ind.	16	Jan. 31	17	#24.3	8
Mt. Carmel, Ill.	17	2	16	#26.4	10
New Harmony, Ind.	15	3	16	#19.3	11
Saline: Harrisburg, Ill.	13	Jan. 30	6	#21.4	3
Ohio: Wellsburg, W. Va.	30	Jan. 31	1	30.9	Jan. 31
Dam 47, Newburgh, Ind.	38	6	7	38.2	7
Mt. Vernon, Ind.	35	7	9	#35.3	8
Dam 49, Uniontown, Ky.	37	6	11	#38.1	9
Shawneetown, Ill.	33	5	13	37.7	9
Dam 50, Fords Ferry, Ky.	34	4	14	#39.7	10
White Basin					
Black: Black Rock, Ark.	14	2	12	19.1	2
Cache: Patterson, Ark.	7	Jan. 29	26	8.8	5
White: Clarendon, Ark.	26	12	28	26.5	17-20
Arkansas Basin					
Elk: Tiff City, Mo.	15	2	2	18.2	2
Illinois: Watts, Okla.	13	1	2	16.1	2
Tahlequah, Okla.	11	Jan. 31	U	#15.35	3
Red Basin					
Clear Boggy Creek: Caney, Okla.	19	Jan. 29	1	20.9	Jan. 30
Sulphur: Hagansport, Tex.	38	Jan. 29 16	4 16	43.7 38.2	Jan. 31 16
Naples, Tex.	22	2	9	25.7	4
Lower Mississippi Basin					
St. Francis: Fisk, Mo.	20	4	10	23.4	8
St. Francis, Ark.	18	6	14	19.5	9&10

FLOOD STAGE DATA

(All dates in February unless otherwise specified)

River and station	Flood stage	Above flood stages -dates		Crest *	
		From–	To–	Stage	Date
	Ft.			Ft.	
WEST GULF OF MEXICO DRAINAGE					
Sabine: Quitman, Tex.	14	1	4	15.1	2
Edgewood, Tex.	12	Jan. 30	11	13.1	3
Mineola, Tex.	14	Jan. 31	18	16.4	4
Trinity: Long Lake, Tex.	35	3	6	35.6	5
Moss Bluff, Tex.	4	Jan. 8	16	(6.85 (6.6	Jan. 18 11
San Jacinto: Lake Houston, Tex.	44.5	Jan. 11	7	45.5	Jan. 22
PACIFIC SLOPE DRAINAGE					
Sacramento: Moulton Weir, Calif.	77	24	29	78.4	26
Colusa Weir, Calif.	62	(19 (20	19 Mar. 3	62.0 66.0	19 26
Tisdale Weir, Calif.	46	(4 (18	5 Mar. 5	46.2 48.6	4 27
Fremont Weir, Calif.	34	22	Mar. 4	(35.2 (35.3	25 29
South Fork Coquille: Myrtle Point, Oreg.	35	23	23	35.1	23
Weiser: Cambridge, Idaho	9	19	20	9.3	20

River and station	Flood stage	Above flood stages -dates		Crest*	
		From–	To–	Stage	Date
	Ft			Ft.	
PACIFIC SLOPE DRAINAGE					
Weiser: Weiser(nr), Idaho	8	20	21	9.0	21
Umatilla: Pendleton, Oreg.	8	(21 (23	22 23	8.2 8.3	22 23
Luckiamute: Suver, Oreg.	27	(3 (19 (21	4 20 21	27.35 28.0 27.0	4 20 21
South Yamhill: Whiteson, Oreg.	38	3 19	5 23	41.0 42.2	4 20
Pudding: Aurora, Oreg.	20	5 19	6 27	20.2 23.4	5 20
Tualatin: Farmington, Oreg.	29	5 22	9 27	31.2 31.5	6 24
Johnson Creek: Sycamore, Oreg.	8	19	20	11.2	19
Chehalis: Centralia, Wash.	63	4	5	65.0	5
Snohomish: Snohomish, Wash.	25	20	20	25.55	20

* Provisional
\# Highest stage observed
T Tentative
1/ Continued at end of month
U Unknown-No readings available from Feb. 9, due to gage breakdown

RAWINSONDE DATA

Average monthly values

FEBRUARY 1968

ALBANY, N. Y. 1001 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	86	-8.7	-14.4	27	2.0
1000	29	92			30	2.1
950	29	492	-9.4	-15.8	28	6.4
900	29	906	-10.9	-17.0	29	9.6
850	29	1,344	-12.3	-18.0	29	11.6
800	29	1,806	-14.2	-19.9	29	11.9
750	29	2,296	-15.5	-23.3	29	14.0
700	29	2,814	-17.6	-26.1	29	15.1
650	29	3,367	-20.0	-29.2	28	16.3
600	29	3,957	-23.0	-32.3	28	18.9
550	29	4,592	-26.3	-35.8	28	22.2
500	29	5,275	-30.7	-38.9	27	23.6
450	29	6,017	-35.4	-41.9	27	25.2
400	29	6,828	-40.8	-46.3	27	27.1
350	28	7,737	-45.4		27	27.0
300	28	8,754	-49.9		27	28.2
250	28	9,938	-52.4		26	24.9
200	28	11,385	-51.0		27	23.2
175	28	12,254	-51.2		27	20.9
150	28	13,256	-51.5		27	19.3
125	28	14,435	-52.8		27	16.3
100	28	15,868	-54.5		26	13.5
80	27	17,290	-56.1		26	13.9
70	27	18,138	-56.2		26	12.3
60	27	19,119	-56.7		26	8.2
50	27	20,274	-57.0		26	8.3
40	27	21,688	-57.2		26	8.7
30	24	23,507	-56.4		27	10.7
25	24	24,664	-56.3		27	11.9
20	23	26,084	-55.5		27	13.9
15	22	27,920	-53.9		27	18.9
10	18	30,562	-50.1		26	25.6
7	5	32,923	-48.5			
5						
4						

ALBUQUERQUE, N. MEX. 840 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	1,619	2.1	-5.5	02	2.7
1000	29	185				
950	29	606				
900	29	1,053				
850	29	1,521				
800	29	2,012	2.4	-7.0	33	3.4
750	29	2,528	-.2	-8.8	31	5.0
700	29	3,081	-3.6	-11.1	31	7.1
650	29	3,657	-6.8	-16.0	31	8.5
600	29	4,285	-9.9	-21.5	30	10.1
550	29	4,945	-13.9	-25.2	30	11.6
500	29	5,669	-18.9	-29.9	30	13.4
450	29	6,439	-24.3	-35.2	30	15.1
400	29	7,294	-30.8	-40.3	30	17.1
350	29	8,228	-38.0	-45.8	29	20.3
300	29	9,271	-46.2		29	23.5
250	29	10,460	-54.5		29	26.5
200	29	11,868	-59.0		29	32.2
175	29	12,707	-58.6		29	31.4
150	28	13,667	-60.0		29	27.8
125	28	14,799	-62.4		29	25.1
100	28	16,168	-64.9		29	20.2
80	28	17,523	-66.5		29	14.8
70	28	18,330	-66.9		29	12.1
60	28	19,264	-65.1		30	10.3
50	27	20,377	-63.4		30	7.0
40	26	21,751	-61.1		29	6.9
30	24	23,544	-58.5		28	9.5
25	23	24,692	-57.2		28	11.6
20	21	26,107	-54.2		27	16.2
15	15	27,962	-52.1		27	19.8
10	11	30,608	-46.7			

AMARILLO, TEXAS 893 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	1,095	-1.7	-5.2	32	1.6
1000	29	186				
950	29	601				
900	29	1,039				
850	29	1,495	.9	-6.6	32	3.6
800	29	1,983	1.0	-8.4	32	5.9
750	29	2,501	-1.2	-11.0	32	7.9
700	29	3,049	-4.2	-13.7	31	9.2
650	29	3,624	-7.0	-18.6	31	9.4
600	29	4,251	-11.2	-22.3	30	9.9
550	29	4,909	-15.5	-26.3	30	12.7
500	29	5,628	-20.1	-31.3	30	15.4
450	29	6,396	-25.4	-36.2	30	18.4
400	29	7,247	-31.4	-41.9	30	20.7
350	29	8,179	-38.6	-47.1	29	23.8
300	29	9,219	-46.8		29	27.5
250	29	10,407	-54.3		29	34.4
200	29	11,821	-58.2		28	38.3
175	29	12,662	-57.8		28	36.5
150	29	13,633	-58.5		28	33.4
125	28	14,772	-61.1		28	29.6
100	27	16,153	-64.1		29	23.5
80	27	17,513	-65.3		29	17.4
70	27	18,325	-65.2		29	14.7
60	27	19,266	-64.3		29	10.6
50	27	20,383	-63.3		29	8.5
40	26	21,761	-61.3		29	9.1
30	26	23,557	-58.7		28	10.2
25	24	24,709	-56.7		28	12.0
20	23	26,132	-54.4		27	15.8
15	18	27,986	-51.8		27	23.0
10	6	30,683	-45.3			

* ANCHORAGE, ALASKA 1000 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	45	-5.3	-10.9	03	1.2
1000	29	41			01	2.6
950	29	451	-4.0	-9.7	05	3.2
900	29	872	-4.0	-10.2	12	4.5
850	29	1,321	-6.0	-11.4	14	7.0
800	29	1,793	-8.6	-14.2	15	8.2
750	29	2,293	-11.5	-16.5	17	8.5
700	29	2,817	-14.5	-19.9	18	8.4
650	29	3,370	-17.8	-24.2	18	8.8
600	29	3,970	-21.6	-30.1	19	8.7
550	29	4,602	-25.5	-34.7	20	10.3
500	29	5,291	-30.3	-37.6	21	11.2
450	29	6,025	-35.6	-42.6	21	12.8
400	29	6,842	-41.7	-44.9	22	13.4
350	29	7,734	-47.8		22	14.8
300	29	8,737	-53.8		22	16.7
250	29	9,900	-56.0		22	16.2
200	28	11,327	-52.9		22	12.9
175	28	12,189	-52.5		23	12.6
150	28	13,184	-52.9		23	11.4
125	28	14,358	-53.4		23	11.9
100	28	15,790	-54.8		24	13.3
80	28	17,215	-55.4		24	12.5
70	28	18,065	-55.7		25	12.9
60	27	19,046	-57.1		25	13.2
50	27	20,198	-57.7		26	14.3
40	26	21,610	-59.2		26	14.4
30	25	23,401	-61.3		27	17.1
25	25	24,527	-62.6		27	17.9
20	25	25,898	-64.0		27	17.3
15	20	27,669	-66.0		28	16.1
10	10	30,076	-67.0			

* ANNETTE, ALASKA 1008 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	37	2.1	-.9	12	1.5
1000	29	103			12	2.7
950	29	520	3.4	-5.1	15	7.4
900	29	958	1.6	-7.4	17	9.7
850	29	1,417	-.1	-8.9	18	9.8
800	29	1,901	-2.3	-11.0	19	10.5
750	29	2,408	-4.8	-13.7	19	10.0
700	29	2,951	-8.0	-17.5	20	10.4
650	29	3,521	-11.5	-22.3	20	11.3
600	29	4,134	-15.2	-25.2	21	12.1
550	29	4,779	-19.6	-29.7	21	12.4
500	29	5,487	-24.8	-34.0	21	12.8
450	29	6,236	-30.5	-38.9	22	13.3
400	29	7,072	-36.9	-44.4	22	13.8
350	29	7,982	-44.0		22	13.2
300	29	8,999	-51.4		22	14.0
250	29	10,165	-57.7		22	13.3
200	28	11,564	-58.2		22	9.9
175	28	12,410	-55.7		23	10.1
150	28	13,394	-54.8		24	9.1
125	28	14,558	-55.5		25	9.1
100	28	15,976	-57.1		25	8.1
80	28	17,384	-58.1		25	6.4
70	28	18,223	-58.6		26	5.1
60	28	19,191	-58.7		27	4.6
50	28	20,334	-59.4		28	3.9
40	28	21,727	-60.7		31	2.9
30	28	23,507	-62.7		34	2.7
25	26	24,658	-63.5		33	4.4
20	24	26,020	-64.6		34	5.5
15	22	27,782	-65.3		33	7.2
10	21	30,254	-65.3		32	8.2
7	15	32,448	-64.1		29	12.0
5	11	34,619	-61.7		30	13.7
4	6	36,059	-59.8			

ATHENS, GEORGIA 987 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	246	-.9	-7.5	33	1.8
1000	29	137				
950	29	549	.9	-9.9	34	4.5
900	29	983	.5	-11.8	33	5.6
850	29	1,441	-.5	-13.0	31	6.9
800	29	1,925	-2.0	-13.8	30	9.4
750	29	2,434	-3.9	-14.5	29	12.4
700	29	2,979	-6.6	-17.2	29	14.2
650	29	3,549	-9.5	-19.7	28	16.7
600	29	4,169	-13.2	-23.5	28	20.3
550	29	4,822	-17.0	-27.5	28	22.3
500	29	5,537	-21.5	-31.4	27	24.5
450	29	6,297	-27.1	-36.2	27	25.4
400	29	7,144	-33.3	-41.7	27	28.4
350	29	8,068	-40.2	-45.3	27	32.8
300	29	9,104	-47.4		27	39.3
250	29	10,291	-53.6		27	43.4
200	29	11,718	-55.5		27	43.4
175	29	12,568	-56.4		27	42.4
150	29	13,543	-57.5		27	39.8
125	29	14,688	-59.9		27	35.3
100	29	16,072	-62.8		27	28.6
80	29	17,444	-63.8		27	23.4
70	29	18,262	-63.3		27	20.9
60	29	19,211	-62.3		27	17.8
50	29	20,340	-60.7		27	13.5
40	29	21,736	-58.6		27	9.4
30	29	23,553	-55.9		27	12.5
25	28	24,716	-53.8		26	15.8
20	28	26,158	-51.1		27	22.0
15	24	28,041	-48.6		27	25.8
10	17	30,740	-43.1			

* BARROW, ALASKA 1025 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	8	-31.8	-31.6	07	1.2
1000	29	182	-28.3	-31.2	08	2.9
950	29	559	-24.8	-27.0	08	3.2
900	29	947	-22.1	-24.9	08	3.1
850	29	1,368	-21.4	-25.0	07	2.6
800	29	1,815	-21.7	-26.2	09	1.3
750	29	2,293	-22.7	-27.8	33	.3
700	29	2,794	-24.3	-29.6	25	2.7
650	29	3,332	-26.6	-33.1	26	2.7
600	29	3,906	-30.0	-35.3	26	3.5
550	29	4,518	-33.8	-37.2	25	4.9
500	29	5,183	-38.0	-38.2	25	5.5
450	29	5,904	-42.2	-41.6	26	6.9
400	29	6,691	-47.0		25	8.6
350	29	7,566	-52.1		25	9.8
300	29	8,553	-56.1		25	10.8
250	29	9,708	-56.5		25	12.1
200	29	11,129	-55.0		25	12.6
175	29	11,983	-54.5		25	13.0
150	29	12,969	-55.0		25	14.1
125	28	14,123	-56.1		26	14.5
100	28	15,536	-57.5		26	16.1
80	28	16,941	-58.7		26	16.7
70	28	17,777	-59.4		26	18.6
60	26	18,753	-59.9		26	20.1
50	26	19,888	-61.1		26	20.3
40	22	21,325	-61.5		26	22.1
30	16	23,191	-62.3		25	22.5
25	16	24,314	-63.6		26	23.2
20	15	25,684	-64.8		26	22.2

BARTER IS., ALASKA 1023 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	15	-32.6	-30.6	17	.5
1000	29	178	-30.0	-31.8	09	1.7
950	29	551	-24.8	-27.1	09	3.4
900	29	946	-19.3	-22.7	10	3.6
850	29	1,373	-18.0	-22.7	11	2.4
800	29	1,826	-18.7	-23.9	13	.7
750	29	2,303	-20.2	-25.5	21	.9
700	29	2,815	-22.2	-27.0	25	2.3
650	29	3,351	-24.9	-29.5	25	3.8
600	29	3,937	-28.0	-32.6	26	5.3
550	29	4,550	-31.5	-34.5	25	7.1
500	29	5,227	-35.7	-37.2	25	8.8
450	29	5,949	-40.4	-40.8	25	12.0
400	29	6,749	-45.0	-43.9	25	13.9
350	29	7,631	-50.2		25	15.2
300	29	8,627	-54.6		25	17.3
250	28	9,775	-56.0		25	17.8
200	28	11,197	-55.0		25	17.0
175	28	12,051	-54.5		26	15.4
150	28	13,038	-54.9		26	16.0
125	28	14,201	-55.5		26	17.7
100	28	15,620	-56.4		26	16.7
80	26	17,087	-57.0		26	18.2
70	25	17,965	-57.5		26	18.3
60	25	18,935	-59.0		26	19.7
50	22	20,181	-59.2		26	22.4
40	21	21,582	-60.8		26	22.3
30	18	23,417	-62.1		26	20.7
25	17	24,547	-64.1		26	22.7
20	13	25,914	-65.7		26	24.6
15	7	27,605	-67.6			

BETHEL, ALASKA 1003 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	28	39	-15.6	-18.0	03	6.6
1000	28	58			04	8.6
950	28	452	-12.2	-17.3	06	10.1
900	28	863	-9.6	-17.1	06	8.0
850	28	1,304	-10.6	-18.3	06	5.4
800	28	1,769	-12.3	-21.2	06	4.9
750	28	2,259	-14.1	-23.5	07	4.6
700	28	2,782	-16.6	-26.1	09	4.1
650	28	3,335	-19.6	-29.9	11	3.6
600	28	3,927	-22.9	-32.7	14	3.5
550	28	4,556	-27.0	-35.7	14	3.1
500	28	5,240	-31.4	-39.1	16	2.9
450	28	5,975	-36.6	-42.8	21	2.6
400	28	6,786	-42.2	-46.2	22	5.0
350	28	7,677	-48.2		22	7.5
300	28	8,678	-54.0		22	9.2
250	28	9,840	-55.9		21	10.4
200	28	11,267	-53.1		21	9.7
175	28	12,128	-52.4		21	9.5
150	28	13,124	-52.4		21	9.9
125	28	14,301	-52.8		21	10.2
100	28	15,736	-53.7		22	10.9
80	28	17,165	-54.6		23	11.3
70	28	18,018	-55.1		23	12.1
60	27	18,998	-55.9		23	11.9
50	27	20,155	-57.0		23	12.1
40	27	21,561	-58.7		24	13.8
30	23	23,346	-61.3		24	13.9
25	19	24,481	-61.9		25	15.8
20	15	25,880	-62.5			

* BISMARCK, N. DAK. 962 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	505	-14.2	-18.4	35	1.3
1000	29	209				
950	29	599	-12.4	-18.2	35	1.8
900	29	1,016	-9.6	-15.8	32	4.7
850	29	1,458	-8.9	-15.5	33	7.2
800	29	1,928	-9.2	-17.2	33	9.7
750	29	2,424	-10.1	-18.7	33	10.8
700	29	2,957	-11.5	-20.8	32	13.7
650	29	3,518	-14.2	-23.7	32	14.9
600	29	4,126	-17.9	-26.5	32	15.7
550	29	4,769	-21.8	-31.4	33	18.4
500	29	5,468	-26.6	-36.3	33	19.9
450	29	6,215	-31.9	-40.8	33	21.8
400	29	7,043	-37.9	-45.5	33	23.3
350	29	7,950	-44.9		33	24.7
300	29	8,963	-52.4		33	26.1
250	29	10,125	-58.2		33	26.2
200	29	11,527	-57.8		32	24.7
175	29	12,373	-55.6		32	21.1
150	29	13,357	-54.9		32	19.2
125	28	14,523	-55.3		31	18.1
100	28	15,940	-57.2		32	17.2
80	28	17,346	-58.7		32	14.2
70	28	18,182	-59.1		32	12.6
60	27	19,147	-59.5		32	11.2
50	26	20,285	-59.9		31	9.3
40	24	21,678	-60.8		33	8.5
30	24	23,469	-60.6		31	8.6
25	23	24,606	-60.7		31	9.6
20	19	25,989	-60.9		30	9.0
15	15	27,827	-59.6		28	12.9
10	8	30,388	-59.4			

BOISE, IDAHO 920 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	867	1.9	-2.0	13	3.3
1000	29	191				
950	29	609				
900	29	1,047	4.8	-1.2	14	2.8
850	29	1,513	3.1	-3.3	21	1.7
800	29	2,002	.5	-6.1	23	2.3
750	29	2,516	-2.4	-8.9	24	3.1
700	29	3,063	-5.6	-12.0	27	3.8
650	29	3,637	-9.1	-16.3	29	4.9
600	29	4,256	-12.9	-22.2	29	5.9
550	29	4,910	-17.3	-27.8	30	7.2
500	29	5,623	-22.3	-32.3	30	8.3
450	29	6,386	-27.8	-38.3	30	9.7
400	29	7,226	-34.1	-43.2	30	10.2
350	29	8,148	-40.9	-44.8	30	11.5
300	29	9,180	-48.3		30	14.2
250	29	10,359	-56.1		30	17.6
200	29	11,761	-59.8		29	17.7
175	28	12,595	-57.2		29	18.1
150	28	13,570	-57.4		29	16.6
125	28	14,717	-59.0		29	16.0
100	28	16,112	-60.6		30	13.6
80	27	17,495	-62.1		30	9.1
70	26	18,322	-62.0		30	6.5
60	26	19,274	-62.2		32	5.7
50	24	20,402	-62.9		32	5.2
40	22	21,786	-62.2		33	5.3
30	20	23,576	-60.9		32	4.5
25	18	24,701	-60.5		30	5.6
20	14	26,072	-60.2		30	7.9
15	13	27,862	-59.8		29	12.0
10						
7						
5						

BOOTHVILLE, LA. 1019 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	1	7.9	4.9	36	3.0
1000	29	154	8.8	2.9	36	4.2
950	29	579	6.7	-.6	35	4.6
900	29	1,021	6.0	-2.2	31	4.5
850	29	1,489	5.3	-6.3	30	6.4
800	29	1,982	3.3	-7.3	29	8.4
750	29	2,505	1.1	-11.2	29	10.5
700	29	3,056	-1.8	-13.9	28	12.9
650	29	3,641	-4.6	-18.6	28	15.2
600	29	4,269	-8.0	-21.9	28	17.9
550	29	4,939	-12.1	-25.1	28	19.7
500	29	5,663	-16.8	-28.7	28	21.8
450	29	6,443	-22.1	-33.6	28	24.9
400	29	7,302	-28.3	-39.3	27	28.2
350	29	8,246	-35.1	-45.1	27	32.4
300	29	9,305	-42.3	-50.9	27	39.1
250	29	10,518	-49.5		27	45.4
200	28	11,958	-54.9		27	49.6
175	28	12,806	-57.6		27	48.1
150	28	13,772	-60.7		27	43.5
125	28	14,896	-64.6		27	38.2
100	28	16,247	-67.9		27	30.3
80	28	17,584	-68.5		27	21.5
70	27	18,383	-67.1		27	16.9
60	25	19,315	-65.2		27	14.0
50	25	20,433	-61.6		27	11.3
40	24	21,826	-57.9		26	10.6
30	23	23,652	-54.4		26	11.8
25	22	24,830	-52.4		26	14.4
20	22	26,282	-49.4		27	18.0
15	21	28,183	-45.7		27	19.9
10	15	30,935	-39.5		26	23.2
7	7	33,405	-37.9			

* BROWNSVILLE, TEXAS 1018 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	7	11.1	9.5	33	1.8
1000	29	158	12.5	10.1	02	1.3
950	29	588	11.4	7.8	13	.7
900	29	1,040	10.4	3.2	24	1.4
850	29	1,515	9.0	-1.0	27	3.2
800	29	2,016	6.9	-3.8	28	5.3
750	29	2,542	4.9	-8.2	29	7.4
700	29	3,106	2.3	-11.5	29	9.1
650	29	3,699	-.9	-16.5	28	11.8
600	29	4,336	-4.7	-19.8	29	14.2
550	29	5,010	-9.0	-24.4	28	15.8
500	29	5,747	-14.0	-28.2	28	17.5
450	29	6,532	-19.3	-31.6	28	20.5
400	29	7,407	-25.2	-36.4	27	23.4
350	29	8,363	-32.4	-43.6	27	27.5
300	29	9,433	-39.6	-50.8	27	32.5
250	29	10,660	-47.6		26	37.3
200	29	12,106	-55.5		26	41.1
175	29	12,950	-59.1		26	38.8
150	29	13,907	-63.4		26	35.4
125	26	15,011	-67.8		27	29.1
100	24	16,338	-72.0		27	24.1
80	21	17,655	-73.5		27	18.3
70	21	18,436	-72.5		27	13.9
60	20	19,354	-68.9		27	11.3
50	20	20,456	-64.8		27	9.1
40	20	21,836	-58.8		26	9.7
30	18	23,660	-55.7		26	11.5
25	18	24,828	-53.2		26	12.2
20	17	26,276	-49.6		26	12.6
15	17	28,178	-45.1		26	12.9
10	16	30,906	-41.2		26	14.9
7	12	33,306	-40.1		26	20.2
5	5	35,652	-32.7			

BUFFALO, N. Y. 986 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	28	218	-8.0	-11.4	25	4.3
1000	28	107				
950	28	507	-9.1	-14.4	27	8.1
900	28	923	-11.0	-15.7	27	10.7
850	28	1,360	-13.1	-18.7	28	11.3
800	28	1,821	-14.8	-21.5	28	13.2
750	28	2,313	-16.2	-22.0	29	14.1
700	28	2,827	-17.8	-25.6	29	14.8
650	28	3,381	-20.1	-28.3	29	16.5
600	28	3,969	-23.3	-31.8	28	17.7
550	28	4,596	-27.1	-35.4	28	17.6
500	28	5,283	-31.3	-38.9	28	18.1
450	28	6,018	-36.3	-42.7	28	18.6
400	28	6,832	-41.4	-44.4	28	19.2
350	28	7,728	-46.5		27	20.7
300	28	8,741	-51.1		27	20.5
250	28	9,923	-51.8		27	18.6
200	28	11,374	-50.8		27	17.3
175	28	12,243	-51.2		27	18.1
150	28	13,244	-51.8		27	15.7
125	28	14,422	-53.3		27	14.1
100	28	15,853	-55.1		27	12.1
80	28	17,275	-55.9		27	10.9
70	28	18,122	-56.4		27	9.6
60	27	19,092	-57.0		27	8.2
50	27	20,244	-57.7		27	6.9
40	27	21,651	-58.0		27	7.3
30	26	23,470	-57.4		27	7.4
25	25	24,632	-56.4		26	9.4
20	23	26,039	-56.1		27	11.8
15	22	27,882	-54.1		27	15.0
10	15	30,491	-51.8			
7	5	32,785	-46.7			

CAPE HATTERAS, N. C. 1014 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	4	2.4	-3.6	33	4.3
1000	29	116	2.5	-5.8	34	5.7
950	29	526	1.1	-10.3	34	7.3
900	29	964	-.9	-13.7	32	6.0
850	29	1,419	-2.2	-15.8	29	7.1
800	29	1,900	-3.7	-15.9	27	10.9
750	28	2,403	-5.3	-16.5	27	15.7
700	27	2,945	-8.0	-20.3	27	17.5
650	27	3,515	-10.7	-22.8	27	20.1
600	27	4,131	-14.1	-25.9	27	23.8
550	27	4,783	-17.9	-28.6	26	27.0
500	27	5,493	-22.4	-33.3	26	29.9
450	27	6,254	-27.5	-37.5	26	33.6
400	27	7,097	-33.5	-42.9	26	36.5
350	27	8,021	-40.2	-44.6	26	40.5
300	27	9,057	-47.2		26	42.5
250	27	10,248	-52.7		26	45.0
200	27	11,685	-53.6		26	46.8
175	27	12,543	-54.1		27	44.8
150	26	13,527	-55.3		27	38.8
125	26	14,684	-57.8		26	34.8
100	26	16,083	-60.1		26	30.0
80	26	17,469	-61.6		26	24.0
70	25	18,301	-61.5		26	20.8
60	25	19,259	-60.2		27	18.1
50	24	20,397	-59.1		26	11.4
40	22	21,804	-57.9		26	9.9
30	20	23,633	-54.6		26	12.8
25	19	24,808	-53.0		26	14.4
20	17	26,262	-51.5		27	15.6
15	15	28,122	-49.4		26	18.9
10	6	30,880	-44.0			

See reference note at end of table

RAWINSONDE DATA

Average monthly values

* CARIBOU, MAINE — 982 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	191	-16.1	-20.5	25	2.2
1000	29	57				
950	29	445	-15.2	-19.0	26	4.8
900	29	852	-15.8	-19.9	27	6.0
850	29	1,282	-16.9	-20.9	27	6.6
800	29	1,740	-17.7	-21.9	28	7.6
750	29	2,220	-18.7	-23.1	27	8.7
700	29	2,732	-20.3	-25.3	27	9.1
650	29	3,277	-22.6	-27.8	27	9.5
600	29	3,863	-25.5	-31.2	27	10.3
550	29	4,487	-28.9	-35.2	26	11.3
500	29	5,165	-33.1	-37.9	25	11.8
450	29	5,897	-37.8	-41.3	25	12.6
400	29	6,704	-42.5	-42.6	25	13.4
350	29	7,598	-46.3		25	14.9
300	29	8,616	-48.7		25	14.9
250	29	9,811	-49.9		25	15.7
200	29	11,270	-49.7		26	15.3
175	28	12,140	-49.9		26	15.3
150	28	13,146	-50.6		25	14.4
125	28	14,332	-51.7		25	12.4
100	27	15,761	-53.5		26	12.6
80	27	17,193	-54.5		26	13.0
70	27	18,046	-54.8		26	11.3
60	26	19,038	-55.4		25	11.6
50	26	20,198	-56.2		26	10.4
40	26	21,612	-57.3		26	10.2
30	26	23,428	-57.8		26	10.3
25	26	24,577	-57.8		26	11.6
20	26	25,982	-58.1		26	13.3
15	25	27,794	-57.4		27	17.6
10	23	30,368	-55.3		27	23.1
7	19	32,662	-52.4		27	31.9
5	5	34,813	-50.9			
4						

CHARLESTON, S. C. — 1014 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	13	.9	-5.4	33	1.8
1000	29	125	3.2	-5.5	35	3.1
950	29	541	3.6	-7.3	34	3.8
900	29	980	2.7	-9.2	30	4.8
850	29	1,442	1.6	-10.8	28	9.2
800	29	1,929	-.2	-12.4	28	12.1
750	29	2,446	-2.1	-13.9	28	13.7
700	29	2,990	-4.7	-16.4	28	14.5
650	29	3,566	-7.8	-19.2	28	18.0
600	29	4,189	-11.5	-22.2	27	20.5
550	29	4,848	-15.7	-25.5	27	21.8
500	29	5,565	-20.3	-29.8	27	24.8
450	29	6,330	-25.5	-34.8	27	27.7
400	29	7,183	-31.9	-39.5	27	30.6
350	29	8,113	-38.6	-44.2	27	34.9
300	29	9,155	-45.7		27	39.4
250	29	10,353	-51.6		27	46.2
200	29	11,790	-54.2		27	49.3
175	29	12,643	-55.7		27	46.5
150	29	13,621	-57.4		27	45.6
125	29	14,767	-59.6		27	38.9
100	29	16,152	-62.6		27	30.2
80	29	17,523	-63.7		27	23.6
70	29	18,342	-63.0		27	20.2
60	29	19,293	-61.6		27	17.7
50	29	20,426	-60.4		27	12.8
40	29	21,824	-57.4		26	11.9
30	29	23,654	-54.0		26	13.1
25	27	24,826	-52.2		27	14.3
20	23	26,278	-49.3		27	19.5
15	19	28,182	-45.7		27	22.9
10	13	30,880	-41.6			
7	5	33,328	-38.0			
5						
4						

* COLD BAY, ALASKA — 995 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	28	30	-4.4	-6.3	03	3.4
1000	28	-11				
950	28	391	-5.1	-7.5	04	4.1
900	28	818	-6.4	-8.6	08	3.6
850	28	1,264	-7.7	-11.3	11	4.1
800	28	1,735	-8.6	-14.1	11	4.7
750	28	2,229	-10.7	-16.8	13	4.3
700	28	2,763	-13.0	-20.7	14	3.6
650	28	3,317	-16.0	-25.1	15	4.0
600	28	3,925	-19.7	-28.4	15	3.8
550	28	4,554	-24.1	-32.0	16	3.7
500	28	5,253	-28.8	-36.7	17	4.2
450	28	5,991	-33.9	-41.5	18	7.7
400	28	6,815	-40.1	-45.7	19	8.5
350	28	7,714	-46.6		19	9.7
300	28	8,723	-53.3		17	14.3
250	28	9,885	-56.5		18	12.8
200	28	11,313	-52.8		18	11.2
175	28	12,180	-51.0		18	10.7
150	28	13,184	-51.1		18	11.1
125	28	14,370	-51.0		19	10.1
100	28	15,818	-52.2		19	10.2
80	28	17,259	-52.7		20	9.7
70	28	18,120	-53.3		20	8.7
60	28	19,109	-54.0		20	7.6
50	28	20,276	-55.2		21	7.7
40	28	21,698	-56.2		23	7.3
30	27	23,513	-59.2		23	7.7
25	25	24,655	-60.3		25	6.6
20	24	26,040	-61.5		26	8.7
15	21	27,818	-62.6		27	11.1
10	18	30,319	-64.0		27	12.7
7	17	32,519	-62.9		27	17.6
5	[illegible]	34,575	-61.7			
4	6	35,971	-60.2			

COLUMBIA, MO. — 992 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	238	-4.3	-9.5	32	1.8
1000	29	175				
950	29	576	-4.7	-12.6	32	4.5
900	29	1,004	-6.2	-15.1	32	7.0
850	29	1,450	-6.6	-15.0	32	9.0
800	29	1,924	-7.4	-16.4	32	10.6
750	29	2,423	-8.6	-17.7	31	12.7
700	29	2,958	-11.0	-18.5	31	15.0
650	29	3,520	-13.9	-21.9	31	17.4
600	29	4,129	-17.0	-26.1	30	20.6
550	29	4,775	-20.5	-30.3	30	21.3
500	29	5,476	-25.1	-34.4	30	23.6
450	29	6,227	-30.3	-38.1	30	24.7
400	29	7,061	-36.3	-44.0	30	26.0
350	29	7,975	-43.2		29	29.4
300	29	8,997	-50.2		29	31.8
250	29	10,172	-55.4		29	34.7
200	29	11,593	-55.4		29	32.2
175	29	12,446	-54.7		29	29.9
150	28	13,430	-55.2		29	28.3
125	28	14,591	-56.5		29	24.9
100	28	15,998	-59.2		29	20.9
80	26	17,391	-60.3		29	17.9
70	25	18,221	-61.1		29	15.6
60	25	19,178	-60.8		29	14.1
50	23	20,312	-60.5		29	12.2
40	23	21,704	-59.9		28	10.8
30	23	23,501	-59.4		28	9.6
25	21	24,654	-58.0		27	12.6
20	18	26,053	-56.3		27	18.8
15	14	27,887	-53.2			
10	6	30,495	-52.2			
7						
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4						

DAYTON, OHIO — 981 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	297	-7.2	-11.5	28	2.6
1000	29	145				
950	29	544	-6.4	-12.7	28	5.3
900	29	967	-8.1	-15.4	30	7.9
850	29	1,411	-9.3	-17.8	30	9.5
800	29	1,879	-11.0	-20.2	29	10.4
750	29	2,374	-12.5	-21.7	29	12.8
700	29	2,899	-14.6	-23.4	29	14.8
650	29	3,457	-16.9	-27.7	29	15.9
600	29	4,055	-20.1	-30.5	29	17.2
550	29	4,693	-23.6	-34.4	29	19.6
500	29	5,387	-27.8	-38.5	28	22.6
450	29	6,136	-32.8	-42.6	28	25.8
400	29	6,957	-38.8	-45.8	28	27.7
350	29	7,860	-45.2		28	31.4
300	29	8,874	-51.5		28	32.1
250	29	10,047	-54.4		28	34.0
200	29	11,482	-52.8		28	31.3
175	29	12,343	-52.7		28	29.4
150	28	13,325	-53.0		28	28.2
125	28	14,495	-54.9		27	25.2
100	28	15,914	-57.4		28	22.3
80	28	17,321	-58.1		28	17.5
70	28	18,160	-58.7		28	14.4
60	28	19,126	-59.0		28	13.6
50	28	20,270	-58.9		28	11.7
40	28	21,671	-58.6		28	10.7
30	27	23,487	-57.5		27	11.8
25	27	24,641	-56.6		27	12.9
20	26	26,058	-55.1		27	15.3
15	24	27,902	-52.9		27	21.4
10	20	30,539	-48.6		26	30.3
7	8	32,883	-45.2			
5						
4						

DEL RIO, TEXAS — 983 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	314	6.8	3.3	07	1.0
1000	29	171				
950	29	595	7.3	2.7	13	2.9
900	29	1,040	7.5	.[illegible]	18	2.4
850	29	1,510	6.5	-1.8	25	2.[illegible]
800	29	[illegible],008	5.7	-4.6	29	4.7
750	29	2,533	[illegible].1	-9.1	31	6.6
700	29	3,090	.1	-12.[illegible]	30	[illegible].0
650	29	3,676	-3.3	-16.4	29	11.1
600	29	4,310	-7.1	-20.0	29	14.0
550	29	4,980	-11.3	-23.9	29	15.5
500	29	[illegible],709	-16.2	-28.2	29	17.6
450	29	[illegible],490	-21.7	-32.6	28	20.7
400	29	7,353	-27.9	-37.[illegible]	28	23.7
350	29	8,297	-35.[illegible]	-44.[illegible]	28	25.6
300	29	[illegible],353	-43.2		28	30.3
250	29	10,561	-50.5		27	35.7
200	29	11,995	-56.6		27	40.7
175	29	12,838	-58.8		27	39.7
150	29	13,800	-61.4		27	37.0
125	29	14,920	-65.2		27	31.1
100	28	16,270	-69.5		28	26.5
80	24	17,596	-70.6		28	17.4
70	24	18,389	-69.6		28	13.[illegible]
60	23	19,313	-67.0		28	11.0
50	22	20,421	-63.5		28	8.3
40	22	21,804	-59.6		27	[illegible].4
30	22	23,620	-55.4		26	11.4
25	21	24,793	-52.5		26	15.[illegible]
20	21	26,241	-50.4		27	20.0
15	19	28,140	-46.4		26	20.9
10	17	30,859	-40.0		27	23.9
7	11	33,313	-37.9			

DENVER, COLO. — 839 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	1,611	-2.9	-7.8	23	1.3
1000	29	194				
950	29	609				
900	29	1,047				
850	29	1,503				
800	29	1,987	-.3	-9.7	30	[illegible].0
750	29	2,501	-2.1	-12.0	31	5.3
700	29	3,048	-5.3	-15.5	31	7.9
650	29	3,623	-8.9	-19.0	32	8.4
600	29	4,242	-12.[illegible]	-23.6	32	10.0
550	29	4,896	-17.0	-28.5	32	12.1
500	29	5,609	-22.0	-32.8	31	13.8
450	29	6,370	-27.6	-38.2	31	16.1
400	29	7,213	-33.[illegible]	-43.9	31	18.4
350	29	8,134	-41.1	-48.9	31	21.1
300	29	9,164	-49.2		31	23.1
250	29	10,337	-57.2		31	27.4
200	29	11,737	-59.0		30	29.1
175	29	12,577	-57.7		30	26.6
150	29	13,550	-57.8		30	24.9
125	29	14,697	-59.0		30	23.3
100	29	16,090	-61.1		30	17.6
80	29	17,472	-62.4		30	13.1
70	28	18,296	-63.0		30	11.3
60	27	19,246	-62.4		31	9.0
50	27	20,373	-61.5		31	6.9
40	26	21,759	-60.6		32	6.2
30	25	23,552	-59.5		29	7.1
25	25	24,695	-58.4		29	[illegible].5
20	22	26,107	-56.4		28	11.2
15	17	27,957	-54.5		27	14.0
10	8	30,628	-49.5			
7						

DODGE CITY, KANS. — 928 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	791	-4.4	-9.3	30	1.6
1000	29	197				
950	29	607				
900	29	1,035	-1.6	-9.8	34	4.0
850	29	1,490	-1.2	-10.5	34	6.5
800	29	1,974	-1.6	-11.2	33	8.2
750	29	[illegible],484	-3.6	-13.5	33	10.1
700	29	3,030	-5.9	-16.4	32	10.8
650	29	3,604	-9.2	-19.7	32	11.9
600	29	4,222	-13.2	-24.2	31	13.1
550	29	4,876	-17.8	-28.3	31	14.[illegible]
500	29	5,586	-22.6	-33.8	31	16.4
450	29	6,347	-28.2	-38.9	31	17.9
400	29	7,187	-34.4	-44.8	30	20.0
350	29	[illegible],106	-41.7	-50.[illegible]	30	23.1
300	29	[illegible],135	-49.2		30	27.8
250	29	10,311	-56.0		30	31.0
200	29	11,719	-57.[illegible]		29	31.8
175	29	12,563	-57.1		29	31.0
150	29	13,539	-57.3		29	29.3
125	29	14,687	-59.1		29	25.2
100	29	16,078	-61.5		29	19.4
80	29	17,454	-63.2		29	16.3
70	29	18,275	-63.1		30	13.4
60	29	19,223	-62.4		30	10.1
50	29	20,349	-62.0		29	9.1
40	28	21,729	-61.0		29	8.5
30	28	23,524	-59.2		28	9.1
25	24	24,670	-57.3		28	11.6
20	23	26,095	-54.9		28	14.6
15	17	27,950	-52.2		27	20.7
10	6	30,641	-47.0			
7						

EL PASO, TEXAS — 884 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	[illegible],193	6.5	-.9	34	1.6
1000	29	161				
950	29	588				
900	29	1,038				
850	29	1,511	7.9	-2.9	34	2.3
800	29	2,010	5.8	-5.5	32	2.8
750	29	2,533	3.0	-8.4	30	4.6
700	29	3,092	-.4	-11.9	29	6.9
650	29	3,676	-3.9	-16.9	29	9.2
600	29	4,309	-7.4	-21.6	29	11.3
550	29	4,977	-11.7	-24.6	29	12.7
500	29	5,707	-16.7	-28.4	29	14.6
450	29	6,484	-22.4	-33.0	29	17.1
400	29	7,346	-28.6	-38.4	29	20.2
350	29	8,289	-36.1	-44.5	28	23.4
300	29	9,342	-44.3		28	24.8
250	29	10,542	-52.5		28	28.7
200	29	11,963	-58.1		28	36.2
175	29	12,803	-59.4		28	35.9
150	29	13,762	-61.5		28	32.2
125	29	14,885	-64.3		28	27.0
100	29	16,238	-67.[illegible]		28	21.8
80	29	17,575	-69.0		29	16.6
70	29	18,373	-68.5		29	12.5
60	29	19,299	-67.0		29	9.2
50	28	20,405	-64.4		29	7.7
40	26	21,782	-60.3		29	8.3
30	24	23,591	-57.5		27	10.1
25	23	24,748	-55.2		27	13.2
20	21	26,182	-51.8		27	19.6
15	18	28,086	-46.6		27	27.0
10	12	30,798	-41.2		27	29.5
7						

ELY, NEV. — 810 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	28	1,908	-2.2	-4.0	20	2.1
1000	28	204				
950	28	619				
900	28	1,059				
850	28	1,525				
800	28	2,010	.0	-3.7	20	1.4
750	28	2,524	-1.0	-6.3	23	1.7
700	28	3,076	-4.2	-9.2	27	3.8
650	28	3,649	-7.6	-12.7	28	5.9
600	28	4,277	-11.1	-17.4	28	7.7
550	28	4,936	-15.2	-22.6	28	9.4
500	28	5,654	-20.2	-27.0	27	10.8
450	28	6,421	-25.[illegible]	-32.8	27	11.9
400	28	7,270	-32.3	-39.5	28	14.8
350	28	[illegible],198	-39.5	-43.3	28	16.2
300	28	9,237	-47.3		27	17.7
250	28	10,422	-55.6		27	19.7
200	28	11,829	-58.5		27	21.7
175	28	12,669	-58.4		28	23.2
150	27	13,641	-58.8		29	20.3
125	26	14,781	-60.7		29	18.9
100	26	16,160	-63.4		29	14.4
80	26	17,523	-64.8		29	10.9
70	26	18,337	-64.5		30	8.2
60	26	19,278	-64.[illegible]		31	7.0
50	26	20,395	-63.3		33	5.5
40	26	21,769	-62.3		33	5.4
30	26	23,548	-61.0		31	5.8
25	25	24,680	-59.6		30	6.2
20	24	26,085	-57.[illegible]		28	9.6
15	20	27,914	-55.7		28	12.4
10	9	30,546	-52.5			
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* FAIRBANKS, ALASKA — 995 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	135	-21.7	-22.9	02	1.8
1000	29	94			03	1.8
950	29	487	-12.8	-18.7	07	4.4
900	29	894	-12.1	-17.8	11	5.0
850	29	1,333	-11.5	-17.9	13	4.3
800	29	1,797	-12.4	-18.5	15	4.5
750	29	2,287	-14.1	-20.3	18	5.3
700	29	2,811	-16.8	-23.4	20	6.0
650	29	3,361	-19.8	-27.0	21	7.9
600	29	3,955	-23.6	-30.8	21	8.8
550	29	4,581	-28.1	-33.2	22	9.6
500	29	5,264	-32.8	-37.0	22	10.3
450	29	5,992	-37.8	-41.1	22	11.2
400	29	6,802	-43.2	-46.0	22	13.7
350	29	7,691	-48.8		23	16.5
300	29	8,692	-53.8		23	15.0
250	28	9,856	-56.0		23	14.4
200	28	11,281	-54.0		23	12.6
175	28	12,139	-53.5		24	13.0
150	28	13,130	-53.9		24	14.5
125	28	14,299	-54.7		25	14.0
100	28	15,724	-55.5		25	14.8
80	28	17,144	-56.3		25	14.6
70	28	17,989	-57.3		26	15.2
60	28	18,962	-58.3		26	16.0
50	27	20,109	-59.4		27	17.9
40	27	21,502	-60.6		27	17.9
30	24	23,324	-61.9		27	18.8
25	23	24,490	-63.1		27	17.2
20	21	25,890	-65.5		28	16.2
15	17	27,653	-66.2		28	19.1
10	12	30,235	-67.9			
7	7	32,375	-67.4			

FLINT, MICH. — 986 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	234	-8.6	-13.3	27	3.4
1000	29	121				
950	29	520	-9.3	-14.8	30	6.7
900	29	936	-11.1	-16.3	31	9.0
850	29	1,374	-12.3	-18.5	31	10.4
800	29	1,837	-13.7	-20.8	31	11.9
750	29	2,328	-15.3	-23.3	30	12.9
700	29	2,846	-16.9	-24.7	31	13.9
650	29	3,398	-19.7	-27.2	30	14.9
600	29	3,990	-23.1	-30.8	30	16.9
550	29	4,616	-26.6	-34.5	30	18.7
500	29	5,305	-30.8	-38.4	30	19.1
450	29	6,041	-35.6	-41.7	30	19.7
400	29	6,856	-40.9	-46.9	29	21.5
350	29	7,754	-46.4		29	23.8
300	29	8,765	-51.5		29	24.4
250	29	9,942	-53.3		29	24.2
200	29	11,385	-51.4		28	21.6
175	29	12,252	-51.4		28	21.0
150	29	13,252	-52.0		28	19.5
125	29	14,429	-53.1		28	17.7
100	29	15,859	-55.3		28	17.2
80	29	17,279	-56.4		28	13.1
70	29	18,124	-56.7		28	12.6
60	29	19,100	-56.9		28	11.8
50	28	20,261	-57.3		28	10.7
40	27	21,676	-58.0		28	9.3
30	24	23,480	-57.4		28	10.3
25	23	24,628	-57.0		28	12.2
20	22	26,044	-56.4		27	12.8
15	20	27,866	-54.6		27	18.4
10	13	30,464	-52.4		27	30.0
7	7	32,788	-48.6			

FORT WORTH, TEXAS — 1001 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	180	2.9	-1.7	35	1.7
1000	29	184			35	2.5
950	29	601	3.1	-3.0	36	2.4
900	29	1,039	3.2	-4.7	34	3.2
850	29	1,502	2.5	-7.0	31	4.9
800	29	1,991	1.7	-9.6	30	7.5
750	29	2,509	-.4	-13.8	30	9.0
700	29	3,060	-3.2	-15.8	30	10.6
650	29	3,640	-6.6	-17.8	30	12.8
600	29	4,264	-10.2	-22.0	29	14.2
550	29	4,929	-14.3	-25.6	29	16.5
500	29	5,647	-19.0	-30.8	29	18.4
450	29	6,421	-24.7	-35.4	29	20.6
400	29	7,270	-30.8	-40.1	29	23.4
350	29	8,205	-37.7	-45.6	28	28.3
300	29	9,251	-45.6		28	33.6
250	29	10,445	-53.4		28	38.7
200	29	11,868	-57.2		28	42.1
175	29	12,712	-57.9		28	39.7
150	29	13,680	-59.3		27	36.8
125	29	14,815	-62.2		28	32.0
100	29	16,179	-65.9		28	26.0
80	28	17,532	-66.7		28	19.5
70	28	18,339	-66.5		28	15.3
60	28	19,277	-64.8		28	12.7
50	24	20,392	-62.6		28	10.6
40	24	21,778	-59.7		28	10.1
30	22	23,589	-56.8		27	12.5
25	19	24,747	-55.2		27	14.8
20	16	26,186	-51.6		27	19.0
15	14	28,055	-49.3		27	23.2
10	7	30,679	-46.2			
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GLASGOW, MONT. — 938 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	696	-9.8	-12.7	05	1.4
1000	29	200				
950	29	598				
900	29	1,020	-4.4	-9.4	30	2.6
850	29	1,472	-4.2	-11.0	31	6.3
800	29	1,949	-4.7	-11.5	31	9.5
750	29	2,456	-6.8	-14.1	32	10.4
700	29	2,992	-9.0	-17.7	32	11.1
650	29	3,561	-12.0	-21.2	32	11.3
600	29	4,171	-15.7	-25.5	32	12.5
550	29	4,816	-20.0	-29.6	32	13.8
500	29	5,522	-24.9	-34.7	32	15.3
450	29	6,274	-30.6	-39.7	32	16.9
400	29	7,105	-36.9	-44.6	32	18.6
350	29	8,015	-43.9		32	20.4
300	29	9,033	-51.5		32	21.8
250	29	10,196	-58.3		32	24.0
200	29	11,591	-59.8		32	22.8
175	29	12,429	-57.5		32	19.1
150	29	13,406	-56.2		32	17.7
125	29	14,565	-56.3		32	16.6
100	29	15,978	-57.6		32	14.3
80	29	17,382	-58.9		32	13.2
70	29	18,218	-59.6		32	11.1
60	29	19,179	-60.3		33	10.3
50	28	20,315	-60.8		33	8.9
40	27	21,706	-61.2		33	8.0
30	24	23,510	-61.7		32	6.3
25	23	24,642	-61.8		31	6.7
20	21	26,016	-61.9		30	9.1
15	15	27,809	-61.7		29	11.5
10	7	30,322	-61.0			
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GRAND JUNCTION, COLO. — 855 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	1,474	-.4	-3.0	13	1.8
1000	29	204				
950	29	620				
900	29	1,060				
850	29	1,522			13	2.3
800	29	2,009	.4	-5.9	14	1.5
750	29	2,521	-2.0	-8.4	22	.9
700	29	3,071	-5.2	-10.6	28	3.6
650	29	3,647	-8.8	-14.0	29	5.5
600	29	4,267	-12.1	-19.2	29	7.7
550	29	4,925	-15.8	-24.7	30	10.2
500	29	5,641	-20.7	-29.3	30	11.9
450	29	6,406	-26.1	-34.2	30	14.1
400	29	7,255	-32.2	-40.0	30	15.8
350	29	8,183	-39.8	-45.1	30	18.5
300	29	9,218	-48.2		29	21.6
250	29	10,396	-56.2		29	26.3
200	29	11,797	-59.6		29	28.3
175	29	12,636	-58.4		29	27.2
150	29	13,605	-58.5		29	25.1
125	29	14,747	-60.3		29	22.6
100	29	16,131	-62.5		29	17.5
80	29	17,500	-64.2		30	14.9
70	29	18,317	-64.0		30	12.3
60	28	19,265	-63.5		32	9.1
50	26	20,387	-63.4		31	6.9
40	23	21,766	-61.8		31	6.5
30	21	23,559	-60.2		31	6.5
25	20	24,700	-58.8		30	7.5
20	19	26,102	-57.7		28	10.9
15	13	27,933	-54.5		27	15.9
10	7	30,550	-51.0			
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See reference note at end of table

RAWINSONDE DATA

Average monthly values

* GREAT FALLS, MONT. 889 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	1,123	-2.4	-8.9	22	2.7
1000	29	183				
950	29	600				
900	29	1,033				
850	29	1,486	.0	-8.9	25	6.5
800	29	1,970	-2.1	-10.5	27	6.0
750	29	2,483	-4.9	-12.6	29	7.2
700	29	3,020	-8.1	-14.9	29	9.1
650	29	3,595	-10.9	-18.6	30	10.9
600	29	4,205	-14.3	-24.0	31	11.2
550	29	4,861	-18.6	-28.0	31	11.1
500	29	5,565	-23.8	-32.3	31	11.6
450	29	6,326	-29.5	-37.6	31	12.3
400	29	7,158	-35.6	-43.0	31	13.7
350	29	8,073	-42.8	-46.8	31	15.0
300	29	9,097	-50.2		31	16.2
250	29	10,268	-57.2		31	18.4
200	29	11,664	-61.0		30	19.0
175	29	12,496	-58.8		30	19.7
150	29	13,472	-56.3		31	16.4
125	29	14,628	-57.0		31	15.0
100	28	16,036	-58.3		31	12.8
80	26	17,442	-59.3		32	12.3
70	26	18,276	-60.2		32	10.9
60	26	19,235	-61.1		32	8.7
50	26	20,365	-61.7		33	8.3
40	26	21,747	-61.4		33	8.8
30	24	23,542	-61.3		32	6.3
25	22	24,678	-61.6		32	6.7
20	18	26,085	-61.3		31	6.4
15	15	27,874	-61.0		29	9.6
10	10	30,413	-59.2		28	16.8
7	6	32,714	-54.9			
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GREEN BAY, WIS. 992 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	210	-12.1	-16.2	31	3.3
1000	29	145				
950	29	538	-11.3	-16.5	33	8.1
900	29	953	-11.9	-18.5	34	8.8
850	29	1,389	-12.7	-20.1	33	9.5
800	29	1,851	-14.1	-22.5	33	10.4
750	29	2,339	-15.6	-23.9	32	11.4
700	29	2,859	-17.8	-25.0	32	12.8
650	29	3,408	-20.1	-27.3	32	14.0
600	29	4,001	-23.0	-31.0	32	16.5
550	29	4,628	-27.0	-35.1	31	16.3
500	29	5,316	-31.2	-40.2	31	18.4
450	29	6,048	-35.8	-43.6	31	19.7
400	29	6,867	-41.2	-45.0	31	20.2
350	29	7,763	-47.2		31	20.8
300	29	8,771	-52.7		31	22.9
250	29	9,941	-54.5		31	23.3
200	29	11,376	-52.6		30	22.4
175	29	12,240	-51.9		30	21.[illegible]
150	29	13,238	-52.4		30	19.8
125	29	14,413	-54.1		30	17.8
100	29	15,838	-55.7		30	16.1
80	28	17,259	-57.3		30	14.6
70	28	18,102	-57.7		30	12.2
60	28	19,075	-57.7		30	9.6
50	28	20,224	-58.5		30	9.4
40	28	21,623	-59.2		29	10.0
30	28	23,421	-59.9		29	9.4
25	26	24,557	-58.9		28	9.8
20	22	25,954	-58.0		28	12.5
15	19	27,758	-56.5		28	17.3
10	10	30,336	-54.0			

GREENSBORO, N. C. 983 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	273	-2.9	-9.8	32	1.8
1000	29	133				
950	29	541	-1.1	-13.1	33	4.8
900	29	972	-2.9	-15.4	32	6.2
850	29	1,424	-4.1	-17.3	30	7.8
800	29	1,902	-5.1	-18.9	29	9.7
750	29	2,408	-7.0	-21.7	29	12.3
700	29	2,943	-9.3	-23.5	29	14.5
650	29	3,512	-12.0	-24.9	29	17.0
600	29	4,123	-15.3	-27.3	28	19.6
550	29	4,776	-19.2	-29.5	28	21.9
500	29	5,478	-23.8	-32.9	28	25.4
450	29	6,237	-29.1	-38.0	27	28.5
400	29	7,073	-34.9	-43.2	27	31.8
350	29	7,992	-41.6	-47.5	27	36.0
300	29	9,022	-48.6		27	38.8
250	29	10,205	-54.0		27	31.9
200	29	11,635	-53.9		27	33.8
175	29	12,492	-54.3		27	32.3
150	29	13,480	-54.6		27	29.6
125	29	14,641	-56.9		27	27.3
100	29	16,043	-59.9		27	25.1
80	29	17,433	-60.5		27	18.7
70	29	18,264	-60.4		27	17.8
60	29	19,225	-60.0		27	15.5
50	29	20,364	-59.1		27	10.4
40	29	21,766	-57.3		27	11.9
30	27	23,587	-55.4		26	15.7
25	26	24,753	-54.1		27	18.5
20	25	26,193	-51.8		27	19.8
15	23	28,074	-49.0		26	25.6
10	16	30,761	-46.0			

* GUAM, MARIANA IS. 1000 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	111	23.5	21.0	08	4.7
1000	29	109			08	5.9
950	29	554	21.3	18.1	08	11.4
900	29	1,024	18.3	14.8	08	10.7
850	29	1,513	15.9	10.9	09	9.4
800	29	2,028	13.9	4.9	08	8.0
750	29	2,568	11.7	-1.6	09	5.8
700	29	3,145	9.4	-6.0	10	3.7
650	29	3,758	6.3	-10.9	10	3.0
600	29	4,408	2.5	-14.4	11	2.4
550	29	5,103	-1.3	-19.2	13	3.3
500	29	5,861	-5.7	-23.8	14	2.9
450	29	6,679	-10.7	-26.6	17	3.4
400	29	7,577	-16.3	-32.3	17	5.1
350	29	8,568	-23.2	-38.2	17	5.1
300	29	9,678	-31.5	-46.1	17	4.3
250	29	10,942	-41.7		20	6.8
200	29	12,413	-54.1		19	11.6
175	29	13,256	-61.3		19	13.6
150	29	14,194	-69.0		18	16.2
125	28	15,259	-76.7		16	16.7
100	28	16,522	-82.3		14	8.6
80	24	17,765	-80.9		10	3.4
70	22	18,525	-76.9		09	1.1
60	22	19,425	-71.9		30	.9
50	22	20,513	-66.8		26	.5
40	22	21,885	-60.3		10	4.6
30	20	23,700	-54.8		09	11.1
25	20	24,871	-52.4		09	14.0
20	20	26,324	-49.6		09	15.5
15	19	28,224	-45.7		09	17.8
10	15	30,954	-41.4		09	16.4
7	14	33,385	-38.0		09	9.7
5	13	35,727	-32.5		10	6.4
4	10	37,317	-29.1			

HILO, HAWAII 1012 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	11	20.2	17.6	21	2.0
1000	29	110	21.1	17.8	22	2.0
950	29	550	19.1	15.8	15	.7
900	29	1,018	16.2	13.0	16	1.6
850	29	1,503	13.4	9.3	20	2.3
800	29	2,013	11.1	4.4	23	3.8
750	29	2,548	8.7	-3.3	25	6.2
700	29	3,118	6.1	-10.0	25	6.6
650	29	3,720	3.4	-16.3	26	8.0
600	29	4,368	.2	-20.1	27	11.1
550	29	5,056	-3.9	-23.2	27	14.3
500	29	5,808	-7.4	-26.8	27	18.0
450	29	6,621	-12.4	-31.2	28	21.0
400	29	7,513	-17.8	-35.8	28	22.4
350	29	8,499	-24.6	-41.8	28	24.0
300	29	9,604	-32.8	-48.3	29	24.4
250	29	10,864	-41.9		30	23.6
200	29	12,339	-53.2		30	22.6
175	29	13,187	-59.8		30	22.2
150	29	14,135	-66.7		30	21.7
125	29	15,219	-73.4		30	19.0
100	27	16,501	-79.8		28	11.8
80	27	17,761	-79.3		28	6.1
70	26	18,527	-77.0		26	2.9
60	26	19,424	-70.9		22	2.1
50	26	20,522	-63.8		15	.7
40	26	21,907	-58.7		09	.7
30	26	23,735	-53.7		01	1.6
25	26	24,912	-51.6		03	1.7
20	24	26,373	-48.1		08	4.8
15	19	28,300	-43.7		10	7.4
10	10	31,011	-42.1			

HUNTINGTON W. VA. 988 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	246	-6.3	-10.6	24	1.8
1000	29	150				
950	29	553	-5.0	-12.2	27	3.9
900	29	977	-7.2	-15.4	29	6.4
850	29	1,421	-8.9	-17.7	29	8.2
800	29	1,890	-9.8	-20.0	29	10.6
750	29	2,390	-11.1	-22.3	29	13.1
700	29	2,915	-13.2	-24.2	29	14.4
650	29	3,477	-15.6	-26.3	29	16.8
600	29	4,078	-18.6	-28.6	29	19.6
550	29	4,723	-22.1	-33.0	28	22.2
500	29	5,417	-26.4	-37.8	28	24.1
450	29	6,165	-31.6	-41.7	28	25.2
400	29	6,994	-37.5	-45.1	28	28.0
350	29	7,904	-43.9		28	33.0
300	28	8,917	-50.4		27	35.6
250	28	10,094	-54.3		27	38.1
200	28	11,529	-52.9		27	35.7
175	28	12,390	-53.2		27	33.0
150	28	13,382	-53.7		27	32.1
125	28	14,549	-55.5		27	28.4
100	27	15,959	-57.9		27	25.7
80	27	17,361	-59.0		27	21.9
70	27	18,198	-59.1		27	19.4
60	27	19,165	-58.6		28	16.7
50	27	20,314	-57.8		27	13.1
40	27	21,719	-58.1		27	12.0
30	25	23,535	-56.4		27	13.8
25	24	24,697	-55.1		27	16.2
20	22	26,133	-53.2		27	19.6
15	21	27,999	-50.1		27	23.5
10	12	30,719	-44.5			
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* INTERNATIONAL FALLS, MINN. 978 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	360	-18.4	-24.1	31	2.0
1000	29	189				
950	29	573	-15.8	-21.6	33	2.4
900	29	983	-14.6	-20.7	33	6.2
850	29	1,416	-14.0	-21.9	34	[illegible].4
800	29	1,876	-14.5	-24.0	33	9.1
750	29	2,361	-16.0	-24.9	34	10.3
700	29	2,881	-17.9	-26.8	34	11.1
650	29	3,428	-20.1	-28.7	33	12.7
600	29	4,023	-22.9	-32.0	33	14.3
550	29	4,649	-26.8	-34.8	33	15.4
500	29	5,338	-31.0	-39.4	33	17.1
450	29	6,071	-36.0	-43.7	33	18.9
400	29	6,887	-41.6	-45.6	33	19.9
350	29	7,781	-47.5		33	21.9
300	29	8,786	-53.4		33	21.6
250	29	9,949	-56.5		33	22.4
200	29	11,371	-54.1		33	18.2
175	29	12,229	-53.0		32	18.7
150	29	13,223	-53.2		32	17.3
125	28	14,394	-54.3		32	14.5
100	28	15,820	-55.6		32	13.5
80	28	17,238	-56.7		32	12.9
70	28	18,082	-57.5		32	11.3
60	28	19,054	-58.4		32	11.1
50	28	20,198	-59.2		32	9.5
40	28	21,592	-60.4		32	8.5
30	28	23,382	-60.7		31	9.9
25	28	24,515	-60.8		31	[illegible].9
20	28	25,902	-60.7		30	10.5
15	25	27,698	-60.4		29	14.8
10	20	30,215	-59.7		29	18.5
7	15	32,441	-55.8		28	23.8
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JACKSON, MISS. 1009 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	28	94	1.6	-1.1	35	1.8
1000	28	166	3.1	-2.7	35	2.3
950	28	584	2.7	-6.2	35	5.0
900	28	1,020	2.1	-7.5	33	6.4
850	28	1,481	1.6	-8.4	31	7.5
800	28	1,968	.0	-10.5	30	9.4
750	28	2,482	-2.1	-13.3	29	11.2
700	28	3,030	-4.5	-17.8	29	13.2
650	28	3,609	-7.4	-20.3	29	15.5
600	28	4,231	-11.0	-23.5	29	17.7
550	28	4,889	-15.3	-26.5	29	20.3
500	28	5,609	-20.0	-31.4	28	22.4
450	28	6,378	-25.6	-36.4	28	24.7
400	28	7,227	-31.6	-41.7	28	28.4
350	28	8,159	-38.4	-45.2	28	32.9
300	28	9,201	-45.9		28	38.2
250	28	10,396	-52.6		27	43.6
200	27	11,829	-55.2		27	47.6
175	27	12,679	-56.7		27	45.4
150	27	13,651	-58.9		27	41.5
125	27	14,786	-62.3		27	36.0
100	27	16,154	-65.1		27	29.5
80	27	17,506	-66.3		28	21.7
70	27	18,315	-65.5		27	17.6
60	26	19,257	-64.0		27	14.9
50	26	20,378	-62.2		28	11.5
40	25	21,769	-59.0		27	9.6
30	24	23,589	-55.8		26	14.0
25	24	24,755	-53.6		27	16.5
20	21	26,190	-50.6		27	21.2
15	19	28,080	-48.0		27	26.3
10	16	30,814	-40.0		27	34.9
7	9	33,270	-39.0			
5	6	35,490	-39.3			

JACKSONVILLE, FLA. 1016 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	5	5.2	1.9	31	2.4
1000	29	138	6.1	-.4	32	3.3
950	29	557	5.8	-4.2	31	5.0
900	29	1,002	5.6	-4.8	28	7.5
850	29	1,468	4.0	-7.2	28	9.9
800	29	1,959	1.8	-9.4	28	11.6
750	29	2,475	-.8	-12.1	27	13.8
700	29	3,027	-3.4	-15.0	27	15.9
650	29	3,603	-6.4	-19.3	27	19.0
600	29	4,233	-9.9	-22.0	27	20.8
550	29	4,888	-13.7	-26.5	27	23.1
500	29	5,618	-18.3	-30.1	27	26.2
450	29	6,387	-23.4	-35.0	27	29.2
400	29	7,249	-29.4	-40.2	27	34.1
350	29	8,189	-36.4	-45.4	27	38.6
300	29	9,243	-42.9		27	45.6
250	29	10,456	-49.9		27	51.1
200	27	11,894	-55.3		26	53.5
175	26	12,740	-57.6		26	52.5
150	25	13,710	-59.9		26	48.3
125	25	14,839	-63.5		26	40.3
100	23	16,201	-66.2		26	32.3
80	23	17,550	-66.5		26	23.2
70	23	18,359	-65.5		26	22.3
60	23	19,300	-64.1		26	13.6
50	23	20,421	-61.3		26	10.3
40	22	21,820	-57.3		27	7.5
30	22	23,650	-54.2		27	9.5
25	20	24,828	-51.9		27	14.5
20	20	26,285	-48.0		27	18.8
15	19	28,187	-44.8		26	20.5
10	12	30,875	-42.5			

JOHN F. KENNEDY INT. AP NY 1013 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	5	-4.0	-13.4	30	5.4
1000	29	103	-4.0	-12.8	30	5.8
950	29	511	-6.1	-13.5	30	7.3
900	29	927	-8.7	-15.5	30	10.1
850	29	1,369	-10.1	-17.3	30	10.8
800	29	1,837	-10.8	-20.8	29	11.1
750	29	2,336	-12.2	-22.3	29	13.1
700	29	2,858	-14.3	-25.0	28	14.8
650	29	3,418	-17.0	-27.3	28	17.1
600	29	4,014	-20.3	-30.8	27	18.7
550	29	4,657	-24.1	-34.5	27	20.8
500	29	5,344	-28.5	-37.9	27	25.1
450	29	6,092	-33.3	-41.4	27	28.3
400	29	6,911	-38.4	-44.3	27	32.5
350	29	7,818	-44.4		27	37.1
300	29	8,839	-50.1		26	34.7
250	29	10,018	-53.7		26	34.8
200	28	11,461	-51.5		27	30.3
175	28	12,328	-51.6		27	27.6
150	28	13,328	-52.0		27	25.6
125	28	14,506	-53.7		27	22.3
100	28	15,933	-55.9		26	18.9
80	28	17,350	-56.5		26	17.7
70	28	18,196	-56.8		26	14.3
60	28	19,173	-56.6		27	11.2
50	27	20,331	-57.3		27	9.6
40	27	21,744	-56.1		26	8.3
30	26	23,571	-55.8		26	10.8
25	26	24,734	-54.8		26	12.5
20	26	26,164	-53.6		27	14.4
15	21	27,997	-52.2		27	19.4
10	9	30,685	-49.4			

JOHNSTON IS., PACIFIC AREA 1013 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	3	23.7	18.6	05	2.1
1000	29	111	22.8	18.3	05	2.1
950	29	556	19.2	16.0	07	1.3
900	29	1,020	15.9	12.1	21	.3
850	29	1,504	14.3	4.6	25	2.1
800	29	2,015	13.1	-2.4	25	4.7
750	29	2,556	11.0	-8.4	26	5.3
700	29	3,129	8.5	-11.5	27	6.0
650	29	3,736	5.6	-15.0	28	7.2
600	29	4,389	2.2	-17.6	28	9.5
550	29	5,082	-1.2	-21.1	28	9.7
500	29	5,841	-5.2	-24.3	28	10.3
450	29	6,665	-10.3	-28.6	28	11.8
400	29	7,558	-16.2	-33.8	29	13.0
350	29	8,549	-23.1	-39.5	30	14.6
300	29	9,660	-31.5	-46.4	29	15.2
250	29	10,924	-41.6		29	14.7
200	29	12,400	-53.5		29	14.2
175	29	13,246	-60.2		30	13.9
150	28	14,192	-67.3		30	13.3
125	28	15,271	-74.8		29	12.5
100	28	16,544	-81.4		29	9.3
80	27	17,790	-82.2		27	4.5
70	26	18,542	-78.5		27	2.7
60	25	19,434	-71.8		26	2.3
50	25	20,534	-63.3		19	2.1
40	25	21,926	-58.3		10	3.3
30	25	23,753	-54.7		09	8.0
25	24	24,926	-51.8		08	10.0
20	24	26,387	-46.9		08	12.9
15	20	28,313	-43.5		09	16.2
10	10	31,063	-40.9			
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KING SALMON, ALASKA 1000 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	15	-11.9	-17.0	02	2.7
1000	29	13			03	2.8
950	29	411	-7.6	-11.8	06	4.2
900	29	832	-6.1	-11.5	10	3.3
850	29	1,280	-7.1	-13.4	12	4.0
800	29	1,751	-9.0	-16.6	15	3.9
750	29	2,247	-11.2	-20.3	16	5.3
700	29	2,776	-13.6	-22.9	17	5.4
650	29	3,333	-16.8	-26.1	17	5.5
600	29	3,935	-20.4	-29.9	17	6.0
550	29	4,569	-24.7	-33.5	19	5.9
500	29	5,260	-29.5	-37.7	20	7.4
450	29	6,004	-34.8	-42.8	21	7.8
400	29	6,818	-40.9	-46.0	22	[illegible].7
350	29	7,714	-47.3		22	11.0
300	29	8,720	-53.0		22	11.9
250	29	9,886	-56.0		22	12.6
200	29	11,316	-52.6		21	10.3
175	29	12,181	-51.5		21	9.7
150	29	13,181	-51.7		21	11.0
125	29	14,362	-51.9		22	10.4
100	29	15,804	-52.9		22	10.5
80	29	17,238	-54.3		23	11.1
70	29	18,092	-54.9		23	11.1
60	29	19,076	-55.6		24	11.3
50	29	20,236	-56.4		24	10.8
40	29	21,647	-58.2		25	11.5
30	26	23,455	-60.5		26	11.5
25	21	24,596	-61.2		27	11.8
20	18	26,020	-62.2		28	6.6
15	13	27,917	-62.9			
10	5	30,401	-63.1			

+ KOROR, CAROLINE IS. 1007 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	30	26.3	23.7	06	2.8
1000	29	90	25.8	23.1	06	3.5
950	29	538	22.7	18.9	07	7.1
900	29	1,012	19.7	14.9	08	8.3
850	29	1,504	17.1	11.7	08	7.2
800	29	2,021	15.0	7.1	08	5.0
750	29	2,562	12.5	3.6	08	5.8
700	29	3,143	9.5	.2	09	5.6
650	29	3,752	6.0	-2.5	09	5.5
600	29	4,407	2.2	-5.7	09	5.1
550	29	5,102	-1.6	-10.4	09	4.7
500	29	5,859	-6.0	-15.2	10	5.6
450	29	6,676	-10.8	-20.0	10	4.7
400	29	7,575	-16.4	-25.8	11	5.0
350	29	8,567	-23.1	-34.4	11	6.2
300	29	9,677	-31.6	-42.6	12	6.5
250	29	10,939	-42.0		12	9.4
200	29	12,408	-54.9		13	15.1
175	29	13,247	-62.2		13	18.8
150	29	14,182	-69.9		13	22.2
125	29	15,249	-75.9		12	21.9
100	29	16,525	-79.1		09	5.9
80	29	17,794	-77.1		35	1.6
70	29	18,567	-73.5		29	4.7
60	29	19,475	-70.2		28	5.4
50	29	20,569	-66.1		28	4.2
40	28	21,939	-60.7		08	5.7
30	27	23,752	-55.6		09	21.0
25	26	24,922	-52.8		09	26.5
20	24	26,374	-48.9		09	28.6
15	17	28,277	-44.7		10	28.8
10	5	31,017	-40.0			

KOTZEBUE, ALASKA 1017 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	5	-27.8	-28.3	08	.6
1000	29	131	-21.2	-26.0	05	1.6
950	29	516	-17.6	-22.4	06	3.4
900	29	918	-17.0	-22.2	05	3.8
850	29	1,347	-16.6	-22.6	04	3.6
800	29	1,802	-17.6	-24.8	02	2.7
750	28	2,283	-19.2	-26.9	02	1.2
700	28	2,796	-21.3	-28.8	34	1.0
650	28	3,339	-24.0	-31.4	18	1.4
600	28	3,920	-27.3	-34.1	19	2.0
550	28	4,539	-31.1	-37.0	21	3.2
500	28	5,212	-35.1	-38.8	21	7.8
450	28	5,940	-39.8	-41.3	22	9.5
400	28	6,738	-44.9	-43.6	22	10.5
350	28	7,619	-50.3		22	11.1
300	28	8,613	-55.0		22	13.1
250	28	9,773	-56.4		23	11.8
200	28	11,196	-54.3		23	12.0
175	28	12,053	-53.7		23	12.2
150	28	13,043	-53.9		23	12.1
125	28	14,213	-54.6		23	14.4
100	28	15,637	-55.8		23	15.3
80	28	17,052	-57.3		24	14.9
70	28	17,894	-58.1		25	17.4
60	28	18,864	-58.9		25	17.2
50	25	20,079	-58.7		25	18.2
40	25	21,476	-60.2		26	20.1
30	23	23,322	-61.7		25	17.7
25	20	24,478	-62.8		26	17.1
20	18	25,883	-64.4		26	17.8
15	11	27,711	-66.1			

KWAJALEIN, MARSHALL IS. 1010 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	4	26.3	21.6	05	6.0
1000	29	96	25.6	20.7	06	7.0
950	29	546	22.1	18.1	06	8.6
900	29	1,015	18.9	14.7	07	7.7
850	29	1,505	16.7	9.5	07	5.6
800	29	2,022	15.9	3.1	08	3.8
750	29	2,568	13.8	-5.2	08	4.0
700	29	3,146	10.8	-9.9	09	5.2
650	29	3,760	7.4	-14.1	08	6.7
600	29	4,415	3.8	-18.0	08	7.5
550	29	5,115	-.4	-21.5	08	7.5
500	29	5,871	-4.9	-26.0	08	8.4
450	29	6,692	-9.5	-31.7	09	9.6
400	29	7,592	-15.2	-35.1	09	9.5
350	29	8,588	-22.0	-40.5	10	8.0
300	29	9,703	-30.6	-46.0	10	5.6
250	29	10,971	-40.8	-53.7	11	5.5
200	28	12,449	-53.1	-63.3	12	6.6
175	28	13,296	-60.1	-70.0	12	5.9
150	28	14,240	-68.1		11	6.4
125	28	15,312	-76.5		10	8.5
100	28	16,569	-83.9		11	12.5
80	26	17,812	-79.5		11	4.9
70	25	18,578	-74.6		26	2.6
60	24	19,483	-71.2		26	6.7
50	24	20,573	-67.2		27	6.3
40	24	21,935	-62.8		06	2.2
30	23	23,734	-57.7		09	17.8
25	23	24,893	-53.7		09	23.5
20	23	26,340	-50.1		09	25.8
15	21	28,248	-44.3		10	27.0
10	20	31,013	-38.0		09	23.0
7	19	33,484	-35.2		10	11.9
5	10	35,881	-31.9			

See reference note at end of table

RAWINSONDE DATA

Average monthly values

LAKE CHARLES, LA. 1019 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	5	4.4	2.4	02	2.2
1000	29	162	6.5	-.1	02	3.5
950	29	587	6.2	-2.5	01	2.5
900	29	1,026	5.6	-5.4	31	3.9
850	29	1,492	4.6	-5.5	30	6.2
800	29	1,985	2.7	-7.9	29	8.0
750	29	2,505	.5	-10.1	29	10.6
700	29	3,057	-1.7	-14.1	29	12.3
650	29	3,642	-4.7	-16.9	29	14.2
600	29	4,269	-8.4	-20.7	29	16.4
550	29	4,932	-12.6	-24.8	28	18.6
500	29	5,661	-17.3	-29.1	28	21.6
450	29	6,440	-22.7	-34.5	28	23.7
400	29	7,296	-29.1	-39.1	28	26.6
350	29	8,237	-35.9	-44.4	27	30.2
300	29	9,291	-43.7	-48.3	27	31.8
250	28	10,496	-50.7		27	38.9
200	28	11,934	-55.7		27	44.2
175	28	12,779	-58.3		27	43.4
150	28	13,743	-60.8		27	40.3
125	28	14,870	-63.6		27	34.7
100	28	16,227	-66.8		27	26.4
80	28	17,568	-67.7		27	21.7
70	27	18,370	-67.0		27	19.3
60	27	19,305	-65.1		27	15.0
50	26	20,422	-62.2		27	10.3
40	25	21,814	-58.1		27	10.7
30	25	23,639	-55.0		27	13.6
25	25	24,810	-52.2		26	19.1
20	24	26,266	-49.1		27	21.5
15	23	28,167	-45.6		27	29.6
10	15	30,890	-41.0			
7						
5						
4						
3						

LANDER, WYO. 830 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	1,696	-6.9	-10.8	22	.7
1000	29	223				
950	29	630				
900	29	1,061				
850	29	1,514				
800	29	1,991	-2.0	-11.2	30	.1
750	29	2,500	-3.6	-13.4	34	1.7
700	29	3,046	-6.6	-15.9	31	5.0
650	29	3,618	-9.8	-19.0	31	7.8
600	29	4,237	-13.1	-23.3	31	10.7
550	29	4,888	-16.9	-28.1	31	12.2
500	29	5,605	-22.0	-32.7	31	13.6
450	29	6,366	-27.7	-37.8	31	13.9
400	29	7,209	-34.3	-43.5	30	16.4
350	29	8,130	-41.6	-46.3	30	19.0
300	29	9,157	-49.9		29	20.9
250	29	10,327	-57.4		30	22.8
200	29	11,725	-60.4		30	25.2
175	29	12,559	-59.0		30	24.5
150	29	13,530	-57.3		30	23.0
125	29	14,681	-58.1		30	19.8
100	29	16,080	-60.1		30	16.1
80	29	17,469	-61.3		31	12.7
70	29	18,296	-61.4		31	11.0
60	29	19,252	-62.3		31	8.5
50	29	20,377	-62.6		32	7.5
40	27	21,754	-62.1		32	6.9
30	24	23,543	-60.8		31	6.6
25	20	24,688	-60.3		31	5.4
20	14	26,119	-58.9		30	6.6
15	7	27,956	-57.0			

* LIHUE KAUAI, HAWAII 1008 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	36	18.4	16.7	25	3.8
1000	29	108	20.3	16.7	25	3.4
950	29	553	18.1	14.3	24	4.7
900	29	1,013	15.0	11.3	24	6.3
850	29	1,495	12.3	6.2	25	7.5
800	29	2,002	10.2	-.4	25	9.0
750	29	2,534	8.0	-6.4	25	11.1
700	29	3,104	5.5	-11.6	26	12.7
650	29	3,704	2.5	-17.8	26	14.8
600	29	4,350	-1.0	-21.5	27	16.7
550	29	5,032	-4.7	-25.5	27	19.0
500	29	5,784	-9.2	-28.1	27	22.2
450	29	6,591	-13.2	-32.3	27	25.8
400	29	7,483	-18.3	-37.2	27	29.1
350	29	8,466	-24.9	-42.8	28	30.0
300	29	9,570	-32.9	-49.2	28	32.1
250	29	10,828	-42.1		28	32.5
200	29	12,302	-52.8		28	33.9
175	29	13,152	-58.9		28	33.0
150	29	14,104	-65.6		28	31.8
125	29	15,194	-72.1		28	29.9
100	29	16,488	-78.0		27	26.2
80	29	17,756	-79.1		27	18.8
70	28	18,518	-77.3		26	12.6
60	28	19,412	-71.9		25	6.7
50	28	20,506	-64.6		24	5.2
40	28	21,888	-59.2		25	2.5
30	28	23,708	-54.9		28	2.1
25	28	24,877	-53.2		29	2.0
20	27	26,324	-49.5		35	2.0
15	27	28,229	-44.8		14	.7
10	27	30,954	-43.4		23	4.1
7	26	33,367	-39.3		25	10.8
5	21	35,692	-34.0		25	20.7
4	16	37,241	-30.3		26	27.7
3	13	39,279	-27.2		26	33.1

LITTLE ROCK, ARK. 1012 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	79	-.2	-5.2	34	2.3
1000	29	172	.9	-7.5	35	2.9
950	29	585	-.1	-10.0	34	4.8
900	29	1,017	-1.5	-11.7	33	6.0
850	29	1,472	-1.7	-12.9	32	7.7
800	29	1,954	-2.7	-13.4	31	9.3
750	29	2,462	-4.5	-15.3	31	11.3
700	29	3,006	-6.5	-17.7	30	13.1
650	29	3,578	-9.8	-19.6	30	14.4
600	29	4,197	-13.0	-23.1	30	16.9
550	29	4,851	-17.2	-26.8	29	19.2
500	29	5,564	-22.1	-31.0	29	21.3
450	29	6,324	-27.2	-35.9	29	24.2
400	29	7,170	-33.2	-41.6	29	27.4
350	29	8,096	-40.0	-46.4	29	31.8
300	29	9,132	-47.4		29	36.5
250	29	10,318	-54.7		28	40.7
200	29	11,735	-56.6		28	43.8
175	29	12,583	-56.3		28	41.7
150	29	13,560	-57.3		28	37.6
125	28	14,703	-59.5		28	31.9
100	28	16,089	-62.4		28	26.9
80	28	17,458	-64.1		28	18.8
70	27	18,276	-63.7		28	15.2
60	26	19,223	-62.1		28	14.1
50	24	20,354	-61.0		28	10.9
40	24	21,745	-59.2		28	10.2
30	23	23,561	-57.2		27	12.5
25	23	24,718	-55.3		27	16.5
20	22	26,145	-52.8		27	20.1
15	16	28,014	-49.9		27	22.7
10	7	30,699	-44.8			

MCGRATH, ALASKA 997 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	28	103	-20.2	-21.1	01	1.2
1000	28	79			01	2.4
950	28	466	-15.5	-18.5	05	4.7
900	28	875	-13.1	-16.0	08	6.9
850	28	1,312	-11.3	-15.9	08	6.7
800	28	1,778	-11.4	-17.2	10	3.6
750	28	2,265	-13.7	-20.0	14	3.4
700	28	2,792	-16.5	-23.2	17	3.9
650	28	3,343	-19.6	-26.1	18	4.2
600	28	3,937	-23.1	-29.8	19	4.5
550	28	4,564	-27.3	-33.5	20	5.5
500	28	5,248	-32.1	-36.3	20	6.3
450	28	5,983	-37.3	-40.2	21	7.6
400	28	6,789	-42.4	-44.9	22	8.2
350	28	7,680	-48.3		22	8.7
300	28	8,682	-53.5		23	9.1
250	28	9,848	-54.9		23	9.3
200	28	11,281	-52.9		23	10.6
175	28	12,143	-52.5		23	11.9
150	28	13,139	-52.6		23	10.6
125	28	14,315	-53.3		23	10.7
100	28	15,748	-54.4		24	12.0
80	28	17,173	-55.4		24	13.5
70	28	18,022	-56.2		25	13.6
60	28	19,001	-56.8		25	14.3
50	27	20,162	-57.7		25	14.4
40	25	21,572	-59.4		25	16.0
30	23	23,406	-61.3		26	17.4
25	18	24,660	-61.5		26	14.1
20	17	26,026	-63.3		27	16.2
15	11	27,770	-65.3			

* MAJURO, MARSHALL IS. 1010 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	3	28.5	23.5	05	5.5
1000	29	96	27.0	20.4	05	6.8
950	29	538	22.5	16.9	06	9.2
900	29	1,017	19.4	14.0	07	8.1
850	29	1,508	17.0	9.9	08	6.7
800	29	2,025	15.7	4.1	09	5.1
750	29	2,566	13.3	-2.3	08	4.6
700	29	3,149	10.3	-5.8	09	5.2
650	29	3,758	7.4	-11.2	09	6.7
600	29	4,417	3.5	-14.6	08	7.5
550	29	5,110	-.3	-18.5	08	8.3
500	29	5,876	-4.6	-22.5	09	9.2
450	29	6,697	-9.1	-27.5	08	9.9
400	29	7,605	-14.2	-31.9	08	10.0
350	29	8,606	-20.9	-37.9	08	8.8
300	29	9,726	-29.2	-45.4	09	6.9
250	29	11,003	-36.7	-51.1	11	6.7
200	29	12,491	-51.7		10	6.7
175	29	13,343	-58.8		10	6.3
150	29	14,293	-66.5		10	7.8
125	29	15,374	-74.6		08	9.3
100	29	16,646	-82.6		09	12.8
80	29	17,894	-79.2		10	6.1
70	28	18,663	-73.8		26	1.7
60	26	19,574	-69.7		27	8.0
50	22	20,676	-65.2		27	9.2
40	17	22,046	-59.9		07	1.8
30	13	23,869	-55.9		09	19.8
25	9	25,036	-52.7			
20						
15						
10						
7						

* MARCUS IS., N. PACIFIC 1015 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	9	21.5	14.0	33	3.2
1000	29	136	19.2	10.2	31	1.9
950	29	575	14.8	6.7	29	2.9
900	29	1,029	10.9	4.8	28	4.9
850	29	1,504	7.9	1.5	28	6.8
800	29	2,003	6.2	-4.7	28	9.3
750	29	2,532	5.3	-9.4	27	12.5
700	29	3,094	3.5	-13.2	27	15.6
650	29	3,692	1.2	-16.7	27	20.7
600	29	4,334	-1.3	-20.1	27	25.9
550	29	5,019	-4.1	-23.9	27	28.9
500	29	5,772	-7.6	-26.9	27	34.4
450	29	6,586	-11.9	-30.0	27	38.6
400	29	7,481	-16.9	-34.3	27	42.2
350	29	8,471	-23.2	-40.3	27	44.8
300	29	9,581	-31.4	-47.1	27	44.7
250	29	10,846	-41.3	-54.1		
200	29	12,325	-52.3			
175	29	13,177	-58.5			
150	28	14,129	-65.6			
125	28	15,217	-73.0			
100	28	16,506	-77.9			
80	28	17,780	-77.1			
70	28	18,552	-74.1			
60	28	19,461	-69.0			
50	28	20,572	-61.3			
40	27	21,979	-54.8			
30	27	23,833	-51.3			
25	23	25,019	-48.9			
20	22	26,490	-46.4			
15	16	28,409	-43.5			
10	5	31,136	-38.8			

* MEDFORD, OREG. 971 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	401	4.1	1.7	12	.8
1000	29	160				
950	29	583	7.2	3.3	11	.9
900	29	1,027	7.4	.8	16	3.2
850	29	1,496	5.2	-1.7	18	5.3
800	29	1,990	2.4	-4.7	20	6.0
750	29	2,507	-.3	-8.8	22	7.3
700	29	3,059	-3.4	-12.7	23	7.4
650	29	3,638	-7.0	-17.7	24	7.4
600	29	4,262	-10.9	-21.2	25	7.6
550	29	4,920	-15.4	-25.6	25	7.3
500	29	5,640	-20.6	-29.7	26	7.0
450	29	6,406	-26.4	-34.8	26	7.8
400	29	7,252	-33.0	-41.8	27	8.9
350	29	8,179	-40.0	-45.3	26	11.2
300	29	9,214	-48.3		27	11.8
250	28	10,392	-56.6		27	14.7
200	28	11,799	-57.7		27	17.8
175	27	12,649	-56.4		27	18.2
150	27	13,627	-57.4		28	17.4
125	27	14,774	-59.3		28	17.0
100	27	16,163	-62.1		28	12.8
80	23	17,534	-63.0		29	7.8
70	23	18,355	-62.7		30	5.4
60	22	19,310	-62.4		30	4.0
50	22	20,437	-61.5		32	3.4
40	18	21,825	-61.3		34	2.7
30	15	23,626	-61.9		35	3.8
25	13	24,769	-61.1		31	3.3
20	13	26,156	-60.6		29	7.5
15	13	27,955	-59.0		28	10.6
10	10	30,536	-55.4		27	20.6
7	8	32,827	-52.5			

MERIDA, MEXICO 1017 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	11	14.8	13.9	06	1.1
1000	29	157	18.8	15.2	06	2.0
950	29	593	16.7	12.5	08	1.1
900	29	1,056	14.0	8.1	30	.9
850	29	1,537	11.7	2.3	28	3.8
800	29	2,043	10.1	-3.7	27	5.4
750	29	2,577	7.8	-7.1	27	5.5
700	29	3,144	5.2	-10.8	28	6.2
650	29	3,745	2.2	-15.0	28	7.6
600	29	4,389	-1.3	-17.9	27	9.8
550	29	5,071	-5.4	-22.7	27	10.5
500	29	5,820	-10.1	-26.3	27	12.0
450	29	6,621	-15.2	-30.9	26	16.1
400	29	7,506	-21.3	-35.8	26	18.4
350	29	8,478	-28.0	-42.1	26	22.9
300	29	9,568	-35.6	-49.6	26	26.4
250	29	10,811	-45.0		25	25.8
200	29	12,267	-55.0			
175	28	13,109	-60.1			
150	26	14,058	-65.3			
125	25	15,153	-70.3			
100	24	16,458	-75.4			
80	24	17,747	-75.7			
70	24	18,521	-73.6			
60	24	19,433	-68.4			
50	24	20,542	-62.0			
40	23	21,944	-55.8			
30	21	23,792	-52.0			
25	19	24,972	-49.5			
20	18	26,451	-45.2			
15	14	28,392	-41.6			

MIAMI, FLA. 1016 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	4	13.3	11.1	32	2.1
1000	29	135	14.9	10.7	32	3.1
950	29	569	13.2	6.7	30	4.5
900	29	1,022	11.0	2.7	28	5.7
850	29	1,498	8.9	-1.2	28	6.8
800	29	1,998	6.7	-4.8	27	9.3
750	29	2,530	4.4	-7.9	27	12.1
700	29	3,086	2.1	-13.0	27	14.3
650	29	3,681	-.5	-16.6	27	17.4
600	29	4,319	-3.9	-20.7	27	18.9
550	29	4,997	-8.1	-23.4	27	21.8
500	29	5,735	-12.7	-27.3	27	25.2
450	29	6,526	-17.7	-32.0	27	28.6
400	29	7,404	-23.8	-36.0	27	32.5
350	29	8,367	-30.3	-42.2	27	36.1
300	29	9,448	-37.7	-49.3	27	42.0
250	29	10,683	-46.1		26	45.9
200	29	12,139	-54.8		26	48.1
175	29	12,984	-59.2		26	46.9
150	29	13,940	-63.7		26	44.1
125	29	15,046	-68.3		26	37.0
100	27	16,369	-72.1		26	30.4
80	27	17,680	-72.1		27	21.6
70	27	18,468	-70.5		27	16.1
60	26	19,389	-67.0		27	11.4
50	26	20,502	-62.6		27	8.9
40	26	21,896	-57.2		27	5.5
30	26	23,734	-53.3		27	6.5
25	25	24,911	-50.6		27	7.5
20	21	26,382	-47.4		28	7.6
15	16	28,281	-43.2		27	11.1
10	7	31,013	-41.1			

MIDLAND, TEXAS 918 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	874	2.3	-.9	03	1.6
1000	29	178				
950	29	597				
900	29	1,037	4.7	-2.1	05	.8
850	29	1,504	5.0	-3.9	30	2.4
800	29	2,000	4.5	-5.9	30	5.7
750	29	2,522	1.8	-10.1	31	7.2
700	29	[illegible],076	-1.3	-13.2	30	9.3
650	29	[illegible],663	-4.7	-16.4	29	10.8
600	29	4,289	-8.5	-22.1	29	12.7
550	29	4,955	-12.6	-26.7	29	15.6
500	29	5,680	-17.3	-30.6	29	18.3
450	29	[illegible],455	-23.0	-34.7	29	21.[illegible]
400	29	7,313	-29.3	-40.6	28	23.6
350	29	[illegible],253	-36.4	-45.4	29	25.6
300	29	[illegible],304	-44.5		29	27.[illegible]
250	29	10,502	-52.7		28	33.8
200	29	11,927	-56.6		28	39.3
175	29	12,770	-58.7		28	36.4
150	29	13,734	-60.5		28	31.[illegible]
125	29	14,860	-63.8		28	27.2
100	29	16,216	-67.3		28	21.6
80	27	17,553	-67.7		28	16.8
70	27	18,356	-67.7		28	12.8
60	26	19,286	-65.9		28	9.7
50	24	20,402	-63.0		28	[illegible].1
40	24	21,784	-60.3		28	8.9
30	24	23,592	-56.7		27	10.1
25	23	24,749	-55.1		27	13.4
20	22	26,181	-52.5		27	19.3
15	19	28,071	-48.4		27	24.8
10	9	30,735	-44.5			
7	6	33,100	-42.3			
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MONTGOMERY, ALA. 1012 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	61	2.2	-3.5	31	1.7
1000	29	155	2.5	-4.6	33	3.2
950	29	571	2.2	-6.5	34	5.8
900	29	1,006	1.9	-7.2	32	7.1
850	29	1,468	1.5	-7.4	30	[illegible].1
800	29	1,955	.0	-9.7	30	11.3
750	29	2,469	-2.3	-12.6	29	12.9
700	29	3,016	-4.9	-15.0	28	14.8
650	29	3,593	-8.0	-17.9	28	16.4
600	28	4,210	-11.5	-21.5	28	18.5
550	28	4,866	-15.4	-26.0	28	20.2
500	28	5,586	-20.1	-30.4	28	23.1
450	28	6,356	-25.6	-35.4	28	25.7
400	28	7,203	-31.6	-40.5	28	30.0
350	28	8,135	-38.3	-45.2	27	34.1
300	28	9,179	-45.6		27	38.6
250	28	10,376	-51.8		27	44.3
200	28	11,810	-55.0		27	47.4
175	28	12,660	-56.7		27	47.3
150	28	13,633	-58.5		27	43.3
125	28	14,772	-61.5		27	38.3
100	28	16,145	-64.2		27	32.4
80	28	17,507	-64.9		27	24.6
70	28	18,320	-64.5		27	20.8
60	27	19,265	-62.9		27	17.4
50	27	20,390	-61.4		27	12.8
40	27	21,785	-58.1		27	12.1
30	27	23,610	-54.4		27	15.2
25	26	24,783	-52.2		26	17.7
20	24	26,238	-49.5		26	21.1
15	24	28,135	-46.0		26	26.6
10	20	30,855	-40.6		27	29.0
7	10	33,311	-38.8			

* NANTUCKET, MASS. 1010 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	14	-4.2	-8.8	31	3.5
1000	29	90	-3.4	-9.2	28	3.8
950	29	492	-5.9	-12.1	28	6.5
900	29	915	-8.4	-14.1	29	7.0
850	29	1,357	-9.7	-17.0	29	[illegible].4
800	29	1,825	-11.3	-20.7	28	10.7
750	29	2,317	-12.8	-22.7	28	12.0
700	29	2,843	-14.8	-25.3	27	14.5
650	29	3,398	-17.4	-28.6	27	17.5
600	29	3,998	-20.6	-31.8	27	20.3
550	29	4,630	-24.3	-35.7	27	22.2
500	29	5,326	-28.8	-39.[illegible]	27	24.[illegible]
450	29	6,069	-33.9	-42.7	27	27.8
400	29	6,889	-38.9	-46.5	27	31.9
350	29	7,794	-44.5		27	34.2
300	29	8,812	-50.2		26	36.3
250	29	9,993	-52.7		27	33.8
200	29	11,439	-50.9		26	30.0
175	29	12,307	-51.1		26	28.5
150	28	13,306	-52.[illegible]		26	27.4
125	28	14,482	-53.6		26	23.1
100	28	15,910	-55.7		26	21.4
80	28	17,327	-56.3		26	19.4
70	27	18,174	-56.3		26	15.4
60	27	19,152	-56.7		26	14.2
50	27	20,306	-57.1		26	13.1
40	27	21,717	-57.0		26	13.9
30	26	23,546	-55.7		26	13.6
25	26	24,709	-55.2		26	14.4
20	24	26,127	-54.6		26	17.1
15	24	27,976	-52.7		26	23.4
10	23	30,624	-49.2		26	31.7
7	19	32,976	-45.6		26	40.1

NASHVILLE, TENN. 998 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	180	-2.[illegible]	-7.8	33	1.4
1000	29	165			36	1.7
950	29	572	-3.4	-10.5	32	3.9
900	29	998	-5.4	-13.3	31	5.9
850	29	1,447	-5.6	-17.0	31	7.8
800	29	1,922	-6.1	-17.7	30	10.4
750	29	2,423	-7.6	-18.9	30	13.0
700	29	2,962	-9.7	-20.4	29	15.1
650	29	3,526	-12.3	-24.3	29	17.1
600	29	4,140	-15.9	-26.8	29	20.2
550	29	4,788	-19.7	-30.4	28	21.2
500	29	5,493	-24.1	-34.4	28	25.1
450	29	6,250	-28.9	-38.7	28	27.0
400	29	7,088	-35.[illegible]	-43.6	28	30.6
350	29	8,007	-41.6	-45.8	28	33.7
300	29	9,035	-49.[illegible]		28	38.6
250	29	10,215	-54.7		28	40.2
200	29	11,639	-55.2		28	38.7
175	29	12,493	-54.7		27	35.8
150	29	13,478	-55.6		28	35.0
125	29	14,636	-57.1		27	32.4
100	29	16,038	-60.2		28	25.6
80	28	17,426	-61.8		27	22.7
70	28	18,253	-61.6		28	18.5
60	28	19,208	-61.0		28	14.8
50	28	20,342	-60.2		28	12.2
40	28	21,737	-58.9		28	10.2
30	28	23,552	-57.0		27	14.7
25	28	24,709	-55.4		27	16.5
20	28	26,139	-53.4		27	20.7
15	28	28,000	-50.8		27	26.8
10	28	30,669	-45.9		27	38.0
7	24	33,038	-43.5		27	51.1
5	19	35,331	-41.4			

* NOME, ALASKA 1013 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	26	5	-21.2	-27.0	01	2.2
1000	26	104			03	2.4
950	26	493	-15.7	-22.0	04	4.0
900	26	899	-15.6	-23.1	04	5.3
850	26	1,331	-15.4	-24.6	04	5.6
800	26	1,788	-16.1	-26.1	03	4.7
750	26	[illegible],274	-17.6	-27.7	03	3.4
700	26	2,787	-20.0	-29.1	01	2.1
650	26	3,333	-22.7	-30.9	34	1.3
600	26	3,918	-25.[illegible]	-34.7	31	1.8
550	26	4,540	-29.7	-38.7	28	2.1
500	26	5,218	-34.1	-40.7	27	3.1
450	26	5,944	-38.9	-43.6	26	5.1
400	25	6,743	-44.3		26	6.3
350	25	7,627	-49.6		25	6.8
300	25	8,626	-54.[illegible]		24	7.5
250	25	9,788	-56.2		24	9.0
200	25	11,214	-53.4		25	8.0
175	25	12,074	-52.9		24	7.8
150	24	13,070	-53.1		25	9.3
125	24	14,245	-53.[illegible]		25	10.5
100	24	15,676	-54.7		25	12.1
80	24	17,101	-55.6		25	13.2
70	24	17,950	-56.3		25	14.5
60	24	18,928	-57.3		26	15.3
50	24	20,078	-58.2		25	17.4
40	24	21,477	-59.[illegible]		26	18.8
30	24	23,267	-61.6		26	19.9
25	23	24,423	-62.0		26	19.5
20	21	25,836	-63.6		26	19.5
15	16	27,764	-64.2		26	18.7
10	9	30,267	-65.5			

See reference note at end of table

RAWINSONDE DATA

Average monthly values

FEBRUARY 1968

NORTH PLATTE, NEBR. 921 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	848	-7.4	-11.0	35	1.1
1000	29	201				
950	29	603				
900	29	1,028	-4.5	-10.4	33	4.1
850	29	1,480	-3.1	-10.5	33	8.5
800	29	1,959	-4.0	-12.2	32	10.6
750	29	2,467	-5.5	-14.1	32	12.4
700	29	3,007	-8.0	-16.8	32	14.5
650	29	3,573	-11.3	-19.7	32	15.0
600	29	4,190	-15.1	-23.5	32	17.0
550	29	4,837	-19.1	-29.5	32	18.8
500	29	5,546	-24.0	-34.5	32	19.5
450	29	6,300	-29.5	-40.4	32	20.9
400	29	7,137	-35.8	-45.6	31	21.6
350	29	8,051	-43.2		31	22.8
300	29	9,072	-50.8		31	25.9
250	29	10,241	-57.1		31	27.5
200	29	11,645	-58.1		31	27.3
175	29	12,489	-56.5		30	26.3
150	29	13,469	-55.9		30	23.6
125	29	14,625	-57.4		30	22.5
100	29	16,029	-59.1		30	18.0
80	29	17,423	-60.6		30	14.4
70	29	18,252	-61.1		31	12.7
60	29	19,210	-61.6		31	10.6
50	29	20,340	-61.3		31	9.0
40	29	21,727	-60.7		30	7.5
30	28	23,521	-59.8		30	7.6
25	23	24,671	-58.6		29	8.0
20	22	26,077	-57.3		28	11.8
15	17	27,893	-55.2		27	17.8

OAKLAND, CALIF. 1018 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	6	10.5	9.5	07	.3
1000	29	155	10.9	8.9	15	.6
950	29	581	9.8	5.6	17	1.9
900	29	1,032	8.9	.1	19	3.5
850	29	1,504	6.7	-2.9	21	3.6
800	29	1,999	3.9	-6.5	22	4.2
750	29	2,521	1.1	-10.6	23	5.3
700	29	3,073	-2.3	-14.3	23	5.5
650	29	3,654	-5.8	-19.9	25	5.9
600	29	4,281	-9.9	-23.0	26	6.9
550	28	4,942	-14.6	-29.0	26	8.2
500	28	5,661	-19.8	-32.2	26	8.9
450	28	6,427	-25.5	-37.7	27	10.4
400	28	7,278	-31.3	-43.6	26	11.8
350	27	8,211	-38.4	-48.6	27	14.7
300	27	9,254	-45.9		27	17.5
250	27	10,445	-53.7		27	21.6
200	27	11,864	-56.3		27	23.1
175	27	12,712	-56.7		27	23.8
150	27	13,684	-58.5		28	21.3
125	27	14,823	-61.3		27	18.9
100	27	16,196	-64.5		28	15.7
80	27	17,554	-65.7		28	11.7
70	25	18,373	-65.3		29	10.1
60	25	19,311	-64.8		30	7.0
50	25	20,426	-63.9		31	5.1
40	24	21,799	-62.2		33	4.3
30	23	23,585	-60.4		31	5.3
25	22	24,725	-59.1		31	6.2
20	20	26,134	-57.1		29	7.9
15	17	27,975	-54.4		27	13.8
10	9	30,573	-50.7			

OMAHA, NEBR. 973 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	403	-6.4	-11.1	35	1.5
1000	29	188				
950	29	586	-6.7	-12.6	33	3.1
900	29	1,011	-7.0	-14.3	32	6.5
850	29	1,457	-7.3	-15.2	32	9.1
800	29	1,929	-7.9	-15.4	32	10.8
750	29	2,429	-9.1	-17.4	32	13.2
700	29	2,962	-11.4	-19.7	32	16.4
650	29	3,526	-14.2	-23.2	32	18.6
600	29	4,131	-17.6	-27.1	32	20.8
550	29	4,774	-21.5	-31.4	32	23.3
500	29	5,476	-25.9	-35.9	32	24.5
450	29	6,224	-31.3	-41.1	32	24.9
400	29	7,056	-37.6	-45.9	31	27.2
350	29	7,964	-44.4		31	28.7
300	29	8,980	-51.7		31	28.6
250	29	10,146	-57.3		31	29.2
200	28	11,557	-55.4		30	28.1
175	28	12,412	-54.4		30	26.7
150	27	13,392	-54.9		30	24.4
125	27	14,554	-56.2		30	21.6
100	27	15,966	-58.1		30	18.1
80	27	17,364	-59.8		30	16.3
70	27	18,196	-60.5		31	13.4
60	27	19,155	-60.8		30	10.9
50	26	20,288	-60.3		30	9.2
40	25	21,678	-60.2		30	8.9
30	24	23,478	-59.6		29	9.3
25	24	24,620	-58.9		28	10.3
20	23	26,024	-57.4		28	13.0
15	17	27,874	-55.0		27	17.8
10	7	30,486	-51.0			

* PAGO PAGO, AMERICAN SAMOA 1008 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	5	28.4	24.3	34	1.3
1000	29	72	27.4	22.6	33	1.7
950	29	515	23.5	18.6	33	3.7
900	29	995	20.5	15.3	32	5.1
850	29	1,488	18.0	11.1	31	4.2
800	29	2,005	15.7	7.7	31	4.5
750	29	2,546	13.0	4.5	31	3.6
700	29	3,129	10.1	.8	31	3.9
650	29	3,735	6.9	-2.2	31	3.4
600	29	4,397	3.2	-6.2	29	3.3
550	29	5,091	-.5	-10.4	28	2.7
500	29	5,855	-4.6	-15.1	27	2.0
450	28	6,672	-9.2	-20.6	25	2.4
400	28	7,582	-14.5	-26.5	28	1.4
350	28	8,582	-21.1	-33.4	27	1.4
300	28	9,702	-29.5	-41.8	30	1.4
250	28	10,977	-39.6	-49.6	28	2.2
200	27	12,463	-52.0		23	2.6
175	27	13,314	-59.3		21	3.8
150	27	14,262	-67.1		19	4.8
125	27	15,341	-74.9		16	5.5
100	26	16,614	-81.1		12	6.5
80	24	17,870	-79.5		10	9.9
70	23	18,636	-74.3		09	10.9
60	20	19,549	-69.2		09	12.6
50	20	20,651	-64.2		09	14.3
40	16	22,033	-59.4		09	21.6
30	9	23,854	-53.5			
25	7	25,036	-50.7			

* PEORIA, ILL. 996 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	200	-7.9	-12.4	32	2.6
1000	29	164				
950	29	562	-7.4	-15.8	32	5.9
900	29	984	-8.6	-16.7	32	6.9
850	29	1,427	-9.2	-19.7	32	8.4
800	29	1,895	-10.4	-20.3	32	9.8
750	29	2,389	-11.8	-22.4	31	10.6
700	29	2,917	-14.3	-24.8	31	12.2
650	29	3,472	-17.2	-27.1	31	13.8
600	29	4,073	-20.0	-30.8	31	15.9
550	28	4,712	-23.6	-33.9	30	17.8
500	28	5,407	-27.9	-37.6	30	20.1
450	28	6,151	-33.1	-42.2	30	22.3
400	28	6,974	-38.7	-46.5	29	25.7
350	28	7,879	-45.1		29	27.9
300	28	8,894	-51.3		29	30.2
250	28	10,066	-55.9		29	30.6
200	28	11,490	-54.0		29	28.3
175	28	12,350	-53.4		29	26.4
150	28	13,341	-53.9		29	25.0
125	28	14,507	-55.5		29	23.3
100	28	15,922	-57.9		29	20.1
80	28	17,323	-59.3		29	16.7
70	28	18,158	-59.5		29	14.2
60	28	19,122	-59.5		29	12.7
50	27	20,261	-59.3		29	11.8
40	27	21,658	-59.3		29	10.4
30	27	23,459	-59.0		28	10.4
25	27	24,605	-57.9		27	12.7
20	26	26,014	-56.2		27	14.6
15	24	27,846	-53.3		27	20.7
10	21	30,492	-49.7		27	28.4
7	8	32,869	-46.1			

* PITTSBURGH, PA. 971 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	359	-7.5	-12.2	26	3.5
1000	29	130				
950	29	532	-7.3	-13.1	27	5.4
900	29	950	-9.0	-14.7	28	8.8
850	29	1,391	-10.7	-17.8	29	11.0
800	29	1,856	-12.5	-20.3	29	12.5
750	29	2,348	-14.4	-22.2	29	13.8
700	29	2,869	-15.9	-23.5	29	16.0
650	29	3,427	-18.2	-27.3	29	17.2
600	29	4,020	-20.9	-30.9	28	18.8
550	29	4,659	-24.7	-33.9	28	20.2
500	29	5,346	-29.0	-37.9	28	21.3
450	29	6,089	-33.9	-41.2	28	24.1
400	29	6,909	-39.2	-45.8	28	27.5
350	29	7,812	-45.0		27	30.8
300	29	8,828	-50.8		28	32.3
250	29	10,005	-53.3		27	29.3
200	29	11,447	-51.7		27	26.2
175	29	12,312	-52.4		27	25.4
150	29	13,307	-52.8		27	24.3
125	29	14,478	-54.8		27	22.6
100	28	15,898	-57.1		27	21.3
80	28	17,310	-57.1		28	15.2
70	28	18,153	-57.2		27	13.7
60	28	19,126	-57.4		27	11.2
50	28	20,276	-58.1		27	10.7
40	26	21,678	-58.2		27	12.1
30	25	23,494	-56.7		27	13.3
25	24	24,646	-56.0		27	14.3
20	23	26,061	-55.3		27	16.0
15	23	27,902	-53.6		27	19.7
10	22	30,519	-50.3		27	30.6
7	19	32,872	-46.0		26	42.4
5	13	35,147	-41.7		27	48.1

• PONAPE, CAROLINE IS. 1005 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	39	27.8	23.0	06	4.0
1000	29	85	27.2	21.8	06	4.8
950	29	531	23.1	17.0	07	8.0
900	29	1,007	19.7	14.1	07	8.3
850	29	1,498	17.1	9.8	08	7.0
800	29	2,015	15.4	4.3	09	5.3
750	29	2,558	13.2	.6	09	4.8
700	29	3,138	10.0	-3.5	09	5.8
650	29	3,750	7.1	-8.8	09	7.9
600	29	4,407	3.7	-13.3	09	9.1
550	29	5,105	-.2	-16.9	09	8.5
500	29	5,866	-4.6	-21.4	10	9.2
450	29	6,688	-9.6	-26.0	10	9.9
400	29	7,591	-15.0	-31.7	10	10.2
350	29	8,588	-21.8	-37.5	10	9.7
300	29	9,705	-30.1	-44.5	11	10.2
250	29	10,978	-40.1	-52.3	12	10.6
200	29	12,461	-52.4		13	13.0
175	29	13,311	-59.6		13	14.5
150	29	14,258	-67.3		12	16.1
125	29	15,334	-75.9		11	17.2
100	29	16,598	-82.3		11	18.6
80	28	17,862	-76.4		10	2.8
70	28	18,638	-72.2		28	4.0
60	27	19,550	-69.1		27	7.7
50	25	20,651	-64.6		26	7.0
40	23	22,027	-59.9		13	2.7
30	23	23,844	-55.7		09	19.2
25	22	25,015	-52.6		09	24.4
20	13	26,468	-48.8		09	27.2
15	9	28,395	-43.5			

PORTLAND, MAINE 1007 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	20	-10.8	-17.7	27	1.9
1000	29	74			29	1.5
950	29	469	-9.9	-17.0	27	4.8
900	29	887	-11.6	-18.8	27	5.7
850	29	1,324	-12.9	-20.2	29	7.4
800	29	1,785	-14.4	-21.4	29	9.6
750	29	2,270	-16.2	-22.6	28	12.1
700	29	2,791	-17.8	-25.7	27	14.0
650	29	3,339	-20.2	-29.3	27	15.9
600	29	3,932	-23.8	-32.2	26	17.4
550	29	4,557	-27.5	-36.1	26	19.0
500	29	5,243	-31.7	-39.5	26	21.0
450	29	5,976	-36.4	-43.8	26	23.7
400	29	6,790	-41.2	-45.6	26	26.3
350	29	7,688	-45.7		26	28.0
300	29	8,704	-49.8		26	28.8
250	29	9,890	-51.7		26	25.6
200	29	11,341	-50.4		26	23.4
175	29	12,211	-50.7		26	20.7
150	29	13,214	-51.3		26	20.6
125	29	14,395	-52.5		26	17.0
100	29	15,830	-54.4		26	16.5
80	29	17,257	-55.1		26	12.8
70	28	18,110	-55.6		26	11.9
60	28	19,090	-56.6		26	10.6
50	28	20,245	-56.9		26	10.8
40	28	21,658	-57.2		26	10.2
30	28	23,476	-57.1		26	11.1
25	28	24,631	-56.4		26	12.4
20	28	26,047	-56.2		26	14.3
15	25	27,878	-55.5		26	19.1
10	22	30,477	-52.5		26	31.2
7	11	32,773	-49.0			
5	7	35,002	-44.3			

* QUILLAYUTE, WASH. 1010 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	58	3.4	2.5	12	2.1
1000	29	134			11	2.2
950	29	557	7.8	-1.3	18	4.8
900	29	1,002	5.8	-4.0	20	7.0
850	29	1,467	3.2	-6.7	21	7.0
800	29	1,956	.3	-10.1	21	6.6
750	29	2,468	-2.0	-13.1	21	6.8
700	29	3,018	-4.9	-16.3	22	7.6
650	29	3,591	-8.3	-19.7	22	7.6
600	29	4,214	-12.4	-23.5	23	7.5
550	29	4,868	-16.6	-27.9	24	8.9
500	29	5,582	-21.6	-32.7	25	9.0
450	29	6,343	-27.3	-38.0	25	9.7
400	29	7,187	-34.1	-44.1	25	10.3
350	29	8,107	-41.5	-48.3	25	10.5
300	29	9,133	-49.9		25	10.4
250	29	10,303	-57.7		26	10.5
200	28	11,697	-59.9		27	11.9
175	27	12,543	-58.1		27	12.7
150	25	13,517	-56.4		27	12.3
125	25	14,674	-56.6		28	12.0
100	24	16,083	-59.3		28	10.5
80	21	17,467	-60.7		27	10.4
70	20	18,295	-61.3		27	9.8
60	20	19,253	-60.1		28	7.5
50	17	20,393	-60.8		29	5.7
40	15	21,788	-61.4		30	4.2
30	13	23,594	-61.8		28	4.9
25	9	24,751	-61.2			
20	[illegible]	26,118	-60.8			
15	6	27,883	-60.5			

RAPID CITY, S. DAK. 907 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	966	-5.6	-10.4	35	2.1
1000	29	196				
950	29	606				
900	29	1,028			33	2.7
850	29	1,480	-3.7	-10.6	33	6.5
800	29	1,959	-4.5	-11.1	33	9.8
750	29	2,458	-6.5	-13.4	33	12.1
700	29	3,003	-8.6	-17.4	32	13.9
650	29	3,563	-11.8	-20.6	32	14.9
600	29	4,184	-15.6	-25.3	32	14.4
550	29	4,828	-19.9	-30.0	32	15.6
500	29	5,536	-24.8	-35.7	32	17.5
450	29	6,284	-30.5	-41.1	32	19.8
400	29	7,120	-37.0	-45.5	32	21.3
350	29	8,031	-44.0		32	22.6
300	29	9,048	-51.6		32	24.6
250	29	10,211	-58.5		32	25.9
200	29	11,610	-58.9		32	24.5
175	29	12,451	-57.0		31	21.1
150	29	13,428	-56.4		31	19.6
125	29	14,585	-56.8		31	18.3
100	29	15,992	-59.4		31	16.0
80	29	17,385	-60.5		31	13.7
70	29	18,216	-60.6		31	12.1
60	29	19,175	-61.1		31	10.0
50	29	20,306	-61.1		32	8.9
40	28	21,691	-61.4		32	7.1
30	25	23,482	-60.6		31	7.4
25	23	24,625	-60.0		30	7.4
20	18	26,032	-58.7		29	9.7
15	18	27,843	-57.5		28	12.8
10	9	30,472	-55.9			

ST CLOUD, MINN. 983 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	316	-15.0	-19.8	34	2.6
1000	29	183				
950	29	574	-12.1	-17.9	34	5.7
900	29	987	-11.7	-20.0	34	6.7
850	29	1,425	-11.4	-20.1	33	7.4
800	29	1,890	-11.8	-21.6	33	8.7
750	29	2,382	-13.5	-23.3	33	10.6
700	29	2,906	-15.4	-24.7	33	12.3
650	29	3,461	-17.8	-26.9	33	13.0
600	29	4,059	-21.0	-30.4	33	14.2
550	29	4,692	-24.9	-34.8	33	15.8
500	29	5,384	-29.6	-39.2	33	16.9
450	29	6,122	-34.6	-44.0	33	19.0
400	29	6,941	-40.3	-48.6	33	21.6
350	29	7,839	-46.9		33	23.5
300	29	8,846	-53.3		33	24.6
250	29	10,009	-56.6		33	24.2
200	29	11,433	-54.3		32	21.8
175	29	12,290	-53.8		31	19.9
150	29	13,281	-53.9		31	19.4
125	29	14,451	-54.8		31	18.5
100	29	15,874	-56.2		31	16.5
80	29	17,286	-57.8		31	14.3
70	29	18,126	-58.3		32	12.0
60	29	19,095	-59.0		31	10.4
50	29	20,237	-59.7		31	9.7
40	29	21,632	-59.8		31	8.2
30	23	23,433	-60.4		30	8.7
25	21	24,569	-60.0		30	9.8
20	20	25,968	-59.0		29	11.3
15	14	27,761	-59.1		29	14.7

* ST PAUL IS., ALASKA 1004 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	10	-7.9	-10.7	03	8.7
1000	29	44			03	10.7
950	29	442	-10.5	-12.5	04	10.4
900	29	857	-10.9	-15.8	05	9.3
850	29	1,295	-11.5	-19.0	05	8.5
800	29	1,760	-12.3	-21.4	06	7.1
750	29	2,251	-14.0	-22.8	06	5.7
700	29	2,773	-16.8	-25.5	07	4.8
650	29	3,326	-19.9	-27.9	08	4.3
600	29	3,917	-23.1	-31.2	10	3.0
550	29	4,545	-27.0	-34.9	14	2.7
500	29	5,230	-31.6	-38.8	15	2.6
450	29	5,966	-36.4	-41.5	16	3.1
400	29	6,776	-42.0	-42.1	18	4.4
350	29	7,669	-48.1		19	5.1
300	29	8,671	-53.7		19	7.5
250	29	9,834	-55.7		21	8.2
200	29	11,266	-52.6		20	7.2
175	29	12,131	-51.1		20	6.5
150	29	13,134	-50.9		20	7.0
125	29	14,319	-51.4		20	7.4
100	29	15,766	-52.2		21	8.2
80	29	17,208	-52.6		22	8.7
70	29	18,070	-52.8		22	9.2
60	29	19,062	-53.4		23	9.4
50	29	20,232	-54.9		23	10.1
40	29	21,654	-56.4		23	10.9
30	29	23,469	-58.7		24	12.0
25	29	24,610	-60.0		25	13.1
20	27	25,993	-61.1		26	14.3
15	27	27,772	-62.7		27	13.4
10	21	30,250	-63.7		27	15.2
7	10	32,482	-62.9			

SALEM, OREG. 1010 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	61	5.6	2.4	19	1.1
1000	29	143	7.6	2.6	19	.7
950	29	568	8.1	1.5	19	3.1
900	29	1,013	7.3	-.5	19	5.6
850	29	1,482	5.0	-3.4	21	7.2
800	29	1,974	2.2	-7.1	22	8.0
750	29	2,491	-.7	-10.5	22	7.8
700	29	3,041	-4.1	-15.6	23	6.8
650	29	3,618	-7.4	-18.5	23	6.4
600	29	4,241	-11.1	-22.2	24	6.9
550	29	4,896	-15.6	-26.9	25	7.4
500	29	5,616	-20.7	-31.7	26	8.7
450	29	6,378	-26.8	-36.0	26	9.0
400	29	7,225	-33.4	-41.9	26	8.9
350	29	8,148	-40.6	-46.3	26	10.1
300	29	9,179	-48.9		27	10.1
250	29	10,353	-57.2		27	14.6
200	29	11,750	-59.4		28	12.4
175	29	12,591	-57.1		28	12.6
150	29	13,568	-56.8		28	14.2
125	29	14,719	-58.5		28	12.7
100	29	16,115	-60.8		28	13.0
80	29	17,500	-61.0		29	8.5
70	28	18,329	-61.5		28	6.0
60	27	19,277	-61.5		29	5.6
50	24	20,420	-61.4		30	4.8
40	24	21,803	-61.6		31	5.3
30	23	23,584	-62.2		32	4.9
25	21	24,720	-61.5		30	6.2
20	20	26,105	-61.2		29	6.6
15	16	27,890	-60.8		28	9.6
10	11	30,474	-57.7			

SALT LAKE CITY, UTAH 875 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	1,288	.1	-3.3	15	1.2
1000	29	202				
950	29	621				
900	29	1,057				
850	29	1,518	2.6	-3.7	17	2.1
800	29	2,008	1.2	-6.7	18	2.7
750	29	2,527	-2.0	-8.5	25	3.1
700	29	3,070	-5.6	-11.5	29	4.7
650	29	3,645	-9.2	-15.2	29	6.1
600	29	4,263	-12.6	-20.1	29	7.2
550	29	4,918	-16.6	-23.9	29	9.1
500	29	5,632	-21.4	-28.4	29	10.3
450	29	6,396	-26.9	-34.7	29	11.7
400	29	7,240	-33.2	-41.1	29	14.4
350	29	8,164	-40.6	-46.2	29	16.2
300	29	9,196	-48.5		29	18.6
250	29	10,374	-56.3		29	21.3
200	28	11,777	-59.3		29	22.6
175	28	12,614	-58.5		29	22.1
150	28	13,583	-58.5		29	21.1
125	28	14,725	-59.9		29	18.7
100	28	16,111	-62.2		30	16.2
80	28	17,485	-63.0		30	12.5
70	28	18,306	-63.0		31	10.3
60	26	19,258	-63.1		32	7.2
50	26	20,380	-63.0		32	6.1
40	26	21,754	-62.5		32	6.4
30	21	23,547	-60.8		32	5.3
25	21	24,684	-59.9		30	6.3
20	21	26,082	-58.3		29	7.8
15	17	27,920	-56.7		28	11.9
10	11	30,479	-53.2			

SAN DIEGO, CALIF. 1002 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	124	11.3	9.3	07	1.0
1000	29	142			07	1.1
950	29	573	13.8	4.5	11	.7
900	29	1,029	12.2	.6	24	.4
850	29	1,507	10.1	-3.3	26	1.8
800	29	2,010	7.9	-7.3	27	2.7
750	29	2,537	4.7	-10.3	27	3.3
700	29	3,099	1.5	-14.1	28	4.4
650	29	3,690	-2.3	-17.2	28	5.4
600	29	4,324	-6.3	-21.2	27	7.6
550	29	4,990	-10.9	-25.4	26	8.5
500	29	5,725	-16.3	-28.1	26	10.2
450	29	6,505	-22.0	-32.9	27	12.2
400	29	7,366	-28.5	-38.9	27	13.4
350	29	8,310	-35.6	-44.9	28	16.2
300	29	9,364	-44.0		27	18.9
250	29	10,564	-52.6		27	21.8
200	29	11,990	-56.3		27	26.9
175	29	12,834	-58.3		27	27.8
150	29	13,798	-60.4		28	26.5
125	29	14,927	-63.3		28	22.4
100	29	16,286	-67.0		28	17.7
80	28	17,626	-68.8		29	12.3
70	28	18,425	-68.0		29	9.3
60	28	19,353	-66.6		29	6.0
50	27	20,463	-64.6		31	5.7
40	27	21,835	-62.0		31	5.2
30	25	23,634	-58.6		30	6.6
25	25	24,786	-56.1		28	9.3
20	23	26,215	-52.4		27	16.4
15	17	28,098	-48.0		27	26.3
10	11	30,802	-43.5			

See reference note at end of table

RAWINSONDE DATA

Average monthly values

FEBRUARY 1968

SAN JUAN, P. R. — 1016 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	6	21.7	18.3	14	1.3
1000	29	149	21.6	17.6	11	3.6
950	29	584	18.9	14.6	09	4.0
900	29	1,048	16.0	11.4	09	3.8
850	29	1,532	13.1	7.5	08	3.5
800	29	2,040	10.8	2.4	05	2.3
750	29	2,574	8.8	-4.8	04	.9
700	29	3,146	7.4	-11.1	26	2.7
650	29	3,747	5.4	-15.2	25	4.2
600	29	4,403	1.6	-18.7	25	6.4
550	29	5,089	-2.6	-22.8	25	7.2
500	29	5,848	-7.3	-27.3	26	9.8
450	29	6,656	-12.8	-31.7	27	12.9
400	29	7,550	-18.6	-36.5	27	15.0
350	29	8,532	-25.5	-42.3	27	18.3
300	29	9,631	-33.8	-48.9	27	23.0
250	29	10,884	-43.4		26	27.5
200	29	12,349	-54.7		26	30.6
175	29	13,191	-60.8		26	28.3
150	29	14,135	-66.6		27	25.2
125	28	15,222	-72.6		27	19.0
100	27	16,510	-77.9		27	13.6
80	27	17,777	-78.8		28	8.8
70	27	18,542	-75.4		28	6.0
60	27	19,446	-69.5		28	2.7
50	27	20,551	-62.7		34	1.8
40	27	21,951	-55.9		06	4.3
30	26	23,797	-52.1		09	6.2
25	25	24,982	-50.0		09	7.9
20	25	26,453	-46.1		10	10.9
15	22	28,378	-42.8		09	11.0
10	14	31,127	-38.6		10	11.7
7	10	33,586	-35.9			
5	6	35,934	-30.7			
4						

* SAULT STE MARIE, MICH. — 987 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	221	-14.4	-16.8	33	2.5
1000	29	118				
950	29	509	-13.2	-16.9	33	5.4
900	29	919	-13.6	-17.5	33	8.3
850	29	1,353	-14.3	-19.6	33	10.0
800	29	1,812	-15.5	-21.0	33	10.5
750	29	2,299	-17.2	-22.2	33	11.2
700	29	2,813	-19.4	-24.8	33	12.0
650	29	3,358	-22.1	-27.9	33	12.7
600	29	3,946	-25.0	-30.6	32	13.0
550	29	4,571	-28.5	-33.9	32	13.7
500	29	5,251	-32.6	-38.2	32	13.6
450	29	5,981	-37.4	-41.6	31	14.0
400	29	6,789	-42.8	-45.3	31	14.9
350	29	7,679	-48.0		31	16.1
300	29	8,684	-52.4		31	17.4
250	29	9,859	-52.9		30	17.6
200	29	11,305	-51.1		30	15.3
175	29	12,173	-50.8		30	15.2
150	28	13,177	-51.8		30	14.6
125	28	14,356	-52.6		30	13.9
100	28	15,792	-54.4		30	12.6
80	28	17,216	-55.6		29	11.9
70	28	18,065	-56.1		30	11.0
60	28	19,043	-57.0		30	10.0
50	28	20,195	-57.6		29	9.3
40	28	21,600	-58.3		29	9.2
30	28	23,409	-58.2		28	9.7
25	28	24,555	-58.6		28	10.5
20	27	25,960	-57.7		28	11.6
15	25	27,777	-57.0		27	14.3
10	25	30,348	-55.4		27	23.4
7	22	32,648	-51.9		27	32.9
5	17	34,875	-47.6		27	43.1
4	8	36,408	-44.2			

* SHEMYA, ALASKA — 998 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	38	-1.5	-4.2	06	8.5
1000	29	23			05	8.1
950	29	428	-4.5	-8.7	06	11.5
900	29	853	-7.8	-10.7	07	10.7
850	29	1,295	-10.8	-14.1	07	10.0
800	29	1,759	-13.9	-18.6	07	9.0
750	29	2,248	-16.7	-23.3	07	8.7
700	29	2,762	-19.0	-28.1	07	9.0
650	29	3,310	-21.8	-31.1	07	8.1
600	29	3,896	-25.3	-33.7	07	6.0
550	29	4,517	-29.1	-37.3	07	4.9
500	29	5,199	-33.6	-40.3	08	4.3
450	29	5,927	-38.8	-43.1	10	3.9
400	29	6,730	-44.5	-46.7	11	4.5
350	29	7,612	-50.4		13	5.3
300	29	8,606	-55.2		13	4.6
250	29	9,767	-55.5		15	4.1
200	29	11,197	-52.7		17	3.6
175	29	12,062	-51.4		20	3.2
150	29	13,064	-51.1		20	4.2
125	29	14,249	-50.8		21	5.0
100	29	15,701	-50.9		21	5.3
80	29	17,151	-51.5		23	6.4
70	29	18,016	-52.0		23	6.9
60	29	19,014	-52.5		24	7.8
50	29	20,190	-53.2		24	9.3
40	29	21,623	-54.3		24	10.8
30	29	23,461	-56.0		25	12.1
25	29	24,617	-57.1		25	13.2
20	29	26,024	-58.5		26	14.8
15	29	27,827	-60.1		27	16.6
10	24	30,356	-60.8		27	21.3
7	20	32,601	-60.8		27	24.9
5	7	34,829	-59.4			
4						

* SHREVEPORT, LA. — 1011 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	79	1.9	-1.7	01	2.0
1000	29	170	3.2	-2.4	36	2.7
950	29	590	2.6	-5.7	36	3.5
900	29	1,023	1.7	-8.5	33	4.1
850	29	1,484	1.4	-9.6	31	5.6
800	29	1,973	.5	-11.0	30	7.4
750	29	2,489	-1.5	-13.6	30	9.3
700	29	3,036	-4.1	-16.5	30	11.2
650	29	3,617	-7.1	-19.7	29	14.4
600	29	4,238	-10.7	-23.2	29	16.2
550	29	4,901	-15.0	-27.2	29	18.8
500	29	5,618	-19.8	-32.9	29	20.7
450	29	6,388	-25.1	-37.7	29	23.7
400	29	7,238	-31.3	-41.8	28	26.4
350	29	8,172	-38.2	-46.1	28	30.8
300	29	9,216	-46.1		28	35.5
250	29	10,407	-53.6		28	39.2
200	29	11,829	-56.7		27	43.0
175	29	12,675	-57.3		27	41.0
150	29	13,646	-59.3		27	40.6
125	29	14,779	-62.5		27	29.6
100	29	16,144	-65.7		28	27.2
80	28	17,494	-66.1		28	20.9
70	28	18,303	-65.7		28	17.7
60	28	19,243	-63.9		28	15.0
50	27	20,367	-62.1		28	10.5
40	27	21,756	-59.1		27	9.5
30	27	23,573	-56.2		26	14.9
25	27	24,735	-54.5		27	19.5
20	27	26,170	-52.4		26	20.7
15	26	28,049	-48.5		26	24.3
10	23	30,759	-42.1		26	31.7
7	18	33,202	-38.6		26	39.7
5	6	35,675	-33.3			
4						

SPOKANE, WASH. — 935 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	717	.4	-2.7	17	1.6
1000	29	175				
950	29	590				
900	29	1,025	2.7	-3.1	19	2.3
850	29	1,488	1.8	-6.6	22	3.3
800	29	1,974	-.7	-9.6	23	3.7
750	29	2,483	-3.3	-11.9	25	3.8
700	29	3,030	-6.2	-15.1	27	5.0
650	29	3,601	-9.5	-18.7	28	5.8
600	29	4,220	-13.0	-24.2	29	6.4
550	29	4,873	-17.1	-28.6	29	7.0
500	29	5,586	-22.1	-33.4	29	8.1
450	29	6,343	-27.9	-38.8	30	9.1
400	29	7,187	-34.6	-44.1	30	10.0
350	29	8,106	-42.0	-48.9	31	11.6
300	29	9,132	-49.6		31	14.0
250	29	10,304	-57.5		30	15.2
200	28	11,701	-59.7		30	15.5
175	28	12,540	-57.5		30	15.2
150	27	13,507	-56.9		30	15.3
125	26	14,664	-57.2		29	13.8
100	26	16,071	-58.7		30	11.7
80	26	17,467	-59.8		29	9.4
70	26	18,300	-60.3		28	7.6
60	26	19,259	-61.0		29	6.7
50	24	20,399	-61.2		31	6.8
40	24	21,781	-61.7		31	6.7
30	23	23,568	-61.9		32	5.0
25	22	24,697	-61.9		31	5.8
20	18	26,117	-61.4		29	7.8
15	14	27,901	-60.9		28	11.8
10						
7						
5						
4						

* SWAN ISLAND, W. I. — 1014 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	10	23.7	18.5	05	2.0
1000	29	127	22.9	17.6	05	2.9
950	29	571	19.2	15.5	07	2.8
900	29	1,037	16.0	11.6	05	1.8
850	29	1,521	13.3	6.5	33	1.3
800	29	2,029	10.7	2.2	31	2.5
750	29	2,569	8.9	-4.5	30	2.5
700	29	3,135	6.8	-9.6	27	3.1
650	29	3,735	4.4	-14.1	26	4.6
600	29	4,389	.8	-17.1	26	6.1
550	29	5,077	-3.6	-21.3	26	8.7
500	29	5,829	-8.3	-26.1	26	9.6
450	29	6,631	-13.4	-30.4	25	12.4
400	29	7,526	-19.0	-36.3	26	15.5
350	29	8,505	-26.2	-42.1	26	18.2
300	29	9,602	-34.6	-49.1	25	20.6
250	29	10,848	-44.6		25	22.3
200	29	12,306	-55.2		24	24.8
175	29	13,148	-60.4		24	23.6
150	28	14,093	-66.2		25	24.0
125	27	15,183	-72.8		25	22.0
100	26	16,480	-77.3		26	15.5
80	25	17,757	-78.1		27	9.9
70	25	18,521	-75.2		26	6.9
60	24	19,424	-70.9		26	3.8
50	24	20,519	-65.1		25	2.1
40	24	21,905	-57.2		07	.5
30	24	23,738	-54.3		09	4.2
25	24	24,913	-51.9		09	6.4
20	23	26,373	-48.1		09	10.6
15	23	28,290	-43.3		11	13.7
10	19	31,036	-39.0		10	13.4
7	14	33,508	-34.9		10	11.8
5						
4						

TAMPA, FLA. — 1016 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	8	9.7	6.9	03	1.4
1000	29	140	11.4	6.3	36	2.5
950	29	570	10.4	4.3	29	5.0
900	29	1,018	8.7	1.7	28	7.8
850	29	1,489	6.6	-1.8	28	9.8
800	29	1,985	4.3	-5.3	27	10.8
750	29	2,512	1.8	-9.0	27	12.6
700	29	3,063	-.8	-12.0	27	15.7
650	29	3,651	-3.2	-16.4	27	19.3
600	29	4,283	-6.4	-21.3	27	22.2
550	29	4,954	-10.7	-23.1	27	25.0
500	29	5,685	-15.3	-27.5	27	26.8
450	29	6,471	-20.4	-31.8	27	30.3
400	29	7,336	-26.2	-38.4	26	34.1
350	29	8,289	-32.8	-44.2	26	37.0
300	29	9,359	-39.9	-49.6	26	43.5
250	29	10,585	-47.5		26	49.0
200	28	12,037	-54.6		26	53.7
175	28	12,886	-57.9		26	52.6
150	28	13,849	-61.5		26	47.4
125	28	14,968	-65.7		26	42.1
100	28	16,311	-69.1		26	32.8
80	28	17,641	-69.5		27	27.8
70	28	18,439	-68.1		27	21.4
60	28	19,371	-65.3		26	16.2
50	28	20,490	-61.6		28	11.6
40	27	21,886	-57.3		27	9.2
30	26	23,724	-53.1		27	9.6
25	26	24,905	-50.7		27	9.7
20	25	26,374	-47.4		27	15.2
15	20	28,273	-43.8		27	15.9
10	14	31,009	-40.0		26	22.2
7						
5						
4						

TOPEKA, KANS. — 990 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	269	-3.4	-7.8	35	1.2
1000	29	189				
950	29	593	-3.9	-11.5	33	3.2
900	29	1,020	-4.6	-12.6	33	5.4
850	29	1,470	-5.1	-13.3	33	7.6
800	29	1,946	-5.9	-14.1	32	9.3
750	29	2,449	-7.7	-15.3	32	12.4
700	29	2,985	-9.6	-17.4	32	14.6
650	29	3,550	-12.5	-20.7	31	16.7
600	29	4,162	-16.1	-24.2	31	18.5
550	29	4,809	-19.7	-29.9	31	20.3
500	29	5,514	-24.4	-34.7	31	22.0
450	29	6,267	-29.9	-39.3	31	22.3
400	29	7,103	-36.1	-44.5	30	23.8
350	29	8,016	-43.3		30	25.2
300	29	9,038	-50.7		30	28.0
250	29	10,207	-57.1		29	29.9
200	29	11,617	-56.3		29	30.0
175	29	12,467	-55.7		29	28.4
150	29	13,449	-55.8		29	26.1
125	29	14,607	-57.0		29	23.9
100	29	16,010	-59.8		29	19.5
80	29	17,398	-61.5		30	16.3
70	29	18,225	-61.3		30	13.6
60	29	19,181	-61.7		29	11.1
50	29	20,312	-61.0		29	9.0
40	28	21,699	-60.3		29	8.3
30	25	23,498	-59.1		28	9.3
25	22	24,639	-57.9		28	10.8
20	21	26,049	-55.9		27	15.7
15	15	27,881	-53.6		27	22.7
10	7	30,486	-48.9			
7						
5						
4						

TRUK, CAROLINE IS. — 1011 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	2	27.6	23.3	05	5.0
1000	29	96	26.5	21.5	05	5.9
950	29	542	22.5	16.9	06	8.5
900	29	1,018	19.6	13.2	07	8.2
850	29	1,510	17.2	9.0	08	6.9
800	29	2,026	14.8	4.8	08	5.8
750	29	2,570	12.5	-.8	08	5.4
700	29	3,148	9.9	-4.8	08	5.5
650	29	3,759	6.4	-7.3	09	5.6
600	29	4,413	2.5	-12.0	09	7.1
550	29	5,107	-1.3	-17.0	09	8.8
500	29	5,867	-5.2	-20.2	10	8.8
450	29	6,687	-10.2	-24.8	10	9.3
400	29	7,588	-15.4	-30.4	11	9.8
350	29	8,583	-22.2	-36.4	10	9.8
300	29	9,698	-30.5	-44.4	11	9.2
250	29	10,967	-40.8	-50.8	12	9.9
200	29	12,444	-53.4		13	13.8
175	29	13,289	-60.7		13	15.1
150	29	14,230	-68.6		13	17.0
125	29	15,299	-77.0		12	21.7
100	29	16,559	-82.2		11	18.9
80	28	17,826	-77.0		09	2.8
70	28	18,598	-73.7		28	3.7
60	27	19,509	-69.9		27	7.5
50	26	20,608	-65.6		27	6.9
40	25	21,984	-60.2		10	4.2
30	24	23,796	-55.7		09	19.0
25	22	24,970	-52.3		09	25.3
20	16	26,426	-48.3		09	27.3
15	9	28,345	-44.3			
10						
7						
5						
4						

* TUCSON, ARIZ. — 926 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	789	9.6	4.0	13	3.0
1000	29	144				
950	29	576				
900	29	1,028	13.1	2.6	13	3.4
850	29	1,507	11.0	-.7	13	1.3
800	29	2,010	7.7	-3.5	25	1.2
750	29	2,537	4.2	-7.3	28	2.9
700	29	3,098	.9	-11.7	28	4.5
650	29	3,684	-2.2	-17.5	28	5.7
600	29	4,322	-6.2	-22.2	29	7.4
550	29	4,988	-10.9	-25.1	28	9.1
500	29	5,724	-16.0	-28.1	28	11.7
450	29	6,500	-22.0	-32.8	28	13.7
400	29	7,366	-28.5	-38.2	28	16.1
350	29	8,308	-35.9	-44.3	28	18.1
300	29	9,360	-43.9		28	20.8
250	29	10,561	-52.6		28	26.5
200	29	11,982	-57.7		28	31.8
175	29	12,822	-59.1		28	31.6
150	29	13,783	-61.4		28	27.7
125	29	14,907	-64.0		28	24.9
100	28	16,257	-67.6		29	19.2
80	27	17,595	-68.8		29	14.5
70	27	18,395	-67.9		29	11.0
60	27	19,325	-66.1		30	9.2
50	27	20,435	-64.5		30	8.0
40	27	21,807	-61.7		30	6.9
30	27	23,604	-58.0		28	8.6
25	27	24,759	-55.7		28	12.5
20	26	26,193	-52.5		27	17.5
15	24	28,062	-48.1		27	24.8
10	23	30,765	-42.5		27	34.4
7	18	33,196	-39.0		27	38.0
5	12	35,524	-36.2			
4	6	37,119	-32.6			

* VANDENBERG AFB, CALIF. — 1006 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	28	100	11.0	9.6	09	.7
1000	28	151	12.1	9.8	08	.8
950	28	584	12.4	5.1	05	1.4
900	28	1,035	11.0	-2.4	05	.4
850	28	1,510	9.2	-6.0	25	1.0
800	28	2,010	6.4	-9.3	26	2.3
750	28	2,535	3.2	-14.1	26	4.0
700	28	3,092	-.2	-17.5	26	5.4
650	28	3,676	-3.9	-20.9	27	7.3
600	28	4,309	-7.7	-24.5	26	9.0
550	28	4,972	-12.4	-27.5	26	11.0
500	28	5,701	-17.4	-31.3	26	12.1
450	28	6,474	-23.1	-36.6	27	14.1
400	27	7,331	-29.5	-41.3	26	15.4
350	27	8,270	-36.7	-46.6	26	17.7
300	27	9,319	-45.2		27	20.6
250	26	10,510	-54.1		26	22.2
200	25	11,936	-55.4		27	24.5
175	25	12,785	-56.8		28	25.9
150	25	13,756	-59.1		28	23.8
125	25	14,891	-62.5		28	19.7
100	23	16,256	-66.1		29	16.7
80	23	17,604	-67.5		29	16.8
70	23	18,409	-66.9		29	11.8
60	23	19,341	-65.8		31	7.4
50	23	20,452	-64.3		30	5.4
40	23	21,821	-62.4		33	4.7
30	23	23,608	-59.9		32	5.[illegible]
25	23	24,750	-58.1		30	6.7
20	23	26,163	-55.4		28	10.4
15	23	28,013	-51.6		27	18.9
10	21	30,686	-45.4		27	34.4
7	19	33,087	-41.5		27	45.6
5						
4						
3						

VICTORIA, TEXAS — 1016 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	33	7.4	4.7	02	2.2
1000	29	166	8.8	3.1	03	3.5
950	29	588	7.2	1.3	05	2.7
900	29	1,035	7.4	-1.2	31	1.3
850	29	1,505	6.3	-3.4	29	4.1
800	29	2,001	4.2	-6.3	30	6.0
750	29	2,522	2.1	-9.4	30	7.7
700	29	3,079	-.3	-13.0	29	10.3
650	29	3,666	-3.3	-17.9	29	12.5
600	29	4,297	-7.4	-20.6	29	14.9
550	29	4,966	-11.5	-25.1	29	17.2
500	29	5,694	-16.4	-28.9	28	19.8
450	29	6,471	-21.8	-33.[illegible]	28	22.6
400	29	7,336	-27.9	-38.1	28	25.1
350	29	8,281	-35.3	-43.5	28	29.2
300	29	9,337	-43.4		27	32.1
250	29	10,545	-50.2		27	38.9
200	29	11,982	-56.1		27	42.2
175	29	12,825	-59.2		27	39.7
150	29	13,783	-62.5		27	37.6
125	29	14,898	-66.3		27	32.8
100	29	16,237	-69.6		28	24.8
80	28	17,563	-69.[illegible]		28	18.6
70	28	18,359	-68.5		28	14.1
60	27	19,286	-66.3		28	11.9
50	26	20,400	-62.5		28	9.5
40	26	21,791	-58.0		27	8.8
30	25	23,618	-54.[illegible]		26	11.6
25	25	24,791	-52.5		26	13.9
20	24	26,243	-49.2		27	17.6
15	18	28,157	-44.9		27	17.6
10	10	30,825	-42.8			
7						
5						
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3						

* WAKE IS., PACIFIC AREA — 1014 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	5	23.0	16.8	02	2.3
1000	29	126	22.0	16.1	02	2.4
950	29	564	18.1	14.1	01	2.7
900	29	1,031	14.5	10.8	36	2.9
850	29	1,512	12.0	4.2	34	3.2
800	29	2,020	11.[illegible]	-4.0	30	4.2
750	29	2,557	11.0	-8.9	29	7.0
700	29	3,133	9.3	-12.1	28	9.3
650	29	3,742	6.7	-15.8	28	11.[illegible]
600	29	4,398	3.4	-18.2	28	13.6
550	29	5,092	-.7	-21.1	28	14.2
500	29	5,853	-5.1	-24.4	28	16.7
450	29	6,670	-9.9	-28.7	28	17.1
400	29	7,574	-15.8	-34.0	27	17.4
350	29	8,568	-22.4	-39.8	27	17.2
300	29	9,682	-31.1	-46.6	27	16.3
250	29	10,947	-41.6		28	16.6
200	29	12,422	-53.4		27	18.7
175	29	13,269	-60.1		27	18.0
150	29	14,215	-67.4		27	17.4
125	29	15,293	-75.0		26	14.9
100	28	16,564	-81.9		25	11.0
80	27	17,807	-81.4		24	4.5
70	26	18,564	-77.3		25	2.7
60	25	19,455	-71.8		26	2.4
50	25	20,555	-62.9		24	3.4
40	25	21,948	-57.6		28	1.4
30	25	23,781	-53.8		08	1.5
25	25	24,958	-51.7		09	5.0
20	25	26,415	-48.2		08	7.5
15	25	28,332	-43.3		08	7.9
10	24	31,078	-41.7		10	5.4
7	24	33,514	-37.7		26	2.0
5	22	35,861	-33.8		27	5.6
4	13	37,438	-31.3		27	10.8
3	10	39,465	-27.6			

* WALLOPS IS., VA. NASA — 1016 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	3	-3.2	-10.1	32	2.5
1000	29	126	-1.3	-11.8	32	4.0
950	29	533	-3.0	-14.7	32	6.9
900	29	961	-5.4	-15.[illegible]	31	7.9
850	29	1,408	-7.2	-17.7	30	9.4
800	29	1,880	-8.2	-19.7	29	10.8
750	29	2,381	-9.7	-22.4	28	11.[illegible]
700	29	2,911	-12.0	-24.5	28	14.1
650	29	3,475	-14.5	-26.5	28	17.5
600	29	4,079	-17.4	-29.8	27	20.[illegible]
550	29	4,726	-21.0	-33.2	27	22.2
500	29	5,426	-25.5	-36.8	27	24.2
450	29	6,180	-30.7	-40.0	27	27.5
400	29	7,010	-36.3	-43.2	27	30.4
350	29	7,924	-42.9	-46.5	27	30.1
300	29	8,948	-49.8		26	28.0
250	29	10,128	-53.8		26	33.6
200	29	11,564	-52.4		27	32.5
175	27	12,432	-52.9		27	30.7
150	27	13,424	-53.[illegible]		27	31.0
125	27	14,590	-55.8		26	26.7
100	27	16,002	-58.4		26	23.7
80	26	17,398	-58.9		27	20.1
70	26	18,234	-59.1		27	18.1
60	26	19,199	-59.1		27	16.7
50	26	20,343	-58.5		26	14.8
40	26	21,750	-57.3		26	12.7
30	26	23,574	-55.5		27	13.2
25	26	24,740	-54.1		27	14.5
20	26	26,174	-53.[illegible]		27	17.4
15	25	28,035	-50.7		26	24.3
10	24	30,694	-47.0		26	37.6
7	15	33,052	-42.9			
5						
4						
3						

WASHINGTON DULLES INT. AP — 1005 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	85	-4.7	-11.7	30	2.0
1000	29	121			30	2.4
950	29	531	-4.2	-14.3	30	7.4
900	29	951	-6.9	-15.8	30	9.2
850	29	1,396	-8.7	-17.5	30	11.7
800	29	1,864	-9.9	-20.3	30	13.8
750	29	2,367	-10.6	-23.8	29	14.2
700	29	2,891	-12.8	-25.5	29	14.1
650	29	3,455	-15.7	-29.0	28	16.9
600	29	4,054	-18.5	-31.4	28	19.3
550	29	4,702	-22.3	-34.3	28	22.1
500	29	5,393	-26.8	-37.2	27	24.4
450	29	6,143	-32.2	-41.3	27	26.0
400	29	6,966	-38.2	-45.3	27	28.2
350	29	7,874	-44.4		27	31.2
300	29	8,892	-50.7		26	33.6
250	29	10,068	-54.4		26	35.9
200	29	11,504	-52.3		27	35.0
175	29	12,368	-52.1		27	32.0
150	29	13,364	-53.1		27	29.0
125	29	14,534	-55.2		27	27.3
100	29	15,952	-57.4		27	24.0
80	29	17,356	-58.4		27	19.9
70	29	18,194	-58.[illegible]		27	17.0
60	29	19,163	-58.1		27	14.5
50	29	20,311	-58.0		27	12.5
40	28	21,720	-57.6		26	11.7
30	28	23,543	-55.9		27	12.7
25	27	24,704	-55.2		27	13.4
20	27	26,134	-53.2		27	19.0
15	25	27,989	-51.2		26	22.5
10	12	30,629	-47.9			
7						
5						
4						
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See reference note at end of table

RAWINSONDE DATA

Average monthly values

Standard pressure surface (mb.)	WINNEMUCCA, NEV. 872 MB						WINSLOW, ARIZ. 853 MB					
	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	1,312	2.3	-.7	14	.9	29	1,492	.0	-3.9	21	1.1
1000	29	184					29	197				
950	29	608					29	615				
900	29	1,054					29	1,056				
850	29	1,514	4.1	-1.7	15	1.2	29	1,520			23	1.1
800	29	2,006	1.9	-4.4	23	2.5	29	2,013	3.8	-3.4	32	2.3
750	29	2,522	-1.6	-7.4	24	4.4	29	2,530	1.3	-6.7	31	3.1
700	29	3,070	-4.9	-11.7	26	5.1	29	3,088	-1.8	-10.8	30	4.3
650	29	3,644	-8.4	-16.0	28	5.8	29	3,668	-5.0	-15.4	29	6.4
600	29	4,266	-11.9	-20.2	29	6.6	29	4,300	-8.3	-19.6	30	9.3
550	29	4,920	-15.7	-25.8	29	8.5	29	4,964	-12.8	-23.4	29	11.4
500	29	5,639	-20.7	-29.8	29	9.2	29	5,691	-17.8	-27.6	29	13.7
450	29	6,402	-26.3	-35.3	28	10.8	29	6,462	-23.7	-32.4	29	15.0
400	29	7,251	-32.6	-42.1	28	12.7	29	7,322	-30.0	-38.3	29	16.9
350	29	8,178	-40.0	-45.6	28	14.5	29	8,259	-37.2	-43.9	29	19.8
300	29	9,212	-47.9		28	16.5	29	9,306	-45.5		28	22.1
250	29	10,393	-55.8		28	21.3	29	10,500	-53.8		28	27.1
200	29	11,798	-58.6		28	21.2	29	11,913	-59.0		28	29.4
175	28	12,641	-57.5		28	21.7	29	12,750	-58.9		28	30.5
150	27	13,614	-58.0		29	19.9	29	13,716	-59.9		29	27.9
125	27	14,758	-59.5		29	18.0	28	14,844	-62.8		28	23.0
100	27	16,143	-62.4		29	14.3	28	16,208	-65.7		28	17.7
80	27	17,517	-63.7		29	10.5	28	17,557	-67.7		29	14.6
70	26	18,332	-63.3		30	8.2	27	18,363	-66.6		30	11.4
60	24	19,279	-63.1		30	6.9	26	19,294	-65.5		30	8.5
50	21	20,402	-62.8		31	5.7	26	20,405	-64.4		30	6.2
40	18	21,772	-61.5		31	5.4	25	21,778	-61.9		30	7.2
30	14	23,576	-60.5		32	4.2	24	23,567	-59.6		29	7.6
25	12	24,714	-59.7		31	5.7	21	24,711	-57.6		27	10.1
20	11	26,115	-58.3		30	6.3	20	26,132	-55.0		27	13.6
15	8	27,938	-56.8				14	27,983	-51.3			
10							5	30,620	-47.0			

Standard pressure surface (mb.)	YAKUTAT, ALASKA 1007 MB						+ YAP, CAROLINE IS. 1008 MB					
	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	12	-2.7	-4.7	11	3.4	29	17	26.8	23.3	06	5.5
1000	29	65			11	4.6	29	92	26.0	21.9	07	6.8
950	29	476	.9	-5.7	13	8.5	29	539	22.1	17.7	08	10.2
900	29	910	-1.3	-7.4	15	9.2	29	1,012	19.3	13.3	08	10.1
850	29	1,364	-3.4	-8.2	16	8.9	29	1,503	16.7	9.6	09	8.7
800	29	1,842	-5.9	-10.6	17	8.2	29	2,019	14.9	6.0	09	6.8
750	29	2,343	-8.8	-13.4	18	8.4	29	2,560	12.7	.9	09	6.3
700	28	2,875	-11.9	-17.5	19	7.2	29	3,141	9.6	-3.2	09	6.0
650	28	3,434	-15.5	-22.0	20	8.1	29	3,750	6.4	-6.1	09	6.2
600	28	4,039	-18.9	-26.5	21	9.9	29	4,406	2.6	-10.2	10	5.9
550	28	4,681	-23.1	-29.4	21	11.5	29	5,100	-1.4	-13.9	10	6.0
500	28	5,375	-27.7	-33.1	22	13.3	29	5,860	-5.5	-17.8	11	5.8
450	28	6,119	-32.9	-37.3	22	14.6	29	6,675	-10.5	-21.9	12	6.3
400	28	6,944	-38.8	-43.2	22	14.9	29	7,579	-16.0	-28.3	12	6.3
350	28	7,848	-45.3		22	15.5	29	8,571	-22.8	-35.7	12	6.2
300	28	8,859	-52.3		22	16.4	29	9,683	-31.2	-44.1	13	7.3
250	28	10,022	-57.1		23	16.3	29	10,948	-41.5		13	8.7
200	27	11,429	-54.0		24	13.5	29	12,421	-54.4		14	12.9
175	27	12,290	-52.7		25	12.3	29	13,263	-61.6		14	15.7
150	26	13,285	-53.7		25	11.9	29	14,201	-69.2		14	20.1
125	25	14,442	-54.4		26	12.1	29	15,271	-75.3		13	20.3
100	25	15,870	-54.6		26	11.4	29	16,548	-79.7		11	8.8
80	25	17,296	-55.7		26	10.0	29	17,814	-78.0		07	1.9
70	25	18,143	-56.5		27	9.7	29	18,584	-74.0		29	2.2
60	25	19,119	-57.6		27	9.7	27	19,489	-70.2		29	3.7
50	25	20,267	-58.7		28	9.2	25	20,586	-65.5		29	2.8
40	24	21,670	-59.7		29	8.8	25	21,964	-58.9		09	6.6
30	21	23,452	-61.5		30	8.8	24	23,792	-54.3		09	18.3
25	17	24,649	-62.3		31	9.2	23	24,965	-52.1		09	23.3
20	13	26,035	-63.6				22	26,422	-48.7		09	24.9
15	8	27,768	-65.0				15	28,305	-45.0		10	25.3
10												

Standard pressure surface (mb.)	YUCCA FLAT, NEV. 884 MB					
	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	1,196	2.8	-1.3	26	.7
1000	29	179				
950	29	600				
900	29	1,048				
850	29	1,514	7.4	-2.7	33	.8
800	29	2,011	4.4	-5.0	26	.3
750	29	2,531	1.0	-7.8	26	2.0
700	29	3,086	-2.1	-11.5	27	3.9
650	29	3,667	-5.6	-14.9	27	5.8
600	29	4,294	-9.6	-19.6	28	8.1
550	29	4,956	-13.9	-24.0	28	10.2
500	29	5,679	-18.7	-29.0	28	13.4
450	29	6,449	-24.3	-34.1	28	14.2
400	29	7,303	-31.1	-39.8	28	16.2
350	29	8,236	-38.1	-45.9	28	17.8
300	29	9,279	-46.1		28	21.3
250	29	10,468	-54.7		28	24.8
200	29	11,876	-58.9		28	26.1
175	29	12,715	-58.3		28	24.7
150	29	13,684	-58.9		28	22.5
125	29	14,820	-61.9		28	19.1
100	29	16,190	-64.9		29	17.8
80	29	17,547	-65.9		29	12.0
70	28	18,352	-65.9		30	9.7
60	28	19,289	-65.0		30	6.9
50	28	20,404	-64.0		32	5.5
40	28	21,778	-61.8		32	5.5
30	23	23,566	-60.5		30	5.5
25	22	24,704	-58.7		30	8.4
20	21	26,108	-56.9		28	12.4
15	14	27,945	-52.9		27	23.1
10						

Standard pressure surface (mb.)	YUMA, ARIZ. 1001 MB					
	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	20	131	12.2	3.9	36	.6
1000	20	136			36	.5
950	20	574	17.2	2.0	01	1.8
900	20	1,032	14.2	-1.0	03	1.9
850	20	1,511	11.2	-4.3	04	1.5
800	20	2,014	7.8	-7.3	36	.7
750	20	2,541	4.2	-10.4	25	1.8
700	20	3,101	.9	-14.6	26	3.6
650	20	3,689	-2.8	-19.9	26	4.6
600	20	4,322	-7.1	-21.0	26	5.3
550	20	4,985	-11.7	-25.0	26	7.5
500	20	5,718	-17.0	-28.2	26	9.2
450	20	6,489	-23.1	-32.9	26	10.1
400	20	7,353	-28.9	-38.5	26	12.8
350	20	8,293	-36.4	-42.8	27	15.7
300	20	9,344	-44.2		26	17.6
250	19	10,554	-53.0		27	20.3
200	19	11,970	-57.9		27	23.4
175	17	12,804	-59.7		27	24.1
150	17	13,762	-61.3		28	21.2
125	16	14,880	-63.1		28	18.3
100	10	16,209	-65.7		27	15.5
80	8	17,554	-67.3			
70	7	18,361	-67.0			
60	7	19,294	-66.1			
50	7	20,406	-64.1			
40	7	21,782	-61.9			
30	7	23,577	-59.0			
25	7	24,728	-56.5			
20	7	26,158	-52.3			
15	7	28,038	-48.0			
10	5	30,777	-43.1			

Note: All observations scheduled at 1200, G.C.T. Pressures shown under station names are the average monthly station pressures for the month of record, corrected to the height of the floors of the instrument shelters used for rawinsonde purposes. "Number of observations" refers to those of dynamic height only. Although the number of temperature observations at any given pressure surface is usually the same as for height, it is possible for temperature to be missing for one or more pressure surfaces of some observations. Dew Point averages are limited to those observations with temperatures warmer than -40°C. Observations of wind speed and direction are sometimes lost due to limiting angles, i.e., elevation angles less than 6° above the horizon, or any obstruction above the horizon.

The temperature and wind values are based on 15 or more observations at the surface or 5 observations at a standard pressure level for temperature and 10 for wind. Dew Point data are not published for standard pressure surfaces for which less than 5 observations are available. Dew Point data are computed and expressed on the basis of vapor pressure over water. Unless otherwise indicated, they are obtained from carbon hygristors.

These average values for standard pressure surfaces were obtained by rawinsondes; dynamic height (geopotential) in units of .98 dynamic meter, temperature and dew point in degrees Celsius, and resultant winds in tens of degrees and meters per second.

* Rawinsondes at this station were equipped with hypsometers to permit more accurate evaluations of pressure, and consequently height, at pressures lower than 50 mb. These rawinsondes were carried aloft by special high altitude balloons, in an effort to consistently reach higher altitudes.

+ Observations for these stations are scheduled at 0000 G.C.T.

† Dew Point temperatures are based on a minimum of 5 observations. Therefor, due to the lesser number of Dew Point observations at the higher levels comparison with dry-bulb temperatures should be made with care. Dew Point temperatures replaced Relative Humidity January 1967.

SOLAR RADIATION DATA

Solar radiation intensities, tabulated in langleys per minute on a surface normal to the direction of the sun. FEBRUARY 1968

Sun's zenith distance: A. M. 78.7°, 75.7°, 70.7°, 60.0°; *; P. M. 60.0°, 70.7°, 75.7°, 78.7°

ALBUQUERQUE, N. MEX.

Date	A.M. 78.7°	A.M. 75.7°	A.M. 70.7°	A.M. 60.0°	*	P.M. 60.0°	P.M. 70.7°	P.M. 75.7°	P.M. 78.7°
Air mass	4.19	3.35	2.51	1.67	*	1.67	2.51	3.35	4.19
Feb.									
1-----	1.09	1.18	1.29	1.46	1.52	1.46	1.32	1.19	1.10
2-----	----	1.22	----	1.44	----	----	----	----	----
3-----	1.04	1.15	1.26	1.38	1.43	1.35	1.18	1.03	.94
4-----	1.01	1.11	1.22	1.37	1.41	1.35	1.20	1.05	.96
5-----	1.02	1.11	1.23	1.38	1.45	1.34	1.08	.98	.84
10----	----	----	----	----	----	----	----	.90	----
16----	----	----	----	----	1.43	----	----	----	----
18----	----	----	----	----	----	----	----	1.07	.94
19----	1.04	1.15	1.23	----	----	----	----	----	----
21----	1.00	1.03	1.25	----	----	----	----	----	----
22----	----	----	----	----	----	----	----	1.07	----
23----	1.06	1.13	1.26	1.41	1.50	----	1.24	1.24	1.04
24----	.97	1.03	1.23	1.39	----	----	----	1.11	1.01
25----	1.02	1.13	1.23	1.38	1.47	1.37	1.24	1.13	1.04
26----	1.06	----	----	1.41	----	----	----	----	----
29----	----	----	----	----	----	1.28	1.11	.98	.91

BLUE HILL OBS., MASS.

Date	A.M. 78.7°	A.M. 75.7°	A.M. 70.7°	A.M. 60.0°	*	P.M. 60.0°	P.M. 70.7°	P.M. 75.7°	P.M. 78.7°
Air mass	4.89	3.92	2.94	1.96	*	1.96	2.94	3.92	4.89
Feb.									
5-----	----	----	----	----	----	1.27	1.00	0.84	0.76
6-----	----	----	----	----	----	----	----	.96	.87
7-----	0.96	1.07	1.20	1.30	----	----	----	----	----
9-----	----	1.08	1.18	1.30	1.35	1.28	1.05	.87	.74
11----	.72	.84	1.01	1.17	1.21	1.13	.89	.72	.62
15----	.66	.76	.91	----	----	----	----	----	----
16----	.94	1.05	1.17	1.32	1.34	1.32	1.15	.99	.86
18----	.81	.91	1.04	1.21	1.29	----	----	----	----
19----	.82	.93	1.06	1.25	1.32	1.25	1.01	.82	.70
21----	.84	.94	1.06	----	1.32	1.22	1.01	.84	.72
22----	.79	.90	1.04	1.23	1.30	1.23	1.01	.87	.79
23----	----	----	1.01	1.24	1.33	1.27	1.10	.94	.82
24----	.87	----	----	----	----	1.25	1.11	.96	.82
26----	.94	1.06	1.13	1.29	1.37	1.28	1.08	.91	.82
27----	.91	1.01	1.13	----	----	----	----	----	----
Averages	0.84	0.96	1.08	1.26	1.31	1.25	1.04	0.83	0.77

MAUNA LOA OBS., HAWAII

Date	A.M. 78.7°	A.M. 75.7°	A.M. 70.7°	A.M. 60.0°	*	P.M. 60.0°	P.M. 70.7°	P.M. 75.7°	P.M. 78.7°
Air mass	3.36	2.69	2.01	1.34	*	1.34	2.01	2.69	3.36
Feb.									
1-----	1.15	1.23	1.33	1.44	----	----	----	----	----
4-----	1.07	1.13	1.27	----	----	----	1.38	1.29	1.22
5-----	1.18	1.28	1.40	1.52	----	----	----	----	----
6-----	1.24	1.32	1.43	1.53	----	----	----	----	----
7-----	1.23	1.32	1.42	1.52	----	----	----	----	----
8-----	1.17	1.25	1.36	1.47	----	----	----	----	----
9-----	1.18	1.27	1.37	1.50	1.61	1.48	1.35	1.24	1.16
10----	1.17	1.26	1.36	1.48	----	----	----	----	----
11----	1.19	1.27	1.37	1.49	----	----	1.38	1.29	1.21
12----	1.23	1.31	1.40	1.52	1.64	1.52	1.39	1.29	1.25
13----	1.22	1.31	1.40	1.52	----	----	----	----	----
14----	1.20	1.27	1.39	1.51	1.62	1.49	1.38	1.28	1.20
15----	----	----	----	----	----	1.49	1.38	1.28	1.19
16----	1.22	1.30	1.41	1.53	1.64	1.51	1.39	1.29	1.20
17----	1.10	1.24	1.34	----	----	----	----	----	----
18----	1.16	----	----	1.46	1.58	1.26	1.06	.94	.85
19----	1.15	1.27	1.36	1.48	1.61	1.48	1.37	1.26	1.18
20----	1.20	1.29	1.38	1.50	----	1.45	1.35	1.25	1.16
23----	1.21	1.29	1.39	1.51	----	----	----	----	----
24----	1.22	1.35	1.40	1.52	----	----	----	----	----
25----	1.22	1.30	1.38	1.47	----	----	----	----	----
26----	1.19	1.27	1.37	1.49	1.62	1.47	1.35	1.25	1.17
27----	1.17	1.31	1.35	1.47	1.59	1.44	1.31	1.21	1.12
28----	1.16	1.25	1.33	1.46	1.58	1.40	1.25	1.16	1.07
Averages	1.18	1.28	1.37	1.49	1.61	1.45	1.33	1.23	1.15

MADISON, WIS.

Date	A.M. 78.7°	A.M. 75.7°	A.M. 70.7°	A.M. 60.0°	*	P.M. 60.0°	P.M. 70.7°	P.M. 75.7°	P.M. 78.7°
Air mass	4.69	3.75	2.81	1.88	*	1.88	2.81	3.75	4.69
Feb.									
3-----	S 1.04	S 1.18	S 1.27	S 1.44	S 1.44	S 1.43	----	----	----
8-----	S .80	S .89	S 1.01	----	----	----	----	----	----
10----	S .96	S 1.08	S 1.20	S 1.36	S 1.39	S 1.35	S 1.17	S 1.04	S 0.93
13----	M .81	M .90	M 1.04	M 1.24	M 1.29	M 1.26	M 1.06	M .92	M .82
14----	S .96	S 1.07	S 1.19	S 1.37	S 1.40	S 1.36	S 1.19	S 1.06	S .97
18----	----	----	S 1.19	S 1.37	S 1.40	S 1.35	S 1.20	S 1.08	S .96
21----	M .70	M .83	M .97	M 1.21	M 1.29	S 1.20	S 1.06	S .95	S .82
22----	S .88	S .92	S 1.04	S 1.26	S 1.37	S 1.33	S 1.17	S 1.05	S .94
23----	S .91	S 1.01	S 1.15	S 1.32	S 1.37	S 1.34	S 1.16	S 1.05	S .93
25----	I .72	I .85	----	----	----	----	S 1.04	S .91	S .79
29----	----	S .86	----	----	----	S 1.24	S 1.10	S .99	S .87
Averages	0.86	0.96	1.12	1.32	1.37	1.32	1.13	1.01	0.89

TUCSON, ARIZ.

Date	A.M. 78.7°	A.M. 75.7°	A.M. 70.7°	A.M. 60.0°	*	P.M. 60.0°	P.M. 70.7°	P.M. 75.7°	P.M. 78.7°
Air mass	4.56	3.65	2.74	1.83	*	1.83	2.74	3.65	4.56
Feb.									
3-----	0.99	1.08	1.18	1.32	1.26	1.09	0.98	0.90	0.83
5-----	.94	.84	1.16	----	----	----	----	----	----
17----	----	----	----	1.42	----	----	----	----	----
18----	.93	----	----	----	1.37	1.25	1.08	.95	.88
19----	.51	.88	1.14	1.26	1.21	----	----	----	----
21----	.86	.95	1.06	----	----	----	----	----	----
22----	----	----	----	1.21	1.39	----	----	----	----
23----	----	----	----	----	1.41	.60	1.13	1.04	.93
28----	----	----	----	1.33	----	----	----	----	----
Averages	0.85	0.94	1.13	1.31	1.33	0.98	1.06	0.96	0.88

OMAHA, NEBR.

Date	A.M. 78.7°	A.M. 75.7°	A.M. 70.7°	A.M. 60.0°	*	P.M. 60.0°	P.M. 70.7°	P.M. 75.7°	P.M. 78.7°
Air mass	4.78	3.82	2.87	1.91	*	1.91	2.87	3.82	4.78
Feb.									
2-----	HS1.00	HS1.08	HS1.22	HS1.37	HS1.39	HS1.36	HS1.12	----	----
5-----	----	----	----	----	HI1.10	HM1.11	HI .89	----	----
7-----	HM1.14	----	----	----	HM1.37	HS1.38	HS1.25	----	----
8-----	HI .84	HI .99	HI1.12	HI1.24	HM1.32	----	----	----	----
11----	HS .87	HS .97	HM1.08	----	----	----	----	----	----
12----	----	----	HS1.18	HS1.38	----	----	----	----	----
14----	HS .88	HS .97	HS1.10	----	----	----	----	----	----
15----	----	----	HS1.09	HS1.27	HS1.35	HM1.25	HM1.12	HM0.97	----
16----	HS .89	HS1.02	HS1.14	HS1.26	----	----	----	----	----
17----	HS .92	HS1.02	HS1.16	HS1.32	HS1.32	----	HS1.12	HS1.01	0.90
18----	HS .82	HS .94	HM1.04	HM1.12	HM1.28	HM1.12	† ----	----	----
21----	HS .92	HS .99	HS1.15	HS1.27	HS1.36	HS1.30	----	----	----
29----	HS .91	HS1.02	HS1.15	HS1.31	HS1.38	HS1.28	HS1.15	HS1.00	HS .91
Averages	0.92	0.90	1.13	1.28	1.32	1.26	0.95	0.99	0.91

GUAM, M. I.

Date	A.M. 78.7°	A.M. 75.7°	A.M. 70.7°	A.M. 60.0°	*	P.M. 60.0°	P.M. 70.7°	P.M. 75.7°	P.M. 78.7°
Air mass	4.92	3.93	2.95	1.97	*	1.97	2.95	3.93	4.92
Feb.									
7-----	----	----	S 0.99	----	----	----	----	----	----
14----	M 0.63	M 0.79	----	----	----	----	----	----	----

S Slight haze - indeterminable
M Moderate haze - indeterminable
I Intense haze - indeterminable
* Values corresponding to true solar noon
† Off target
HS Slight haze
HM Moderate haze
HI Intense haze

Langley is the unit used to denote one gram calorie per square centimeter. An explanation of the formula used in computing the air mass values for each station listed above appears in the February 1957 issue, Vol. 8, No. 2, page 63, of this publication.

SOLAR RADIATION DATA

Daily totals and monthly averages of solar radiation (direct and diffuse) received on a horizontal surface, tabulated in langleys. FEBRUARY 1968

Station	Day of month 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
ALBUQUERQUE N.M.	400	339	396	407	402	329	343	339	290	250	336	109	140	244	174	452	344	401	454	417	459	386	484	475	488	458	256	263	510			357
AMES IOWA	41	275	178	214	278	175	291	309	154	305	298	317	254	272	309	278	351	344	221	292	375	377	375	353	95	60	81	162	412			257
ANNETTE ALASKA	97	165	25	81	24	19	128	84	175	195	195	203	207	218	215	202	156	128	36	24	47	58	120	22	12	94	249	185	76			119
APALACHICOLA FLORIDA	345	162	463	457	233	194	422	451	461	316	242	507	480	469	245	388	447	55	461	501	348	130	46	399	533	453	539	471	430			367
ARGONNE NAT. LAB.	60	129	340	185	293	243	155	303	310	374	325	322	356	376	379	369	376	404	103	349	403	414	410	169	336	123	97	320	360			289
ASTORIA OREGON	75	55	32	152	259	258	257	268	262	196	255	276	296	286	253	250	42	36	56	98	85	107	100	311	193	337	353	---	205			191
ATLANTA GEORGIA	35	152	387	375	300	341	173	329	384	386	398	408	383	344	256	415	332	15	442	403	151	373	74	414	411	422	402	122	---			308
BARROW ALASKA	2	8	10	9	12	9	11	10	11	8	30	15	16	22	25	29	38	72	71	55	50	64	62	75	85	85	56	55	115			38
BETHEL ALASKA	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	157	105	129	160	165	173	181	182	93	92	119	64	119	86			---
BISMARCK N.DAK.	205	236	233	257	140	257	276	216	100	151	121	233	219	296	294	235	346	312	123	369	335	299	212	163	130	73	147	404	373			233
BLUE HILL MASS.	85	55	172	267	276	263	257	97	310	138	318	270	240	202	277	353	216	329	322	201	357	378	356	363	347	397	316	287	175			263
BOISE IDAHO	220	129	181	207	251	253	199	277	255	278	298	94	215	303	113	275	61	---	---	---	83	65	266	---	345	343	---	361	369			227
BROWNSVILLE TEXAS	---	---	---	---	---	---	---	---	---	---	---	---	219	117	81	98	118	234	140	536	546	268	584	586	571	488	493	476	505			---
BURLINGTON VERMONT	156	106	39	221	137	175	275	248	272	124	136	181	227	157	244	341	245	199	262	316	364	222	358	398	393	391	303	81	247			235
CAPE HATTERAS N.C.	166	130	368	381	394	316	8	309	400	387	140	432	428	438	231	444	420	249	385	439	119	478	152	---	508	489	382	341	125			324
CARIBOU MAINE	200	70	61	129	223	208	242	---	220	301	230	268	296	301	279	338	194	354	342	367	346	262	383	384	387	401	388	386	253			279
CHARLESTON S.C.	127	214	417	410	407	123	379	387	406	432	312	437	390	458	233	453	459	128	411	493	253	387	61	96	508	543	476	439	168			345
CLEVELAND OHIO	97	44	172	310	296	297	274	146	147	200	272	226	302	337	150	331	256	374	261	228	298	387	293	371	394	356	165	265	258			259
COLUMBIA MISSOURI	18	346	219	222	288	162	173	328	332	174	396	385	393	299	269	385	412	351	219	179	404	406	441	233	193	49	115	276	497			281
DAVIS CALIFORNIA	149	154	196	251	94	270	338	340	154	307	296	323	338	219	299	80	220	210	71	213	342	133	382	303	406	409	421	298	335			260
DODGE CITY KANSAS	333	348	340	329	349	347	363	310	380	379	378	133	311	147	390	389	394	189	423	372	387	264	333	432	443	408	114	263	479			335
E. LANSING MICHIGAN	47	108	205	284	305	294	201	97	---	242	166	259	325	316	179	289	228	---	183	237	285	396	224	434	416	363	121	266	---			249
EL CENTRO CALIF. NPF	360	368	373	360	298	262	327	271	160	305	285	285	285	371	343	345	345	413	413	330	360	428	428	425	391	391	391	397	486			352
EL PASO TEXAS	459	408	449	459	465	446	395	426	120	133	365	351	75	178	436	297	498	465	524	505	517	517	524	526	531	487	361	171	569			402
ELY NEVADA	370	332	365	374	289	288	269	231	197	111	312	163	214	354	318	405	196	320	301	328	276	272	261	349	419	403	451	495	500			316
EPPLEY NEWPORT R.I.	82	82	217	183	286	271	196	111	299	217	308	263	220	231	176	340	270	336	322	163	326	357	366	334	312	380	323	293	111			254
FAIRBANKS ALASKA	14	16	20	16	22	20	20	28	44	28	53	---	---	50	131	80	91	81	87	69	96	99	72	65	159	58	61	95	74			61
FLAMING GORGE UTAH	354	222	210	336	318	344	267	193	338	369	349	260	261	169	355	344	297	212*	293	113	153	352	133	339	454*	438	186	308	240*			283*
FORT WORTH TEXAS	387	416	360	238	290	409	444	436	414	292	457	380	205	40	85	461	204	141	172	459	40	102	241	504	497	512	426	193	560			323
FRESNO CALIFORNIA	159	330	90	78	120	258	244	152	26	293	276	304	62	321	271	65	94	266	239	208	265	366	271	238	260	322	229	342	416			226
GAINESVILLE FLORIDA	228	226	398	406	219	108	408	409	417	---	---	297	509	492	337	297	415	120	276	453	426	320	90	90	513	374	449	460	434			340
GLASGOW MONTANA	251	231	156	185	200	272	264	263	259	283	109	220	164	249	315	319	346	131	182	232	168	185	346	239	283	355	182	145	356			238
GRAND JUNCTION COLO.	361	196	302	375	359	314	357	265	326	356	155	230	146	112	181	188	187	151	353	---	174	316	231	409	405	426	149	301	466			278
GREAT FALLS MONTANA	159	231	189	180	257	273	253	277	288	286	89	136	138	301	328	175	312	169	185	161	71	259	115	222	356	235	175	---	389			222
GREENSBORO N.C.	55	28	301	336	363	359	352	287	306	372	392	395	403	392	215	395	393	230	413	279	363	411	235	348	426	438	398	327	79			320
INDIANAPOLIS INDIANA	35	61	318	238	293	341	175	108	243	365	388	356	379	392	389	391	405	425	177	216	431	445	438	402	412	381	107	254	245			304
ITHACA NEW YORK	44	34	57	137	150	312	281	237	121	178	222	183	242	159	105	264	274	255	377	231	263	305	363	411	399	415	204	148	83			223
LAKE CHARLES LA.	165	434	353	388	351	412	429	431	397	307	258	469	176	67	211	289	106	219	439	481	157	47	195	507	374	507	475	31	550			318
LAKELAND FLORIDA	319	330	355	449	274	293	404	460	445	406	196	465	465	459	451	146	283	282	105	366	425	228	115	188	540	516	534	529	229			354
LARAMIE WYOMING	282	112	223	289	285	221	301	316	310	314	303	205	266	181	371	266	313	230	281	47	185	240	273	236	329	379	216	233	372			261
LAS VEGAS NEVADA	339	358	368	368	298	297	315	288	144	161	326	343	247	313	368	390	343	432	361	407	387	459	361	430	456	335	456	487	498			356
LITTLE ROCK ARKANSAS	74	382	273	355	363	367	377	400	397	369	430	389	334	138	155	176	339	234	245	402	200	200	---	---	263	291	429	---	---			303
LOS ANGELES CALIF.	312	387	357	374	207	356	316	200	43	238	156	235	247	261	308	336	140	353	255	186	286	398	422	451	447	162	85	428	490			291
MADISON WISCONSIN	35	246	316	221	273	88	145	329	350	356	267	352	349	366	350	350	367	384	116	385	388	397	400	226	369	110	158	298	440			291
MANHATTAN KANSAS	50	311	206	244	231	139	320	316	322	260	332	265	339	140	283	342	324	187	329	68	376	197	162	97	231	272	328	264	429			254
MATANUSKA ALASKA	71	101	93	87	42	24	8	31	18	13	66	100	33	110	49	89	32	62	35	93	55	87	62	---	189	33	15	53	---			61
MEDFORD OREGON	125	100	249	196	160	169	266	270	260	307	145	180	343	225	222	154	208	173	71	92	---	---	---	---	---	---	---	---	---			196
MIAMI FLORIDA	436	449	262	345	245	377	449	426	455	505	290	253	---	---	475	480	473	465	186	340	---	230	334	369	521	---	---	---	401			381
MIDLAND TEXAS	374	388	378	383	387	379	395	385	276	60	413	146	47	123	415	383	69	254	287	439	415	149	407	455	456	463	398	143	486			322
NASHVILLE TENNESSEE	108	347	360	332	308	360	160	84	324	155	426	410	413	270	173	439	433	371	424	98	341	397	443	467	336	417	104	50	258			304
NEW YORK N.Y. U	31	74	197	249	310	263	181	178	275	306	310	178	303	282	297	354	215	363	372	237	352	372	388	376	409	411	293	296	18			272
NORTH OMAHA NEBRASKA	57	322	188	216	291	211	---	344	183	244	295	367	248	261	369	381	407	392	225	194	420	225	225	120	72	96	257	359	468			266
OAK RIDGE TENNESSEE	84	240	383	300	336	360	195	167	268	344	418	418	410	300	184	428	366	329	470	84	381	403	338	462	438	474	204	144	239			316
OKLAHOMA CITY OKLA.	261	386	297	207	354	329	409	380	399	278	422	94	326	176	308	311	294	84	157	415	424	204	416	428	485	492	2	381	532			319

Note.--Langley is the unit used to denote one gram calorie per square centimeter.
Values with an asterisk are interpolated.

U Indicates Urban sites

SOLAR RADIATION DATA

Daily totals and monthly averages of solar radiation (direct and diffuse) received on a horizontal surface, tabulated in langleys.

FEBRUARY 1968

Station	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
PAGE ARIZONA	375	285	379	374	338	307	276	285	204	328	189	237	229	261	350	348	225	385	367	314	224	432	374	433	445	407	397	474	476			335
PALMER AAES ALASKA	63	75	93	77	36	22	8	28	21	14	65	90	37	99	43	124	29	55	29	72	62	103	51	89	151	28	19	50	84			59
PHOENIX ARIZONA	349	375	401	416	400	283	376	281	88	241	239	206	116	327	335	407	406	450	445	389	430	465	478	479	480	399	426	513	492			369
PORTLAND MAINE	108	51	129	279	250	281	313	114	327	99	307	264	287	279	254	365	195	326	368	367	386	358	389	384	388	405	344	283	78			275
PROSSER WASHINGTON	130	113	56	128	260	255	266	241	29	258	50	168	310	305	287	241	56	52	103	240	199	89	218	291	312	315	356	354	358			208
RAPID CITY S.DAK.	214	220	291	242	181	315	265	283	305	288	180	330	301	278	344	281	362	190	210	213	217	254	304	185	379	392	160	398	411			276
RENO NEVADA	214	204	288	301	179	255	243	289	51	110	190	288	78	237	344	163	306	203	89	229	373	220	347	253	355	391	406	426	420			257
RICHLAND 25 NW WASH.	140	202	71	179	264	265	271	85	46	126	92	272	301	274	301	293	58	74	92	215	212	72	322	288	318	341	364	360	361			216
RIVERSIDE CALIFORNIA	277	321	315	323	191	344	306	205	8	165	122	124	131	191	280	311	87	339	326	25	119	288	392	377	416	245	26	274	439			240
RUSTON LOUISIANA	62	370	329	362	249	350	393	389	370	331	369	385	189	45	108	52	296	440	245	435	33	273	128	436	418	456	453	33	474			292
SAINT CLOUD MINN.	71	265	255	243	240	267	276	266	291	310	318	248	273	328	339	277	313	349	262	356	358	367	333	362	104	198	180	367	348			282
SALT LAKE CITY	331	159	294	336	303	289	340	398	345	346	176	93	132	316	250	257	144	293	298	96	47	249	127	303	425	326	439	450	446			276
SAN ANTONIO TEXAS	312	461	439	361	449	449	464	410	297	82	209	434	53	28	457	248	73	102	124	453	276	71	438	507	493	513	434	159	538			322
SANTA MARIA CALIF.	206	358	310	314	111	354	280	135	83	381	219	200	162	262	276	116	97	337	372	280	254	419	388	412	451	259	79	334	468			273
SAULT STE MARIE MICH	31	---	212	247	277	136	219	214	289	304	185	191	193	200	335	200	218	277	268	370	339	297	361	377	362	298	278	251	382			261
SEATTLE TACOMA WASH.	91	53	39	174	236	244	238	248	251	236	254	267	278	280	284	270	50	54	52	134	123	92	162	233	136	331	340	341	324			201
SEATTLE WASH. UNIV.	76	71	32	163	226	234	232	235	241	231	233	248	258	270	275	267	47	44	56	101	122	71	148	210	143	309	321	322	295			189
SPOKANE WASHINGTON	196	73	74	143	217	276	279	255	268	281	234	270	280	287	242	306	85	48	---	196	110	65	158	328	304	332	326	338	344			227
STATE COLLEGE PENN.	27	47	153	257	272	326	255	307	143	240	231	202	361	318	269	197	267	387	385	190	392	391	364	385	437	414	208	142	83			264
STERLING VIRGINA	37	63	302	366	362	358	144	222	118	---	397	311	337	396	---	390	317	382	391	178	443	439	---	362	464	462	415	305	59			308
SWAN ISLAND W.I.	344	485	479	447	494	207	500	300	151	554	479	524	456	539	527	509	490	515	563	327	514	574	575	450	553	415	606	601	582			475
TAMPA FLORIDA	391	419	---	463	290	652	450	436	428	415	192	414	491	487	480	217	289	286	123	364	527	312	134	79	552	518	555	548	281			385
TUCSON ARIZONA	352	371	372	379	371	278	312	274	70	292	---	205	164	402	309	399	414	438	431	378	481	441	---	---	---	---	313	453	342			343
WAKE ISLAND PACIFIC	487	500	278	403	507	442	460	508	449	499	421	490	422	462	336	451	339	542	318	546	510	460	412	526	450	566	518	527	446			458

Note.--Langley is the unit used to denote one gram calorie per square centimeter.

Values with an asterisk are interpolated.

NET RADIATION

Net radiation in langleys per day (8 a.m. to 8 p.m.) at Palmer, Alaska

FEBRUARY 1968

Date.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
Langleys. . .	-74	-67	-84	-75	-10	-7	-31	-25	-5	-55	-15	-21	-12	-9	-12	16	-22	-1	-8	-9	-21	-21	-21	-31	-31	-27	-64	-2	26			-25

The measurement is made with a CSIRO Funk net exchange radiometer over a plot of sod. The value represents the total incoming minus the total outgoing radiation of all wave lengths.

These data are of an experimental nature and are published as received from the Palmer Exp. Station. The instrument with which they were measured has not been checked by the Weather Bureau.

SOLAR ULTRA-VIOLET RADIATION DATA

Daily totals and monthly average ($<$ 3900 Å)

Date.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
Langleys. . .	2.43	11.01	8.57	9.47	10.83	7.58	11.28	11.64	7.22	10.10	9.20	9.83	8.30	10.10	13.17	11.10	12.00	13.26	10.37	12.72	12.81	13.80	14.34	13.35	5.59	3.70	4.78	8.48	15.97			10.10

These data are from an U - V Eppley total ultra violet sensor and Speedomax H (Leeds Northrup) Recorder. It is at the same location (Agronomy Building, Iowa State University, Ames) as the published total solar radiation instrumentation. This instrument has not been checked by the ESSA, Weather Bureau.

TOTAL OZONE DATA

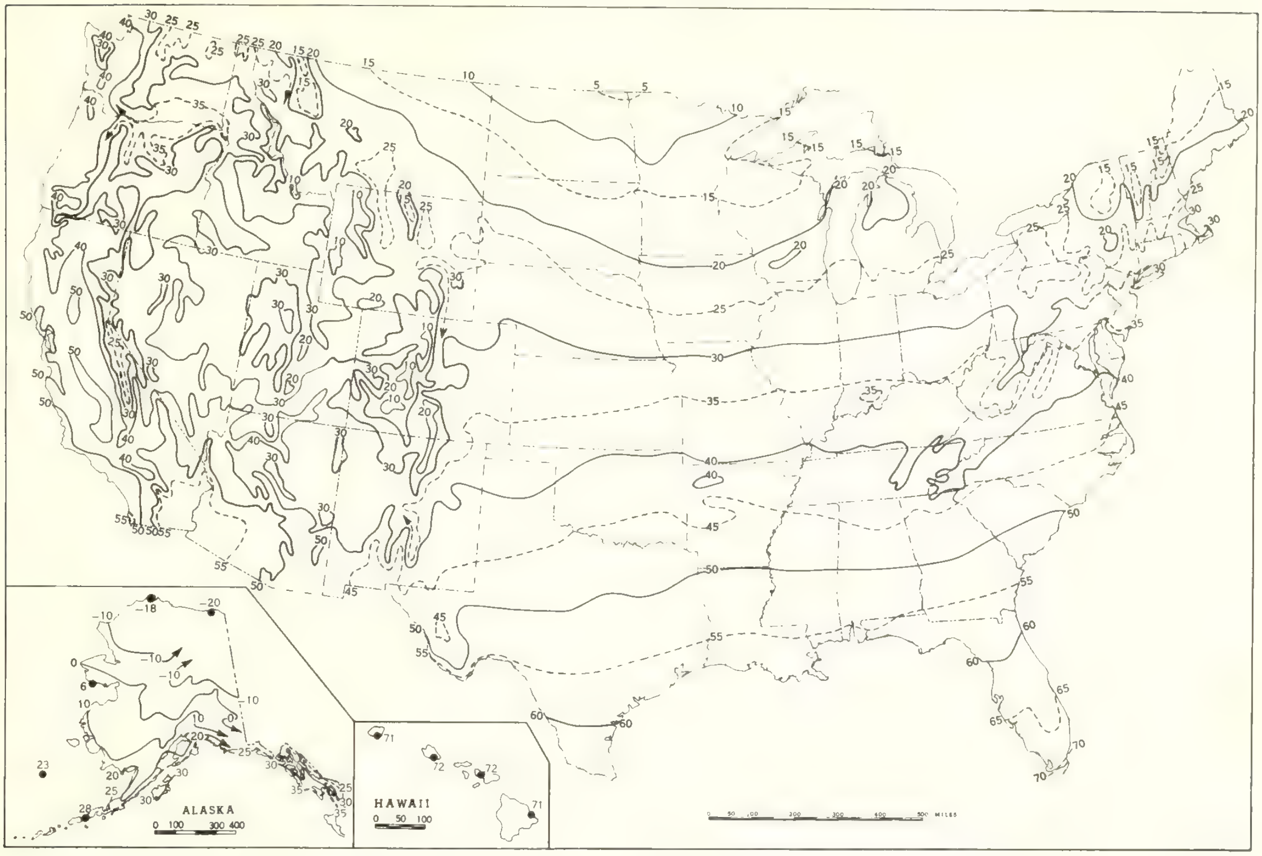
These provisional ozone data are obtained from measurements made with a Dobson ozone spectrophotometer, and are applicable approximately to local apparent noon. The data are presented in the code ΛSΩΩΩ defined in the August 1962 WMO circular entitled "PUBLICATION OF DATA FOR METEOROLOGICAL RESEARCH, WORLD OZONE DATA."

Units: Milli-atmo-cms.

Station	Day of month																														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean O_3
															Data will be delayed																	

The spectrophotometer measures the total amount of ozone in the atmosphere, i e , the amount contained in a vertical column of air extending from ground level to the top of the atmosphere in the vicinity of the station The amount of ozone in this column (coded ΩΩΩ) is expressed in terms of a thickness of a layer it would occupy at standard temperature and pressure, e g , 350 milli-atmo-cm ozone implies an ozone layer 0 350 centimeter thick The code ΛS designates the type of measurement made

Chart 1. A. Normal Daily Average Temperature (°F. 1931-60), February



B. Temperature Departure from 30 - Year Mean (°F 1931-60), February 1968.

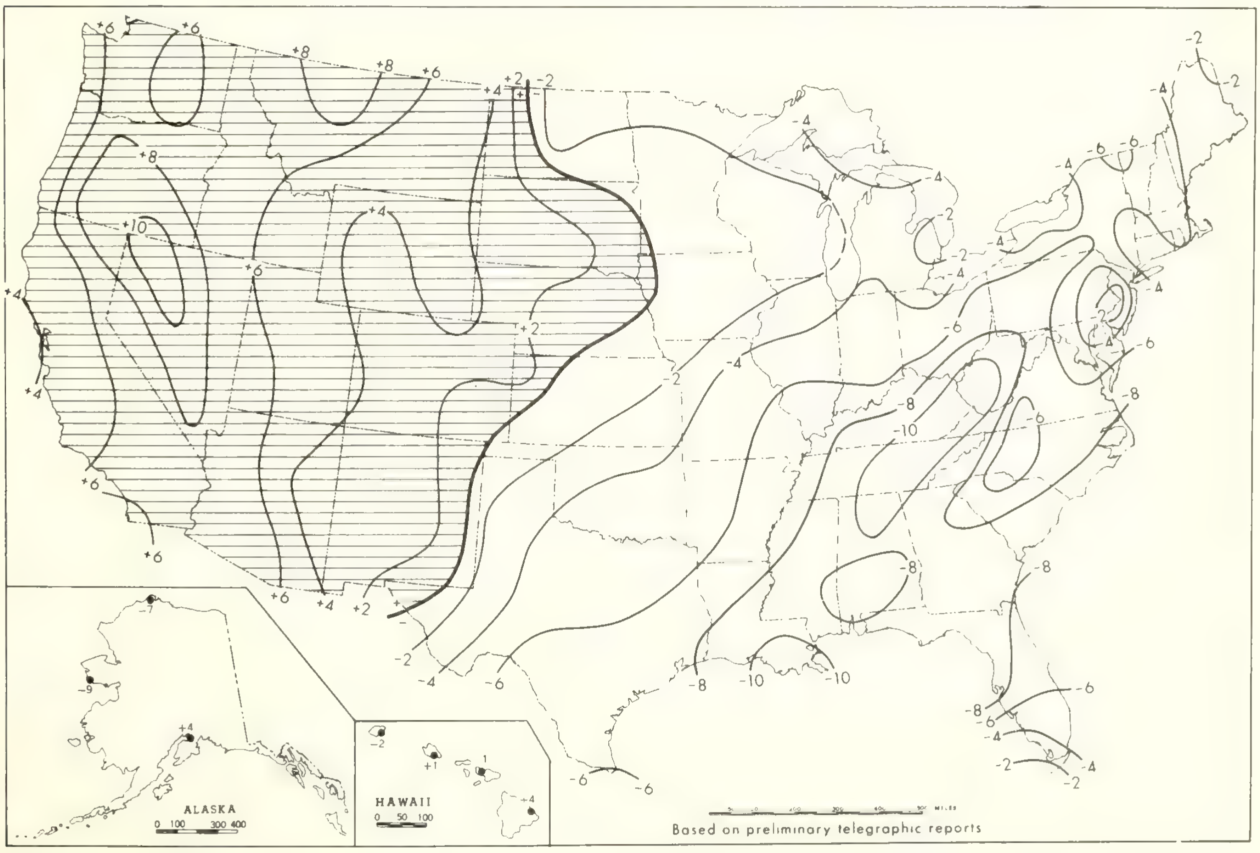


Chart II. Total Precipitation (Inches), February 1968.

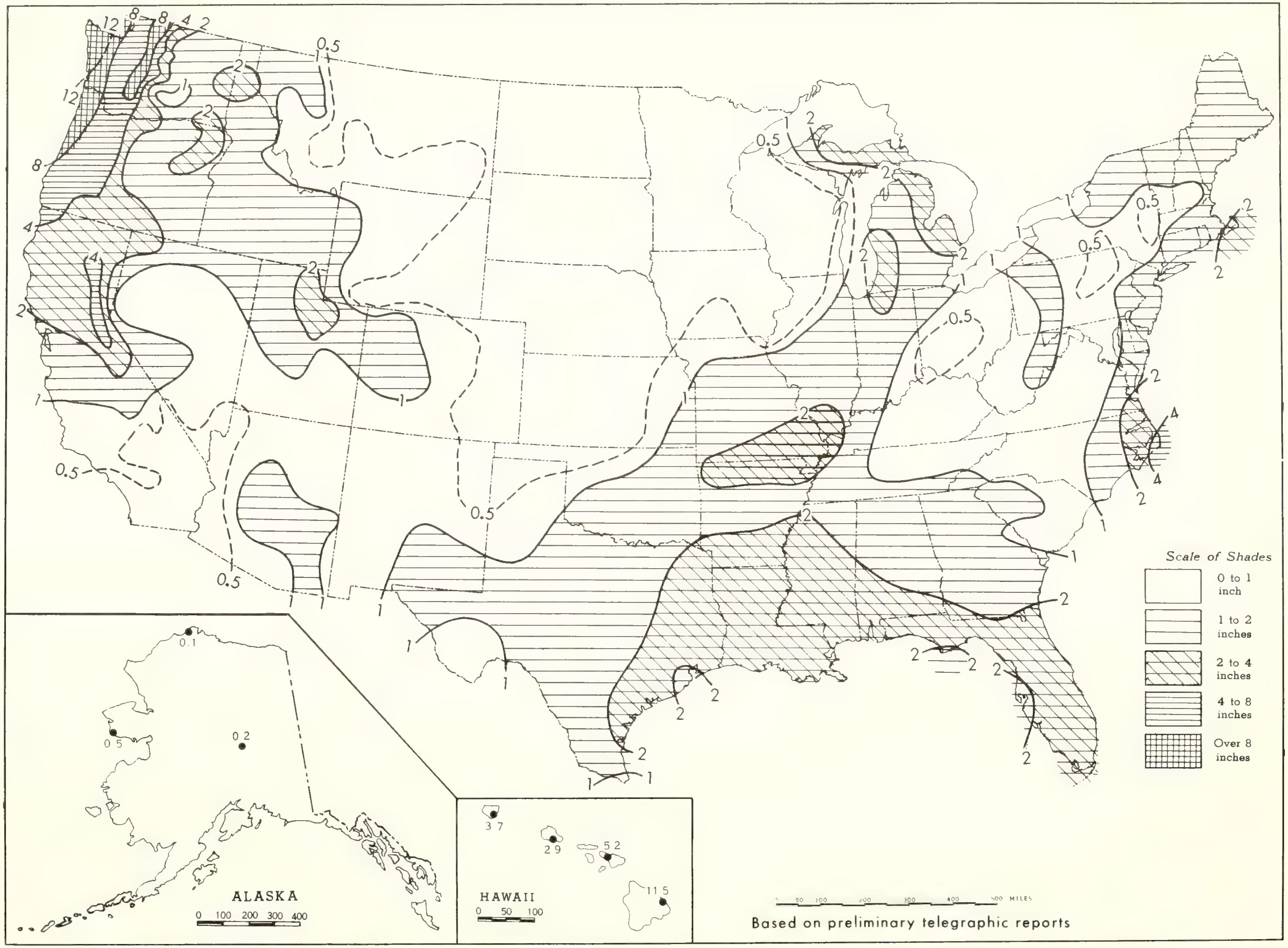


Chart III. Percentage of Normal Precipitation, February 1968.

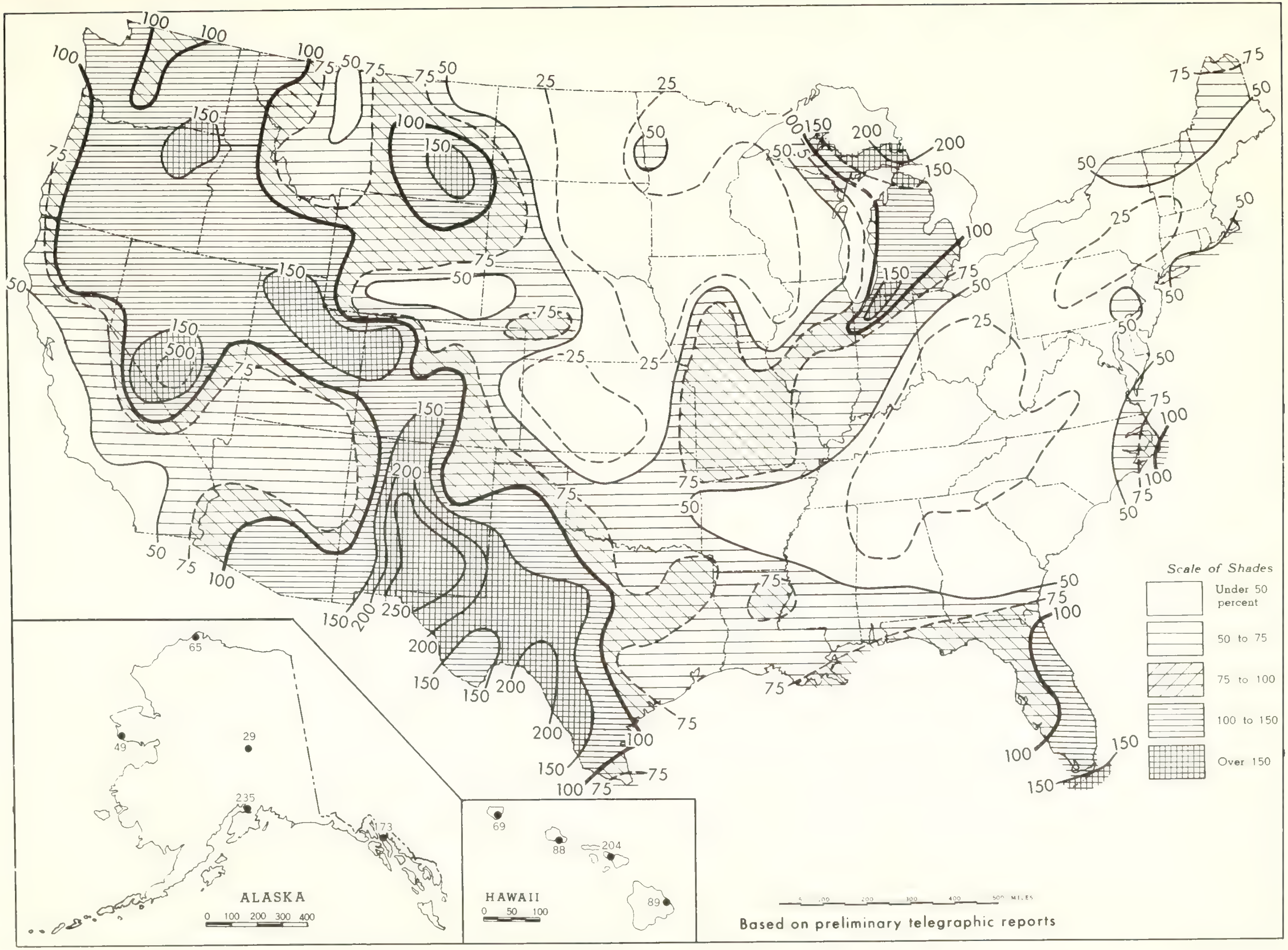
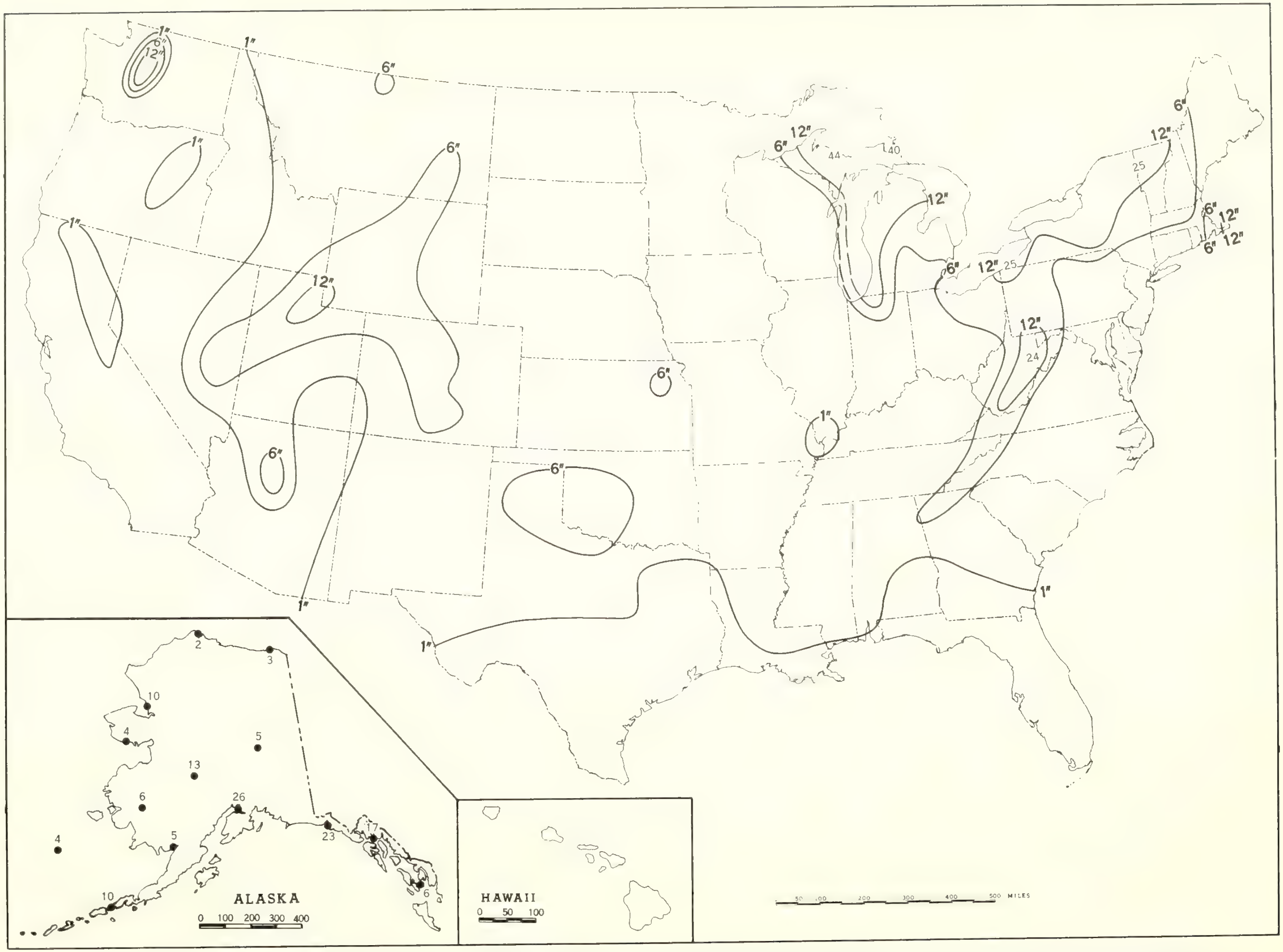
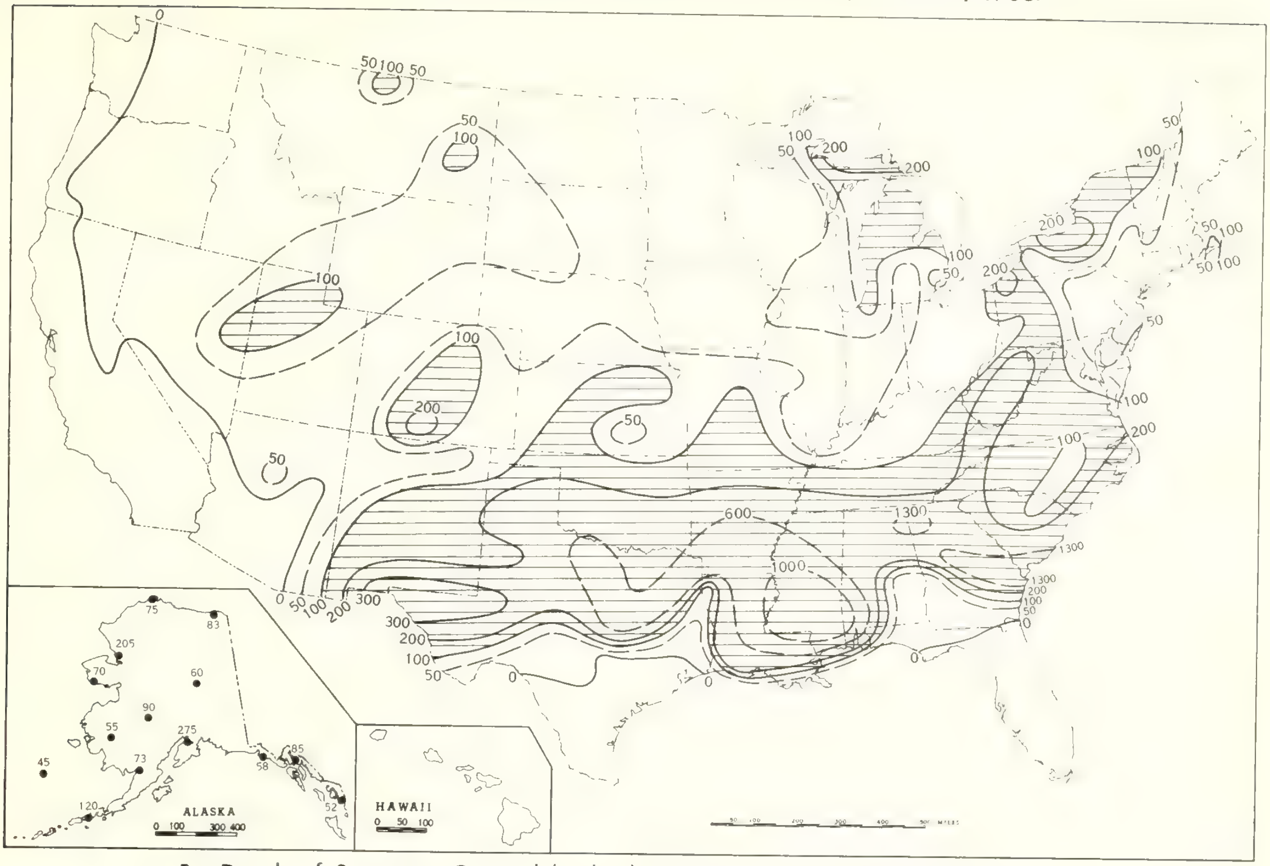


Chart IV. Total Snowfall (Inches), February 1968.

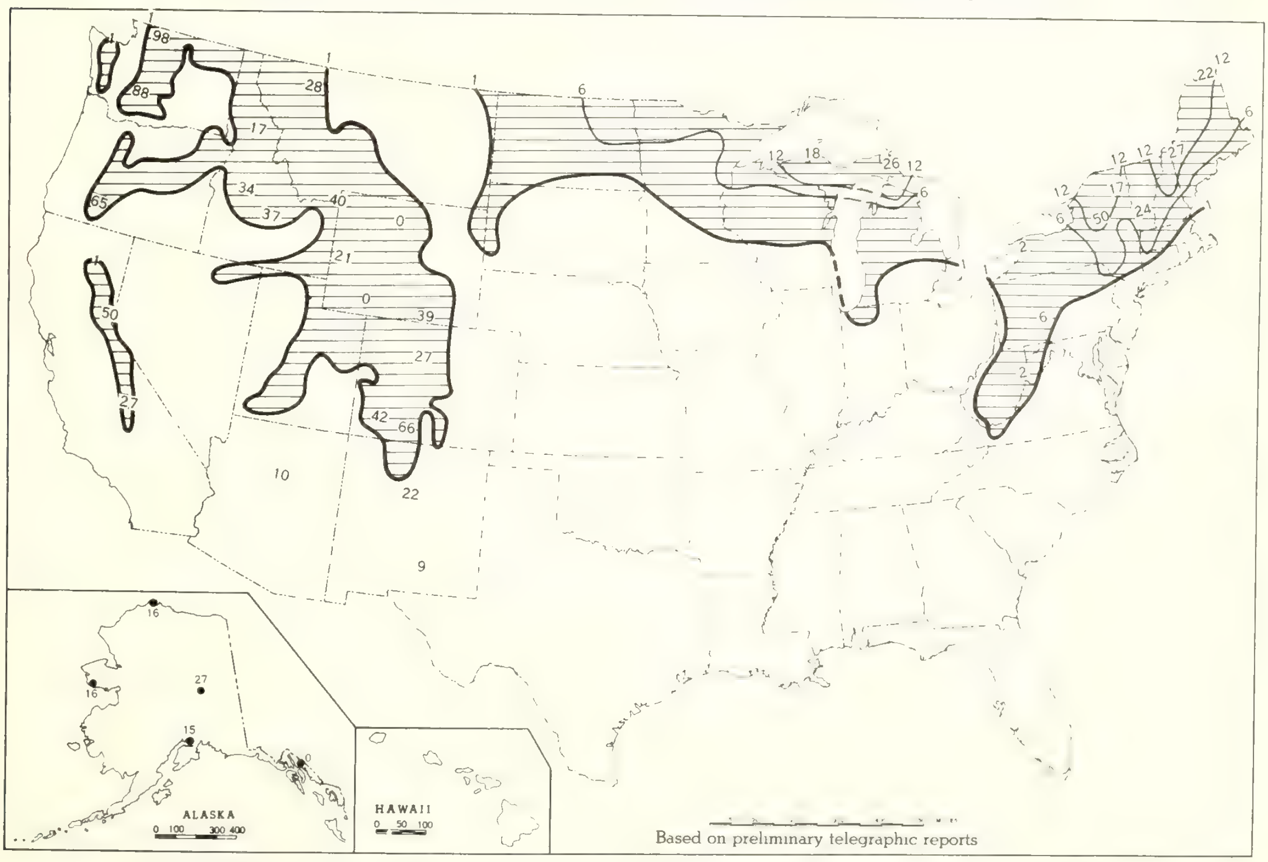


This is the total of unmelted snowfall recorded during the month at Weather Bureau and selected cooperative stations. This Chart and Chart V are published only for the months of November through April, although of course there is some snow at higher elevations, particularly in the far West, earlier and later in the year.

Chart V. A. Percentage of Mean Monthly Snowfall, February 1968.

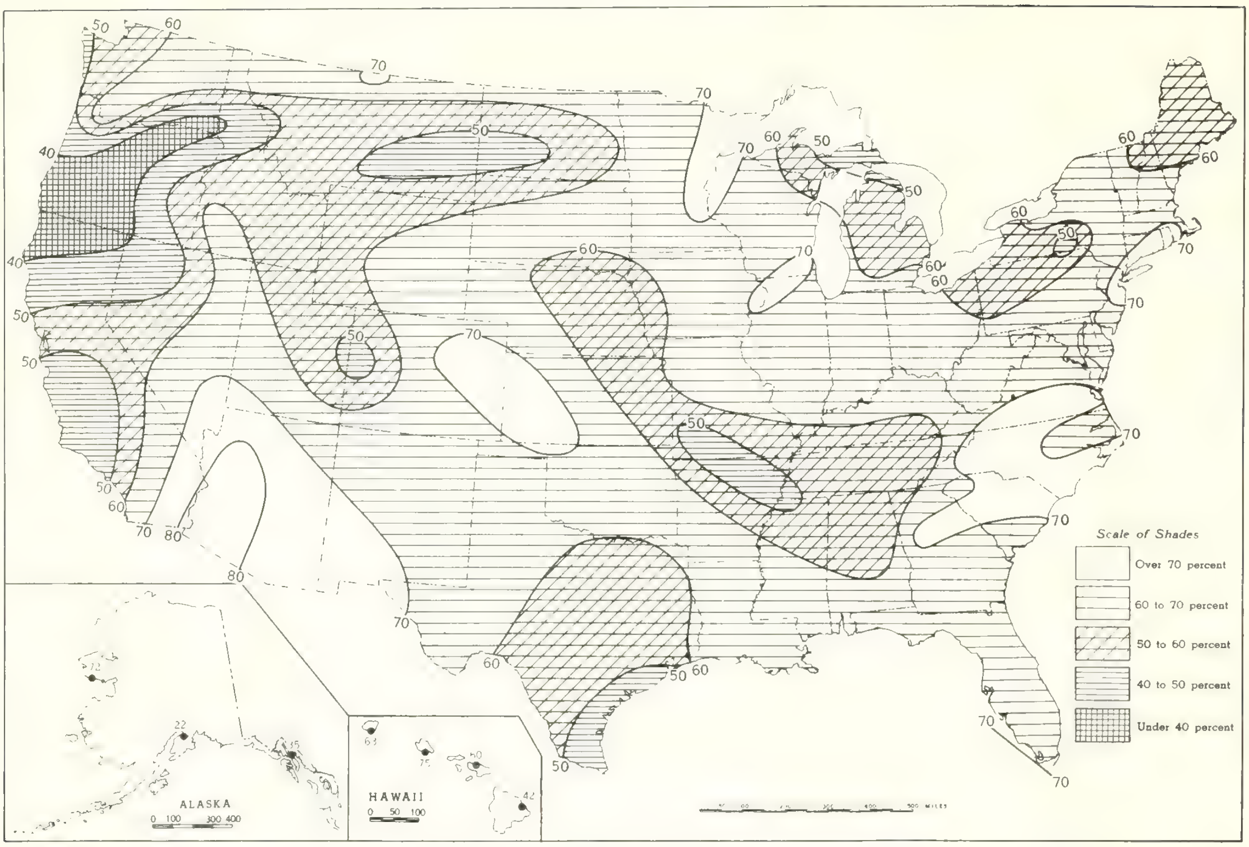


B. Depth of Snow on Ground (Inches), 7:00 a.m. E. S. T., February 26, 1968.

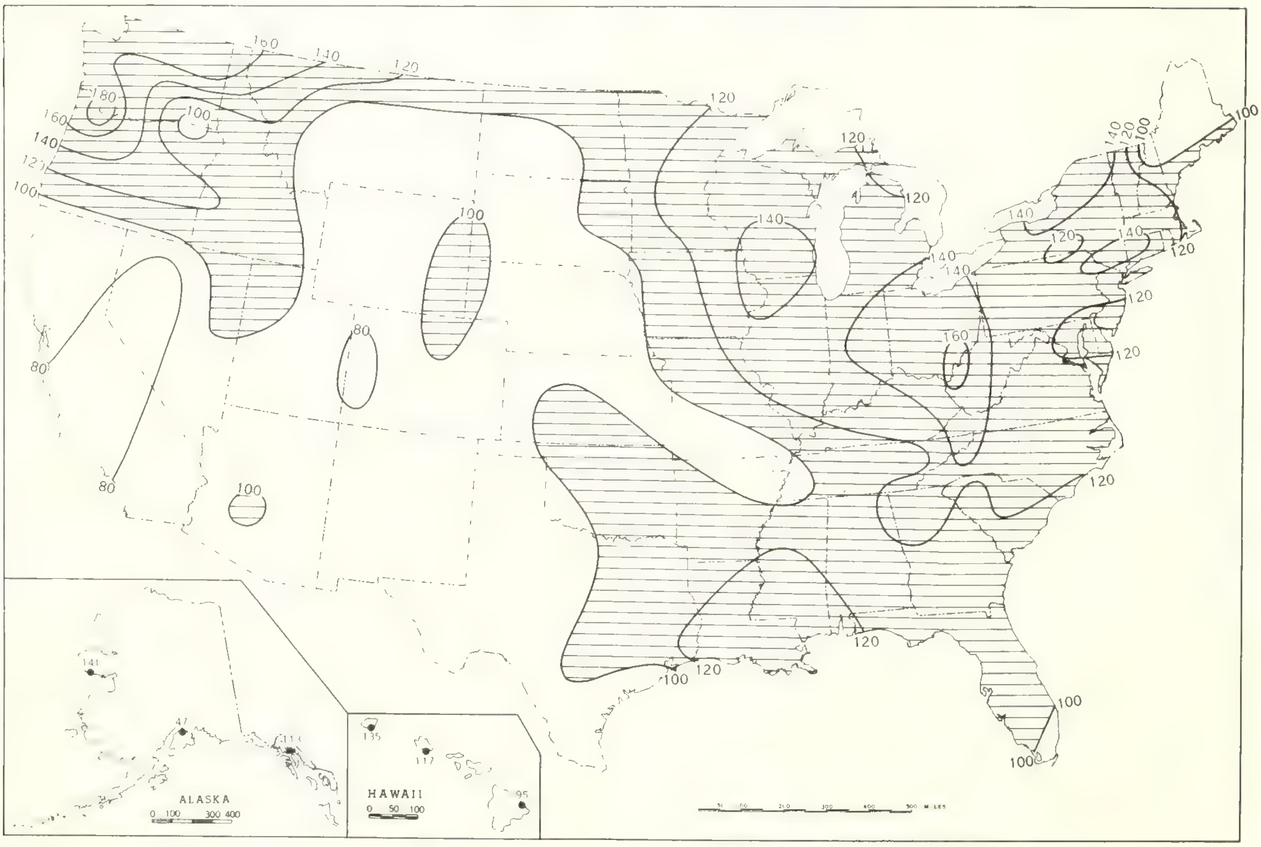


A. Amount of mean monthly snowfall is computed for Weather Bureau stations having at least 10 years of record.
B. Shows depth currently on ground at 7:00 a.m. E.S.T., of the Monday nearest the end of the month.
It is based on reports from Weather Bureau and selected cooperative stations.

Chart VI. A. Percentage of Possible Sunshine, February 1968.

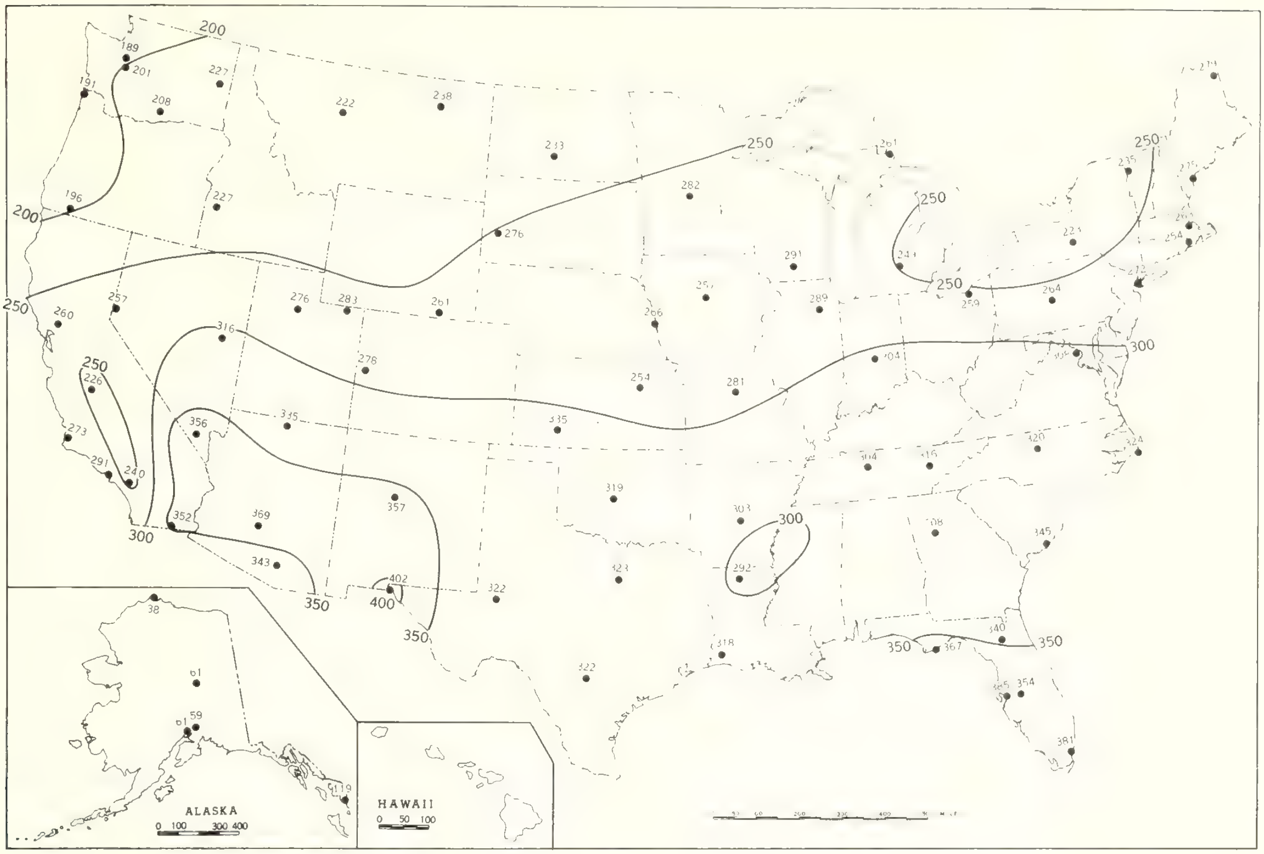


B. Percentage of Mean Monthly Sunshine, February 1968.

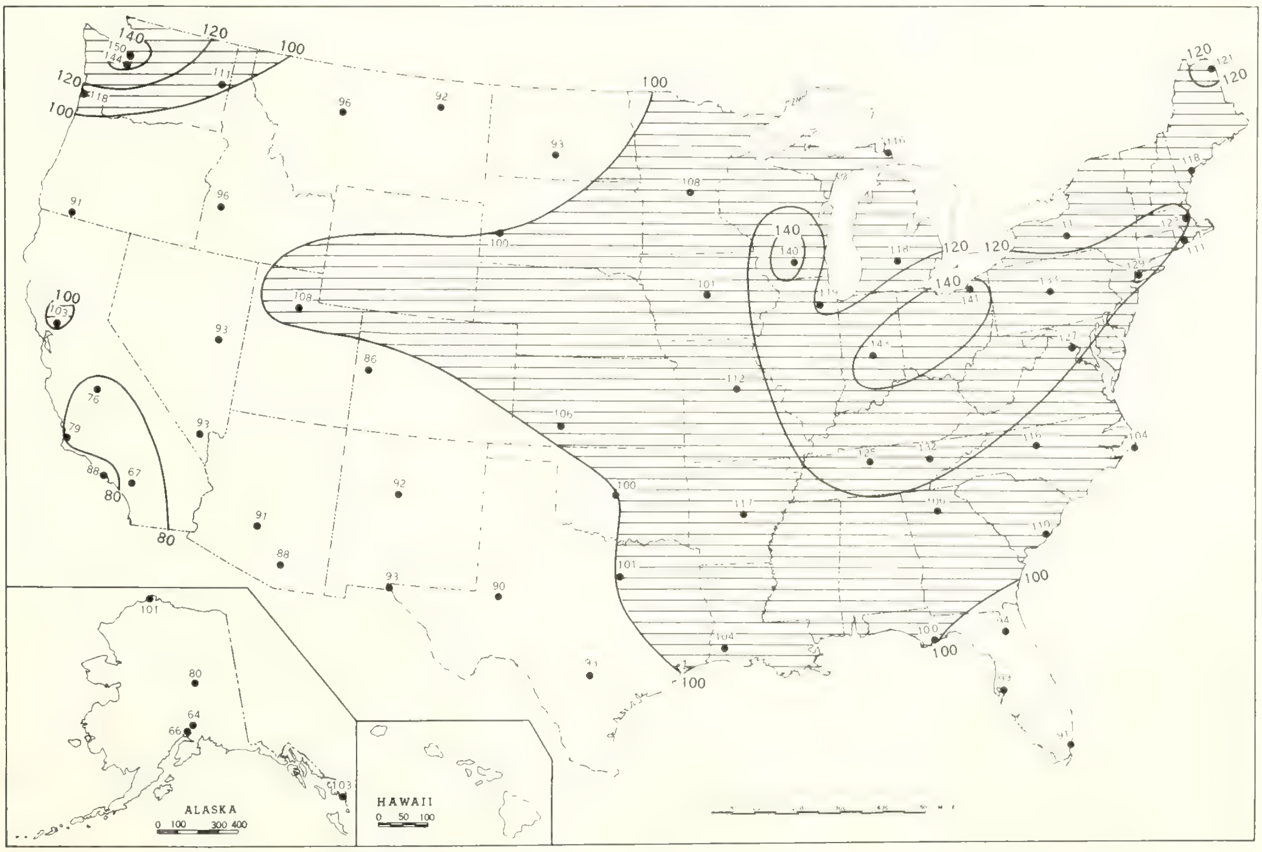


A. Computed from total number of hours of observed sunshine in relation to total number of possible hours of sunshine during month. B. Means are computed for stations having at least 10 years of record.

Chart VII. A. Average Daily Values of Solar Radiation, Langleys, February 1968.



B. Percentage of Mean Daily Solar Radiation, February 1968.

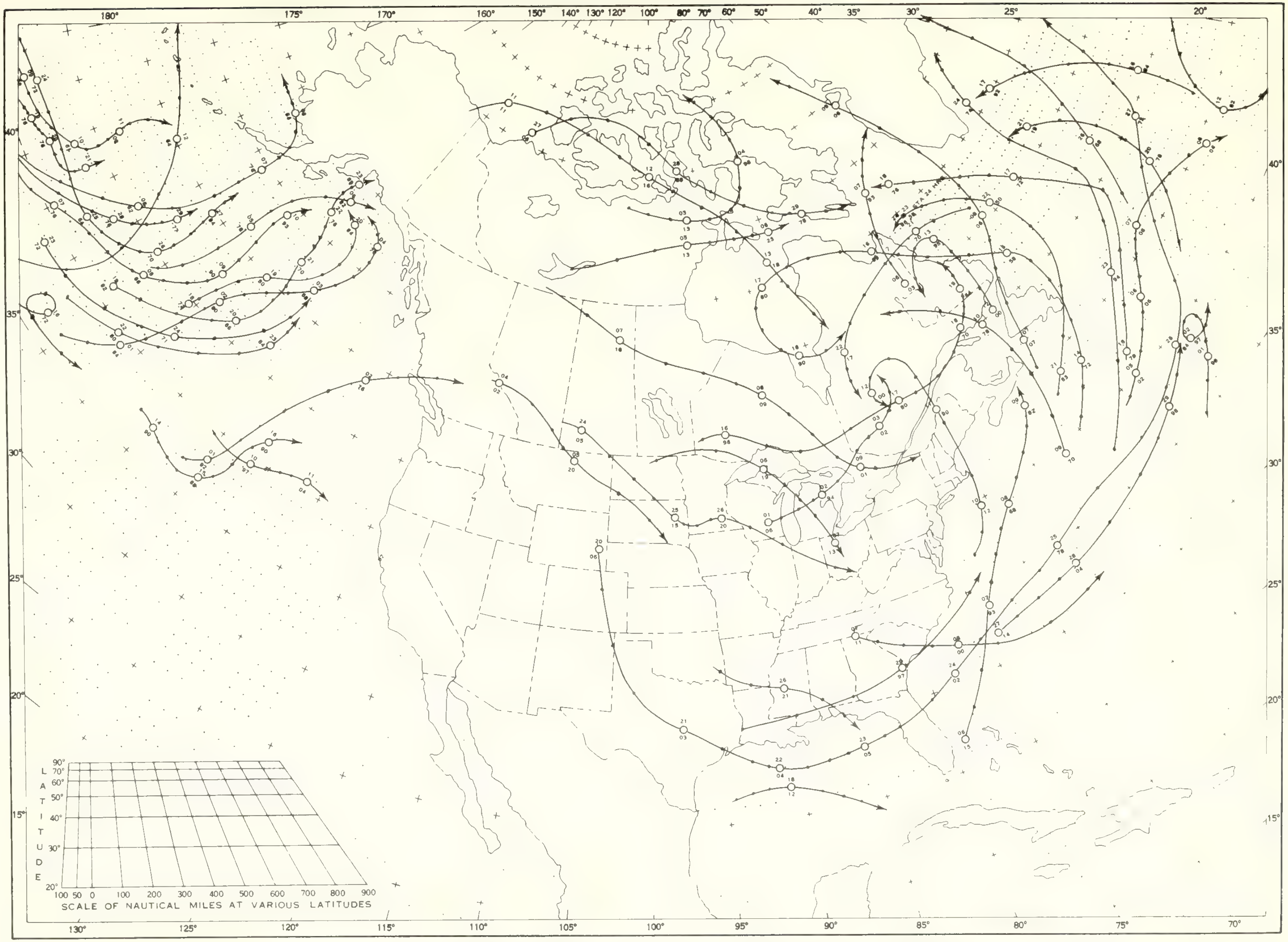


A. Mean daily solar radiation, direct + diffuse, received on a horizontal surface in langleys (1 langley = 1 gm. cal. cm.$^{-2}$) and recorded in International Pyrheliometer Scale of 1956. B. Percentage of the mean based on at least 5 years of record during the period 1950-60, and corrected to the International Pyrheliometer Scale of 1956.

Chart VIII Tracks of Centers of Anticyclones at Sea Level, February 1968.

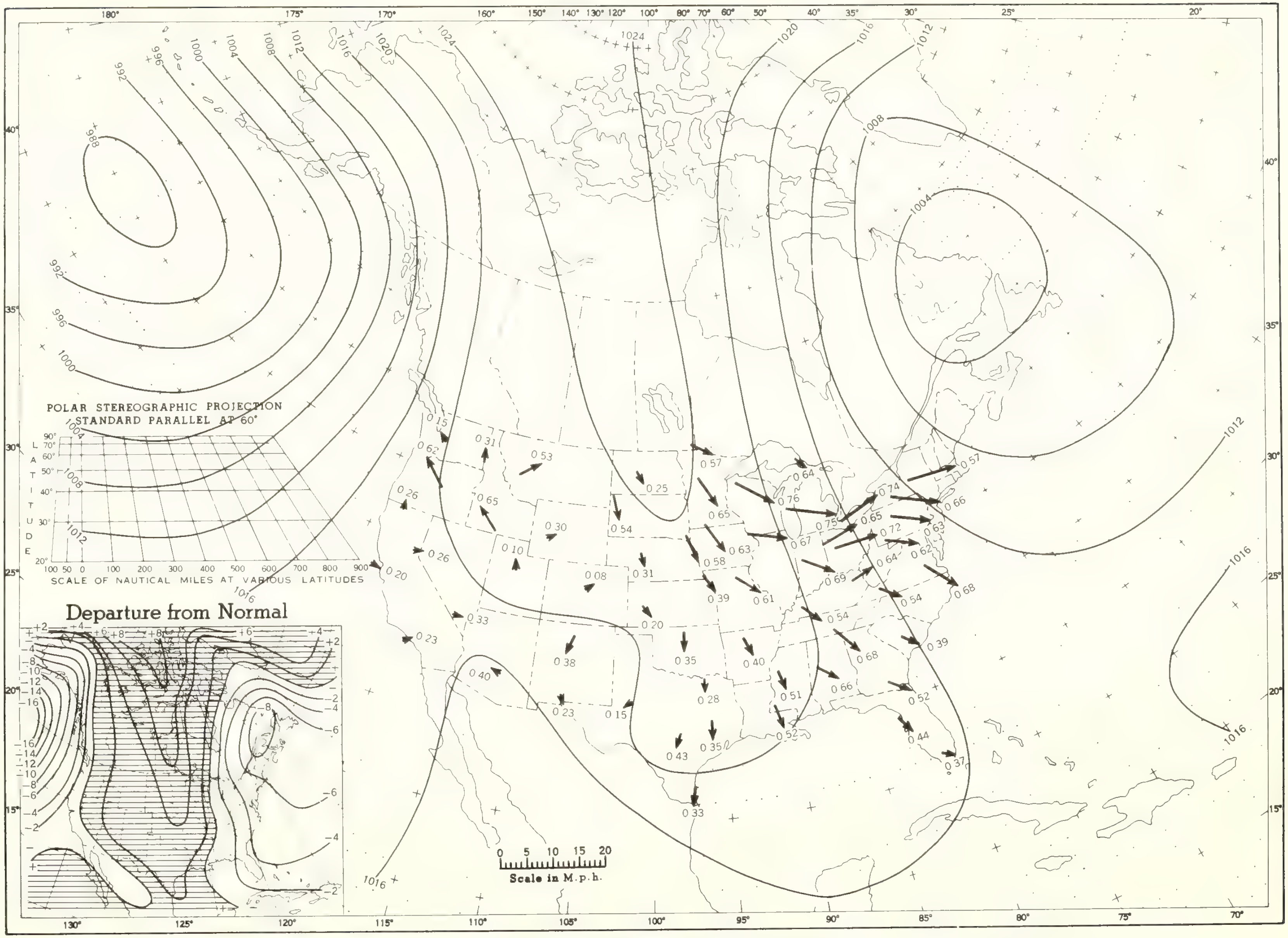
Circle indicates position of center at 7:00 a.m. E.S.T. Figure above circle indicates date, figure below, pressure to nearest millibar. Dots indicate intervening 6-hourly positions. Squares indicate position of stationary center for period shown. Dashed line in track indicates reformation at new position. Only those centers which could be identified for 24 hours or more are included.

Chart IX. Tracks of Centers of Cyclones at Sea Level, **February 1968.**



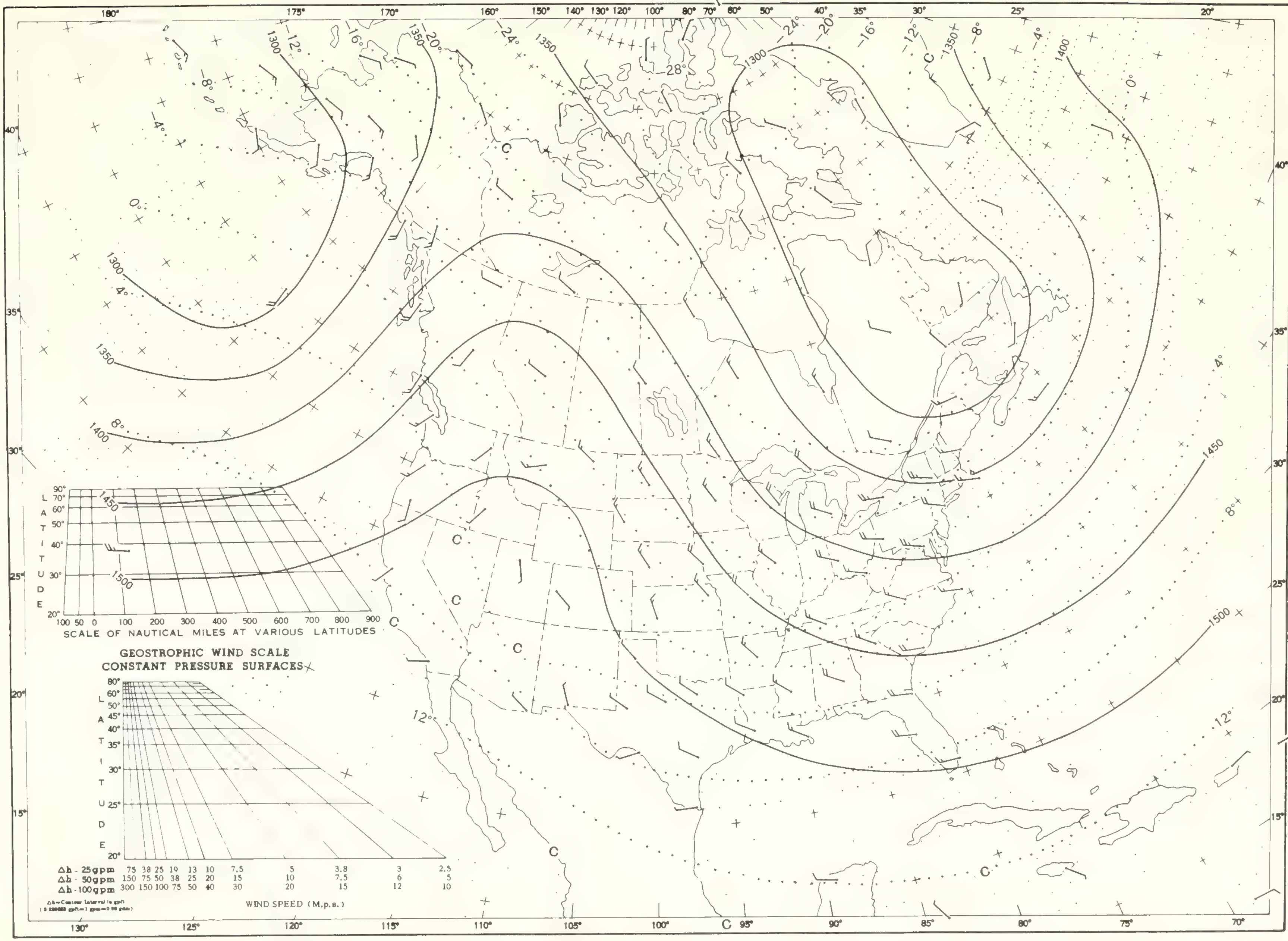
Circle indicates position of center at 7:00 a.m. E.S.T. Figure above circle indicates date, figure below, pressure to nearest millibar. Dots indicate intervening 6-hourly positions. Squares indicate position of stationary center for period shown. Dashed line in track indicates reformation at new position. Only those centers which could be identified for 24 hours or more are included.

Chart X. Average Sea Level Pressure (mb) and Resultant Surface Wind, **February 1968.** Inset: Departure of Average Pressure (mb) from Normal, **February 1968.**



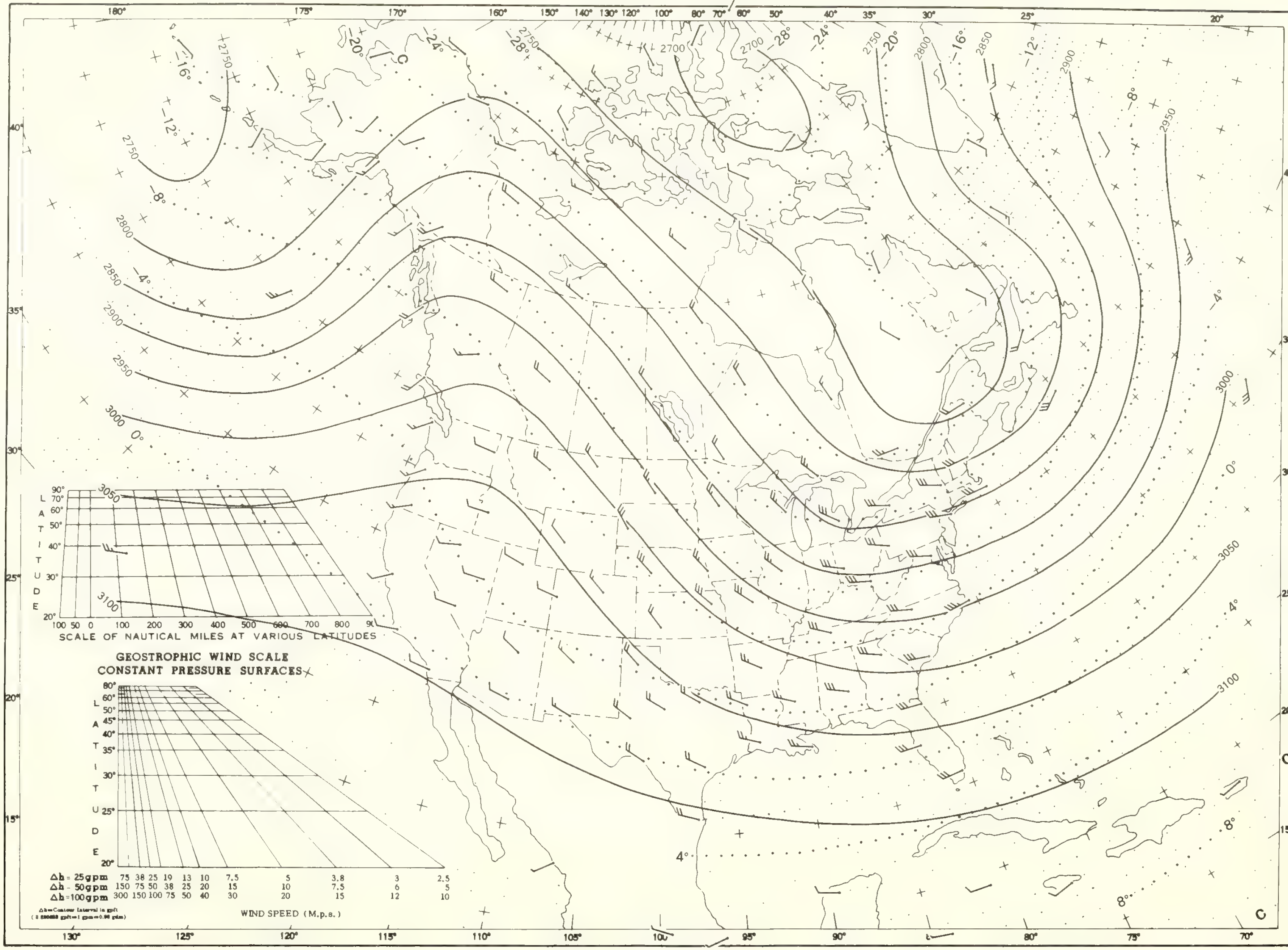
Average sea level pressures are obtained from eight daily 3-hourly observations. Resultant wind directions and speeds are shown by arrows. Constancy ratios (resultant speed÷average speed) are shown to two decimal places. Pressure normals are computed for stations having at least 10 years of record and for 10° intersections in a diamond grid over the oceans.

Chart XI. 850-mb Surface, 1200 GMT, **February 1968**. Average Height and Temperature, and Resultant Winds.



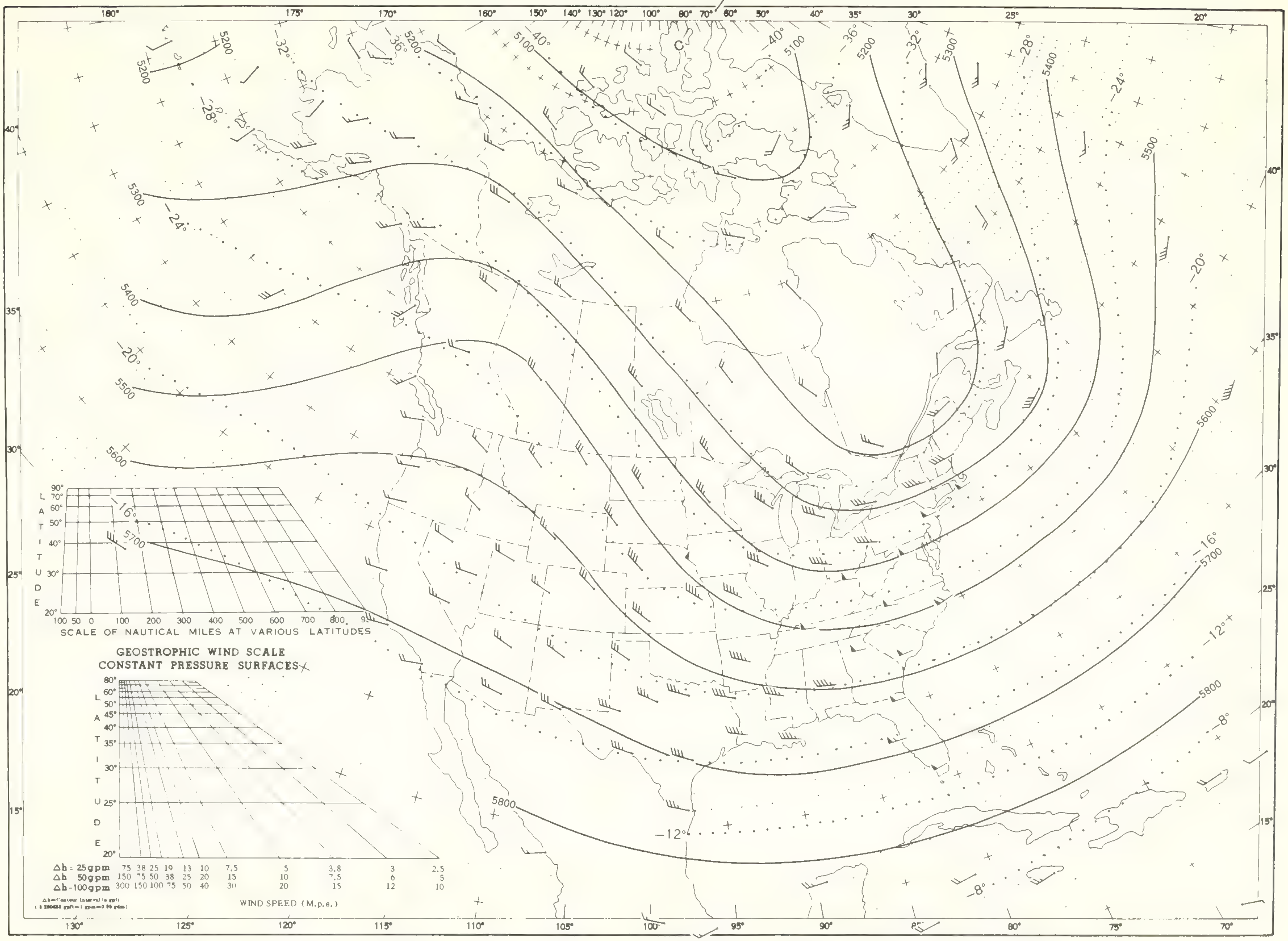
Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XII. 700-mb. Surface, 1200 GMT, February 1968. Average Height and Temperature, and Resultant Winds.



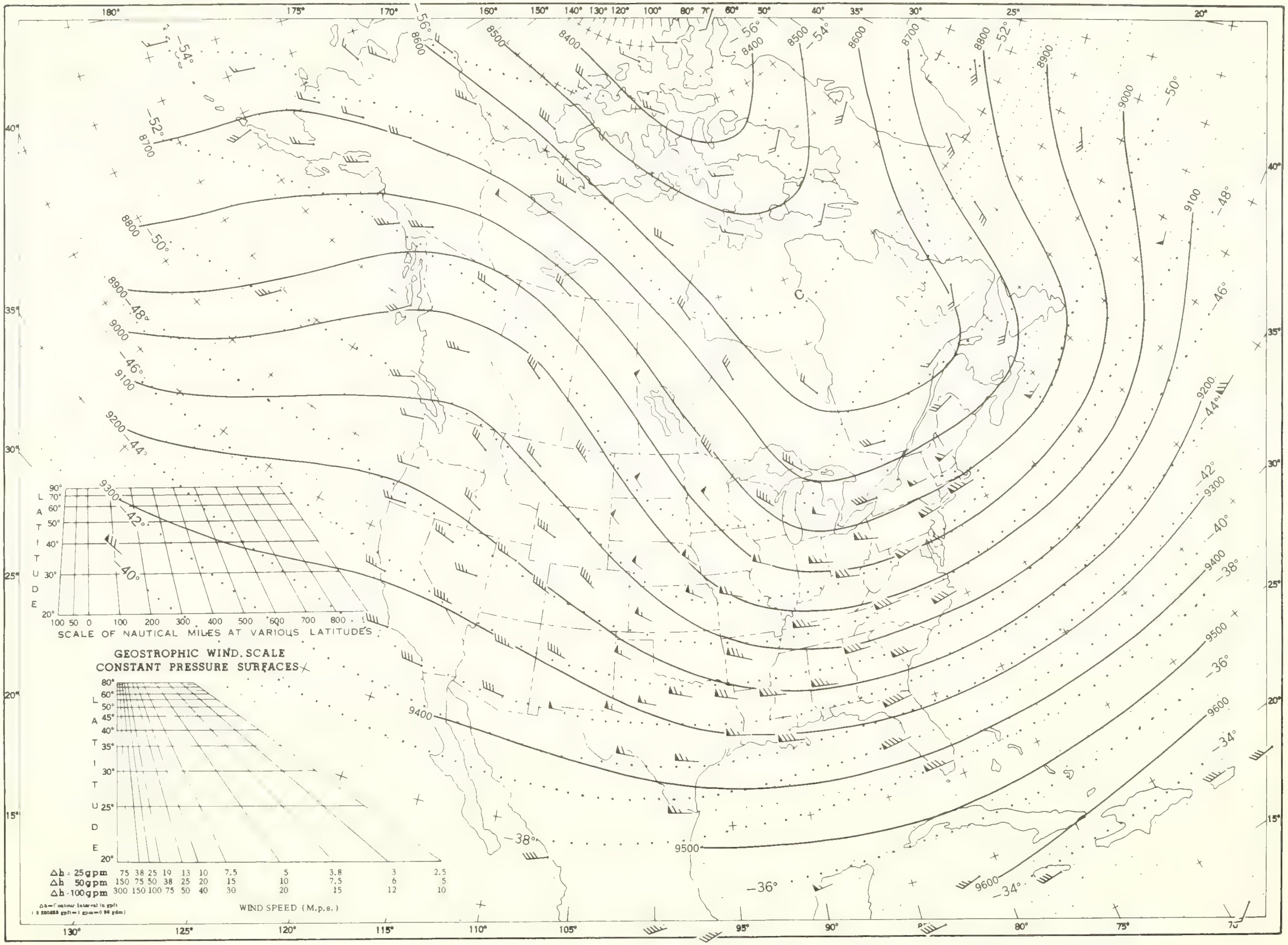
Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25mps, full feather 5mps, and half feather 2.5mps. All wind data are based on rawin observations.

Chart XIII. 500-mb. Surface, 1200 GMT, **February 1968**. Average Height and Temperature, and Resultant Winds.



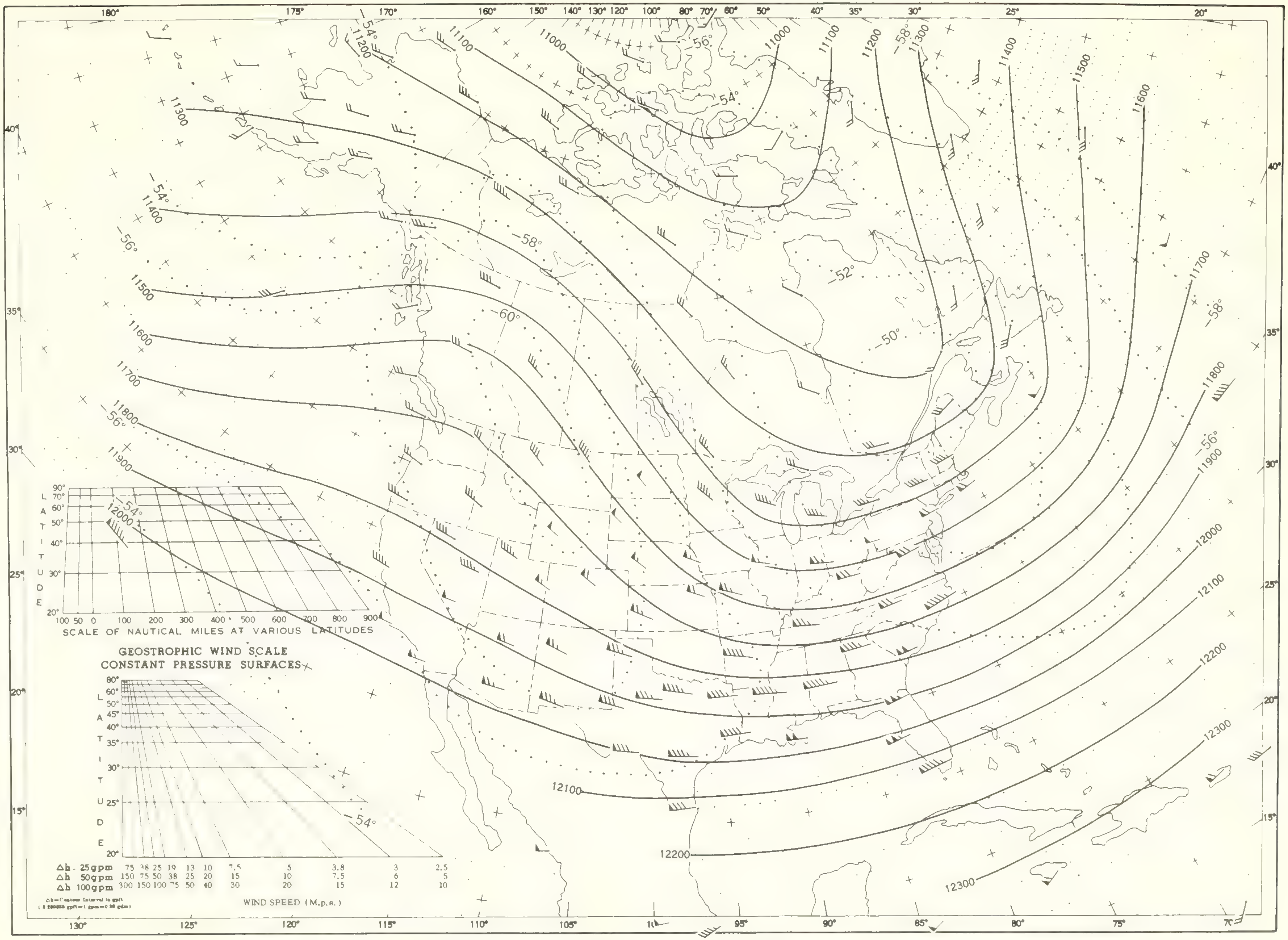
Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XIV. 300-mb. Surface, 1200 GMT, **February 1968.** Average Height and Temperature, and Resultant Winds.



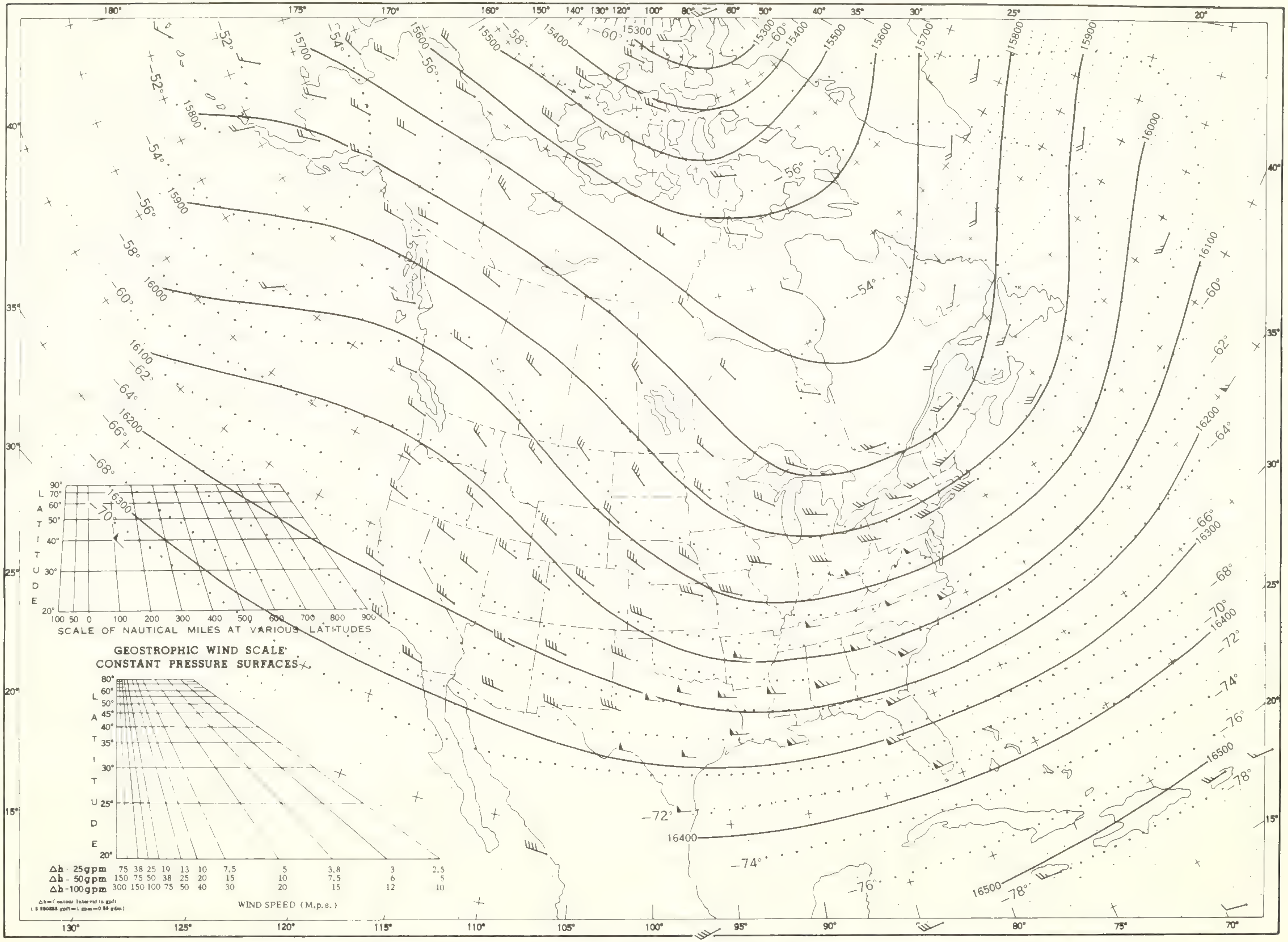
Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XV. 200-mb. Surface, 1200 GMT, **February 1968.** Average Height and Temperature, and Resultant Winds.



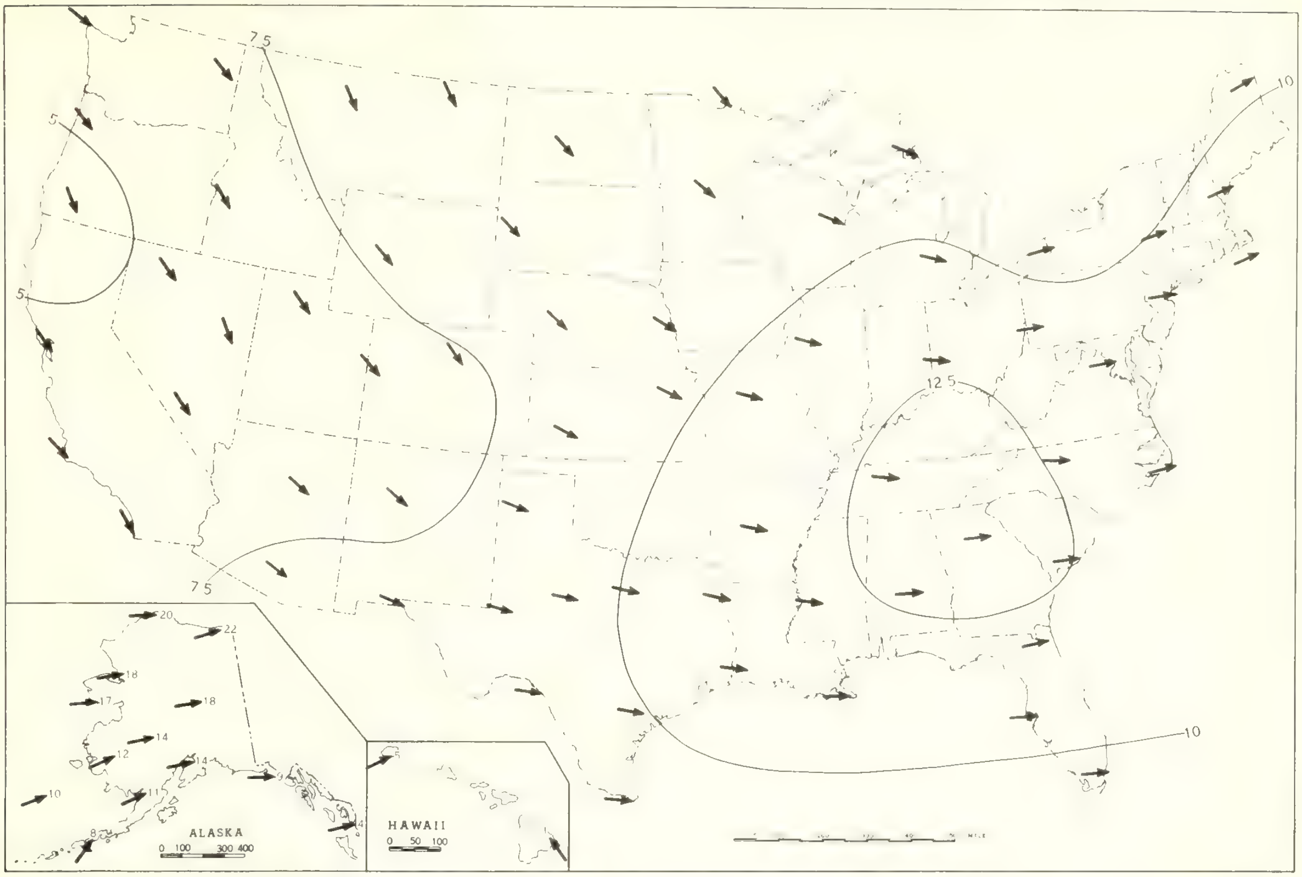
Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XVI. 100-mb. Surface, 1200 GMT, February 1968. Average Height and Temperature, and Resultant Winds.

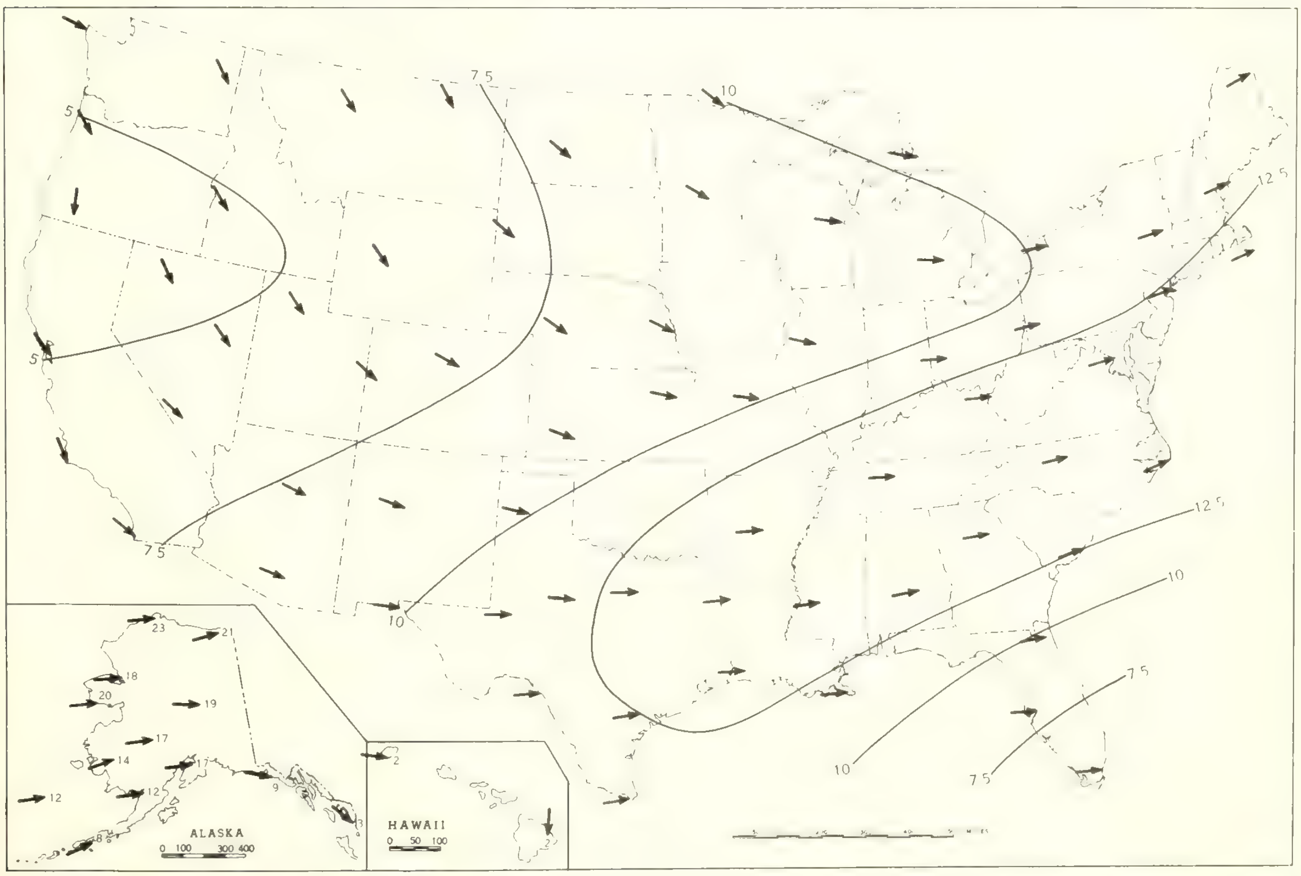


Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XVII. A. 50-mb. Surface, 1200 GMT, February 1968. Resultant Winds.



B. 30-mb. Surface, 1200 GMT, February 1968. Resultant Winds.



Wind speed (isotachs) in meters per second. Arrows show resultant wind direction. All wind data are based on rawin observations.

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CLIMATOLOGICAL DATA

NATIONAL SUMMARY

MARCH 1968
Volume 19 No. 3

ASHEVILLE: 1968

C O N T E N T S

NOTE: Delayed data and corrections will be carried in the June and December issues of this publication. An explanatory page "Description of Charts" will be carried in the January and July issues.

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CLIMATOLOGICAL DATA

NATIONAL SUMMARY

Volume 19 No. 3 MARCH 1968

GENERAL SUMMARY OF WEATHER CONDITIONS

HIGHLIGHTS:

1. Generous precipitation, Texas to Ohio River Valley; relatively dry in the Great Basin and the northern and central Great Plains.
2. Two severe late-winter snowstorms.
3. Unusually warm over the northern 2/3 of the Nation, below-normal temperatures in the Gulf States.

TEMPERATURE.--The outstanding characteristics of the March temperature pattern were the persistent warmth over the Northern States and the coolness in the Deep South. At many stations from Oregon to New Jersey, it was the warmest March in more than 20 years. The Far Northwest continued mild throughout the month. The Great Basin and the central Great Plains were warmer than normal except in the third week when afternoon temperatures were mostly in the 30's and 40's. The Southland, from Arizona to Georgia, averaged cooler than normal during the 2d and 3d weeks but was near normal early in March and above normal at the end of the month. The Florida Peninsula remained cold the entire month. On March 24, the temperature at Lakeland dropped to 35°, the coldest on record for so late in the season. West Palm Beach set a similar record on the 24th when the temperature dropped to 43°. Temperatures at West Palm Beach averaged 64.9°, the lowest average March temperature of record for that location.

PRECIPITATION.--Many rainy days in the Far Northwest produced monthly totals ranging from 8 to 14 inches along the Washington and Oregon coast. Quillayute, Wash., received 15.2 inches of rain in March.

A midmonth storm dumped 6 inches to a foot or more of snow from Oklahoma to New England. Several counties in northeastern Oklahoma received 12 to 16 inches. In some areas, this was the worst storm of the winter. The wet snow in Oklahoma was accompanied by gusty winds of 30 to 50 m.p.h. during the late afternoon and evening of the 11th, slowing rush-hour traffic in Tulsa to a snail's pace. More than 3,500 motor vehicles became stalled in drifts 2 to 4 feet deep. Ice accumulations of 2 to 3 inches on telephone and power lines downed more than 1,700 poles and several roofs collapsed.

Substantial rains south of the snow belt brought much needed moisture to the South. In Indiana and Ohio, the mixture of snow and rain clogged some roads and caused others to be slippery. Numerous traffic accidents occurred in Ohio. One accident involved 17 cars.

As the storm moved eastward, heavy rains fell along the Atlantic coast from Virginia to New England. Melting snow, ice jams, and heavy rains caused local flooding in eastern Massachusetts and Rhode Island. The floods in Massachusetts seriously damaged 20,000 residences and caused heavy losses to commerce and industry. Flood damages in Rhode Island were estimated at $5 million.

In the third week of March, light to moderate precipitation -- mostly snow but in some areas mixed with rain -- fell across the northern Great Plains. Freezing rain iced power and communication lines in eastern North Dakota. More rain fell from Texas to the Great Lakes before spreading eastward to New England. Heavy snow fell from the eastern slopes of the southern Rockies to New England. Amounts ranged widely but many areas from New Mexico to New England received from 9 to 12 inches. Most of the snow melted quickly and was gone within a few days.

Thunderstorms and a few tornadoes developed in the central Great Plains near the end of the month. Some of the thunderstorms were accompanied by high winds and damaging hail.

A number of stations set new 24-hour snowfall records for the month of March. For instance, -- Cincinnati, Ohio, 9.3 inches; Louisville, Ky., 12.1 inches; Jackson, Miss., 5.3 inches. This was the first time more than a few flakes have fallen in March at Jackson. Among the stations that received little precipitation or snow are: St. Cloud, Minn., 0.1 inch of snow, least March snowfall in 43 years; Concordia, Kans., 0.02 inch of precipitation, least March rainfall in 84-year record; Macon, Ga., 1.26 inches, least March rainfall in 47 years.

CONDENSED CLIMATOLOGICAL SUMMARY

Section	Temperature						Precipitation			
	Monthly extremes						Monthly extremes			
	Station	Highest	Date	Station	Lowest	Date	Station	Greatest	Station	Least
		°F			°F			In.		In.
Alabama	Greenville	88	19	Waterloo	10	24	Athens 2	7.55	Fort Morgan	0.80
Alaska	Sitka Magnetic	60	1	Wainwright	-47	2	Little Port Walter	21.93	4 Stations	.00
Arizona	8 Stations	93	30+	Hawley Lake	-10	12	McNary	3.62	2 Stations	.05
Arkansas	Calico Rock	87	29	Gravette	8	13	Pine Ridge	11.15	Eudora	3.05
California	Palm Springs	98	29	White Mountain 1	-25	24	Honeydew 2WSW	11.57	5 Stations	.00
Colorado	Holyoke	87	30	Antero Reservoir	-27	12	Wolf Creek Pass 1E	3.08	2 Stations	T
Connecticut	2 Stations	78	29	Norfolk 2SW	1	7+	Groton	7.65	Coventry	3.77
Delaware	Georgetown 5SW	82	29	Wilmington Porter Resvr	10	3	Wilmington Porter Resvr	5.88	Selbyville	3.51
Florida	Clewiston US Eng	92	12	Fountain 3SSE	21	5	De Funiak Springs	4.83	De Soto City 8SW	.12
Georgia	3 Stations	89	23+	Calhoun Exp Station	12	5	Thomaston 2S	[illegible].39	2 Stations	.70
Hawaii	Mauna Kea Beach	91	31+	Mauna Loa Slope Obs	30	30	Paakea 350, Maui	62.41	Mauna Kea Beach	.26
Idaho	Swan Falls Power House	78	29	Stanley 1NNE	-11	20	Pierce	3.60	Salmon 1N	T
Illinois	2 Stations	84	30+	Jerseyville 2SW	2	13	Cairo WB City	7.04	2 Stations	.32
Indiana	do	83	30+	LaGrange Sewage Plant	-2	13	North Vernon 2SW	6.49	Logansport Radio WSAL	.93
Iowa	Sioux City WBAP	91	30	Swea City 5NW	-4	1	Fort Madison	3.28	Forest City	.00
Kansas	Kirwin	92	31	2 Stations	-2	3	Mound Valley 3WSW	3.77	23 Stations	.00
Kentucky	Pikeville	85	20	Cumberland	4	3	Springfield	8.74	Jeremiah	D 3.41
Louisiana	Chatham	86	11	Ashland 2S	17	1	Marion	8.42	New Orleans Dublin	1.35
Maine	2 Stations	65	31	Squa Pan Dam	-35	7	Saco	5.62	Orono	2.32
Maryland	La Plata 1W	88	22	Bittinger 2NW	3	3	Vienna	5.94	Westernport	D 2.62
Massachusetts	Springfield Gen Elec	76	29	Birch Hill Dam	-1	7	Blue Hill WB	10.96	Adams	3.28
Michigan	5 Stations	76	29+	Champion Van Riper Pk	-19	12	Hillsdale	2.63	Cheboygan RR Light Sta	.10
Minnesota	New Ulm 2SE	87	30	Int Falls WBAP	-21	12	Grand Portage RS	2.88	St James Filtration Pl	.05
Mississippi	Waynesboro 2W	87	19	Batesville 2SW	11	23	Batesville 2SW	8.25	Pascagoula 2ENE	.96
Missouri	2 Stations	88	30+	Berryman 6NW	-2	13	Parma	[illegible].53	Fairfax	.10
Montana	3 Stations	77	30+	Cooke City	-12	11	Gallatin Gateway 26SSW	3.76	2 Stations	.00
Nebraska	Ewing	91	30	3 Stations	0	3	Aurora	2.05	Hardy	.00
Nevada	Sunrise Manor Las Vegas	90	31+	Sheldon	4	19	Lamoille Power House	2.59	Amargosa Ranch	.00
New Hampshire	3 Stations	71	31	First Conn Lake	-30	7	Mount Washington	7.53	2 Stations	2.30
New Jersey	Atlantic City WBAP	81	29	High Point Park	4	3	New Monmouth	8.51	Newark WBAP	3.59
New Mexico	2 Stations	87	30+	2 Stations	-9	12	Sandia Crest	4.24	Abbott	T
New York	Port Jervis	80	29	Wanakena Ranger School	-20	7	Tannersville 2E	7.71	2 Stations	1.01
North Carolina	Louisburg	90	22	Grandfather Mountain	4	14	Rosman	9.71	Wilmington WBAP	.97
North Dakota	3 Stations	74	25+	3 Stations	-10	11+	Moffit 3SE	2.12	2 Stations	.00
Ohio	2 Stations	81	30	Mansfield 6W	1	14+	Portsmouth US Grant Br	6.57	Greer	.51
Oklahoma	Freedom	91	29	Kenton	8	12	Kiamichi Tower	12.02	Laverne	T
Oregon	4 Stations	78	29+	Fremont	5	20	Otis 2NE	13.56	Metolius 1W	T
Pennsylvania	Coatsville 1SW	84	30	Kane 1NNE	-7	4	Marcus Hook	5.81	Mt Gretna 2SE	1.51
Puerto Rico	Red Hook Bay	94	1	Barranquitas	51	9	Indiera Alta	6.03	Aguirre Research Sta	.03
Rhode Island	Greenville	75	29	Greenville	6	3	Newport	10.63	Block Island WBAP	6.69
South Carolina	Ridgeland 2SE	90	21	2 Stations	13	4+	Caesars Head 1NE	8.94	Ridgeland 2SE	.51
South Dakota	2 Stations	90	31+	Custer	-13	21	Bowdle	3.03	5 Stations	T
Tennessee	3 Stations	84	31+	Centerville Water Pl	5	24	Lascassas 3W	8.82	Newport 1NW	3.29
Texas	Presidio	92	29	Lipscomb	10	1	Arthur City	8.92	Higgins	.02
Utah	Saint George	86	29	Strawberry Hwy Station	-8	11	Alta	5.88	Myton	T
Vermont	Rutland	75	31	Enosburg Falls	-23	7	Somerset	6.86	South Newbury	1.81
Virginia	3 Stations	90	22+	Monterey	-2	1	Newport 2NW	6.25	Tangier Island	1.85
Washington	Glenoma 1W	76	1	Mount Spokane Summit	12	30	Quinault Ranger Sta	22.77	Priest Rapids Dam	.02
West Virginia	Williamson	85	21	2 Stations	0	14+	Richwood	D 6.76	Union	2.09
Wisconsin	Holcombe	80	30	Mellen	-11	12	Big Falls Hydro	3.16	Milwaukee N Side	.02
Wyoming	Heart Mountain	78	29	Foxpark	-20	21	Big Sandy	D 2.31	Clark 7NE	T

\+ And also on an earlier date or dates.

NOTE: Dates in the above Condensed Climatological Summary apply to the period 24 hours prior to time of observation. In some cases the actual occurrence is on the calendar date preceding that shown. (See individual Climatological Data for times of observations).

D Water equivalent of snowfall wholly or partly estimated, using a ratio of 1 inch water equivalent to every 10 inches of snowfall.

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	No. of days: Max. 90 F. or above	No. of days: Min. 32 F. or below	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	No. of days: .01 inch or more	No. of days: With thunderstorms	Snow, Sleet: Total	Snow, Sleet: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Fastest mile: Speed	Fastest mile: Direction	Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	No. of days (sunrise to sunset): Partly cloudy, 4-7	No. of days (sunrise to sunset): Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	Ft.	Mb.	Mb.	F.	F.	F.	F.	F.		F.				F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
ALABAMA																																
BIRMINGHAM	620	998.0	1020.7	67	39	52.8	- 1.7	86	20	19	4	0	10	37	58	6.17	0.17	2.83	7	3	T	0	2.4	25	27	SW	12+	9	6	16	6.1	69
HUNTSVILLE	624	997.0	1020.2	64	38	50.9	- 0.9	82	30	20	23+	0	13	39	68	5.63	0.06	2.07	10	3	2.1	2	1.9	25	37	25	12	8	10	13	6.1	
MOBILE	211	1012.9	1021.0	70	46	58.1	- 2.2	82	30	27	1	0	3	45	67	1.30	- 5.93	0.58	11	1	T	T	1.8	19	28	18	11	8	10	13	5.8	
MONTGOMERY	194	1013.9	1021.1	69	43	55.7	- 0.3	87	20	26	1	0	6	40	60	2.80	- 3.36	1.36	5	2	T	0	2.4	24	32	S	11	11	6	14	5.8	67
ALASKA												B																				
ANCHORAGE	114	1001.7	1006.5	35	22	28.4	3.8	43	1	8	23	0	28	17	64	0.29	- 0.22	0.13	5	0	3.2	5	1.8	35	21	35	20	8	7	16	6.6	58
ANNETTE	110	1005.8	1009.9	48	36	42.0	4.2	57	20	29	31	0	9	34	77	10.43	0.88	1.65	27	0	3.0	T	6.6	13	36	14	20	1	4	26	9.0	
BARROW	31	1016.3	1016.9	- 4	-19	-11.8	2.8	15	31+	-41	2	0	31	-16		0.15	0.04	0.06	5	0	2.0	17	6.4	9	26	7	8	8	8	15	6.4	
BARTER ISLAND	39	1015.9	1017.8	- 2	-17	- 9.8	5.1	17	31	-28	19	0	31	-17	68	T	- 0.20	T	0	0	T	24	3.7	11	24	27	4	12	8	11	5.2	
BETHEL	125	1003.4	1009.2	22	4	13.2	1.6	38	25	-19	4	0	31	11	86	0.12	- 0.91	0.04	7	0	5.6	5	3.6	35	25	19	30+	7	4	20	7.1	
COLD BAY	96	1003.1	1006.9	34	26	30.4	1.6	43	13	16	3	0	28	26	83	1.21	- 0.54	0.35	12	0	7.8	2	2.1	35	55	13	31	2	8	21	8.1	
FAIRBANKS	436	992.9	1010.6	28	- 2	12.8	3.9	44	21	-23	18	0	31	- 1	52	T	- 0.40	T	0	0	0.1	24	1.5	2	15	20	21	14	6	11	4.8	
JUNEAU	12	1008.1	1008.9	39	27	33.1	2.7	48	1	16	16	0	25	29	87	3.85	0.58	0.88	17	0	8.2	3	7.3	11	30	12	21	3	1	27	8.7	36
KING SALMON	49	1003.7	1005.9	33	18	25.5	6.0	42	10+	- 1	21	0	29	17	67	0.80	- 0.16	0.62	7	0	7.5	7	3.9	3	35	9	24	5	6	20	7.5	
KOTZEBUE	10	1011.9	1012.4	8	- 9	- 0.3	1.8	29	30	-35	4	0	31	- 7	72	0.14	- 0.14	0.07	5	0	4.8	28	4.1	11	37	11	29	5	11	15	6.5	
MC GRATH	344	996.6	1009.7	27	- 3	11.7	3.4	36	31+	-24	19	0	31	3	66	0.39	- 0.54	0.15	6	0	8.3	19	2.2	31	21	36	20	11	7	13	5.9	
NOME	13	1009.1	1009.9	19	- 3	7.9	0.0	30	30+	-22	3	0	31	3	73	0.39	- 0.49	0.09	14	0	5.0	22	3.8	7	25	30	30+	6	3	22	7.3	45
ST. PAUL ISLAND	22	1007.5	1008.4	29	19	23.8	- 0.4	36	20+	- 7	3	0	31	22	89	0.84	- 0.22	0.17	18	0	12.7	6	5.8	3	46	8	4	1	8	22	8.6	
SHEMYA	122	1004.7	1008.3	36	29	32.2	- 0.2	41	18	21	2	0	29	28	83	0.98	- 1.59	0.28	21	0	3.9	3	5.2	26	56	34	4	1	11	19	8.1	
YAKUTAT	28	1005.4	1006.4	39	25	31.9	0.5	47	12	10	18	0	25	27	82	9.46	0.77	1.84	18	0	14.3	4	5.4	10	28	14	21	5	3	23	7.9	
ARIZONA																																
FLAGSTAFF	6993	786.3	1016.7	52	22	37.0	1.4	68	29	14	12	0	31	20	58	1.15	- 0.30	0.42	8	0	10.1	2	1.6	19	23	31	18	10	8	13	5.5	
PHOENIX	1117	975.6	1014.8	74	46	59.9	0.9	90	29	36	20	1	0	41	55	1.04	0.38	0.85	4	2	0.0	0	2.7	12	30Y	WNW	10	10	10	11	5.5	79
TUCSON	2584	926.2	1014.5	71	47	58.7	0.7	85	29	36	21	0	0	37	50	1.79	1.26	0.96	6	2	0.0	0	2.8	16	29	W	10	12	5	14	6.1	77
WINSLOW	4895	851.0	1016.5	60	33	46.6	1.0	75	30	25	22	0	12	24	46	0.56	0.17	0.38	4	0	1.0	T	3.3	22	35	22	17	11	9	11	5.3	
YUMA	194	1007.5	1014.7	79	53	66.1	3.1	92	29+	43	19	3	0	35	37	0.33	0.09	0.26	3	1	0.0	0	1.6	32	26	N	20	14	6	11	4.6	90
ARKANSAS																																
FORT SMITH	447	1002.4	1019.2	64	39	51.7	0.6	84	29	20	4+	0	10	38	64	8.00	4.53	2.49	6	4	5.3	2	0.7	3	26	N	12+	6	5	20	7.0	58
LITTLE ROCK	257	1009.8	1019.5	62	39	50.8	- 1.0	81	29	21	4+	0	10	36	60	5.55	0.74	2.41	8	7	T	T	2.1	22	34	NE	11	7	3	21	7.1	67
TEXARKANA	391	1006.1	1019.3	65	45	55.0	0.1	79	28	23	1	0	5	42	67	7.32	2.58	2.92	10	7	0.1	T	4.1	19	23	33	12+	6	6	19	7.2	
CALIFORNIA																																
BAKERSFIELD	475	1000.3	1018.2	72	48	59.8	2.9	88	29	39	18	0	0	41	54	1.01	- 0.05	0.62	4	0	0.0	0	1.5	1	20	16	12	12	9	10	5.0	
BISHOP	4108	873.7		66	30	48.2	0.6	82	30	20	17	0	22			0.10	- 0.45	0.08	4		T	0						15	8	8	4.4	
BLUE CANYON	5280			49	34	41.5	2.0	64	28	24	18	0	16			6.84	- 1.61	1.85	10		48.9	28			31	22	12	9	6	16	6.2	
EUREKA U	43			57	44	50.6	1.9	72	21	36	10	0	0			3.85	- 1.40	1.01	14		0.0	0			37	S	12+	3	7	21	7.6	60
FRESNO	328	1006.4	1018.1	69	43	55.8	0.8	85	30	37	19+	0	0	44	70	1.49	- 0.47	0.70	4	0	0.0	0	1.3	34	23	NW	25	12	7	12	5.4	72
LONG BEACH	34	1016.3	1017.5	72	50	61.1	4.4	88	4	42	20+	0	0	45	61	2.20	0.83	1.99	4	0	0.0	0	2.6	24	21	27	10+	15	8	8	4.7	
LOS ANGELES	97	1013.2	1016.9	69	52	60.5	3.5	84	4	46	18	0	0	45	59	3.77	1.98	3.54	4	0	0.0	0	3.3	26	33Y	SW	8+	13	10	8	4.7	
LOS ANGELES U	270			73	53	62.9	3.5	89	28	46	18	0	0			3.34	1.08	3.03	4		0.0	0			20	SW	9	16	7	8	4.3	84
MT SHASTA R	3544			55	32	43.1	1.9	70	29	25	6	0	18			4.09	- 0.37	2.17	10		18.7	15										
OAKLAND	6	1018.6	1019.0	62	49	55.9	2.3	79	28	44	18+	0	0	47	76	3.07	0.65	1.46	10	0	0.0	0	3.8	27	28	16	12	11	10	10	5.3	
RED BLUFF	342	1005.4	1018.1	68	46	56.8	2.7	84	28	36	19	0	0	43	65	1.27	- 1.43	0.50	7	1	0.0	0	1.4	19	31	SE	12	9	7	15	6.2	68
SACRAMENTO	17	1017.3	1018.1	66	44	55.1	1.7	80	29	37	20	0	0	45	75	2.39	0.03	1.09	6	1	0.0	0	1.9	23	32	SW	16	15	3	13	5.2	79
SANDBERG R	4517	863.2		52	36	44.0	- 1.0	72	29	25	18+	0	13	26	58	0.94	- 0.50	0.61	5		0.0	0			36	34	10	12	6	13	5.3	
SAN DIEGO	13	1016.3	1017.2	68	53	60.7	1.7	83	4	46	19	0	0	47	63	1.55	- 0.02	1.39	5	0	0.0	0	2.5	27	32	SW	8	10	12	9	5.2	74
SAN FRANCISCO	8	1018.3	1019.0	63	46	54.5	1.2	76	29+	40	20	0	0	44	72	3.03	0.34	1.21	11	0	0.0	0	5.4	27	40	S	12	11	7	13	5.5	
SAN FRANCISCO U	52			62	51	56.7	2.0	77	28	48	13	0	0			3.15	0.22	1.60	9		0.0	0			32	SE	12					82
SANTA MARIA	236			67	41	54.3	1.0	82	28	34	20	0	0			1.90	- 0.16	0.98	4		0.0	0						14	6	11	4.9	
STOCKTON	22			65	43	54.1	0.4	80	30	35	20	0	0	43	70	2.68	0.63	1.71	7	0	0.0	0			29	17	12	12	6	13	5.5	
COLORADO																																
ALAMOSA	7536	770.4		50	17	33.3	1.2	65	29	8	12	0	31			0.21	- 0.05	0.14	2		4.8	2						13	9	9	4.6	
COLORADO SPRINGS	6145	810.0	1017.7	52	25	38.6	2.4	73	30	8	12	0	25	15	45	0.37	- 0.24	0.30	3	0	5.7	4	2.2	3	39	31	8	13	8	10	5.0	
DENVER	5283	835.4	1015.5	56	25	40.6	4.2	74	29	9	3	0	27	19	51	0.85	- 0.36	0.44	7	0	9.2	4	2.0	20	36	SW	30	9	10	12	5.4	79
GRAND JUNCTION	4855	852.0	1016.6	58	30	43.8	2.3	75	30	21	21	0	22	21	45	0.44	- 0.31	0.23	5	1	0.3	T	1.9	10	36	SW	17	14	8	9	4.3	74
PUEBLO	4684	855.4	1016.6	57	28	42.8	2.7	79	30	12	12	0	22	19	47	0.78	0.26	0.48	4	0	9.3	5	1.0	29	43	NE	31	12	7	12	5.1	79

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure		Temperature								No. of days			Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 90 F. or above	Min. 32 F. or below	Average dew point		Total	Departure from normal	Greatest in 24 hours	No. of days: .01 inch or more	No. of days: With thunderstorms	Snow, Sleet: Total	Snow, Sleet: Maximum depth on ground	Resultant speed	Resultant direction	Fastest mile: Speed	Fastest mile: Direction	Fastest mile: Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	Ft.	Mb.	Mb.	F.	F.	F.	F.	F.		F.				F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
CONNECTICUT																																
BRIDGEPORT	7	1014.2	1015.0	48	32	40.2	2.7	66	30	16	4+	0	15	29	68	4.51	0.26	2.10	10	1	1.6	1	4.3	33	51	24	24	4	13	14	7.2	
HARTFORD	169	1007.5	1014.3	48	32	39.9	3.9	77	29	12	4	0	16	27	64	4.55	0.75	1.34	13	1	6.8	3	4.2	33	40	NW	1	4	5	22	7.8	51
NEW HAVEN	6	1014.6		48	32	39.8	2.9	65	30	15	3	0	14			4.58	- 0.04	1.86	13		2.3	1			34	NW	1	5	8	18	7.2	54
DELAWARE																																
WILMINGTON	74	1012.9	1015.8	55	35	44.6	3.3	79	29	16	3	0	13	31	63	4.75	0.73	2.06	8	1	1.3	1	3.6	29	36	31	1	6	9	16	6.6	
DIST.OF COLUMBIA																																
WASH NATL AP	14	1013.9	1016.4	62	38	49.7	4.9	[illegible]5	22	19	3	0	10	31	54	3.66	0.45	1.58	8	1	3.0	3	3.5	29	38	NW	24	8	11	12	6.2	65
FLORIDA																																
APALACHICOLA U	13			66	48	57.0	- 4.0	76	30	30	1	0	1			0.74	- 3.78	0.38	3	3	0.0	0			27	SE	12+	14	6	11	4.5	78
DAYTONA BEACH	31	1020.0	1021.4	72	48	60.0	- 3.8	85	22+	31	2	0	2	47	64	1.79	- 1.77	0.77	5	2	0.0	0	0.5	18	28	22	12	13	11	7	4.6	
FORT MYERS	15	1020.7	1020.9	77	53	64.6	- 3.6	86	11	36	2	0	0	52	68	0.65	- 1.97	0.35	3	1	0.0	0	1.8	7	29	19	12	15	11	5	4.2	
JACKSONVILLE	20	1020.3	1021.2	73	48	60.5	- 1.7	89	22	33	1	0	0	44	61	1.20	- 2.29	0.70	6	2	0.0	0	1.9	25	34	W	1	10	14	7	4.7	79
KEY WEST	4	1019.3	1019.8	76	65	70.8	- 1.7	83	12	53	2+	0	0	59	69	4.36	2.59	3.10	6	1	0.0	0	6.7	7	33	NW	1	11	12	8	5.3	76
LAKELAND U	214			74	51	62.5	- 4.0	86	21+	34	1	0	0			1.07	- 3.18	0.40	3		0.0	0						13	12	6	4.3	77
MIAMI	7	1020.0	1020.2	74	60	67.0	- 3.5	81	11	37	2	0	0	55	66	0.88	- 1.39	0.46	5	0	0.0	0	3.7	8	29	31	1	11	14	6	4.9	
ORLANDO	108	1017.3	1021.5	74	49	61.4	- 4.5	86	21	31	2	0	2	48	67	2.27	- 1.14	1.44	4	2	0.0	0	0.4	31	28	20	12	12	10	9	4.8	
PENSACOLA	112	1016.6	1020.9	66	46	56.1	- 4.9	80	10	27	1	0	3	46	71	2.66	- 3.38	1.42	7		0.0	0	1.1	16	36	SW	12	7	11	13	6.1	68
TALLAHASSEE	55	1019.0	1021.4	73	40	56.6	- 4.0	84	30+	24	5	0	7	42	65	2.10	- 3.08	1.00	5	3	0.0	0	1.5	24	23	20	12	9	13	9	5.2	
TAMPA	19	1020.7	1021.1	73	49	60.9	- 5.1	83	21	35	2	0	0	48	67	1.23	- 2.52	0.79	3	1	0.0	0	1.1	36	25	31	1	14	9	8	4.5	86
WEST PALM BEACH	15	1020.0	1020.7	76	54	64.9	- 5.0	86	11	31	2	0	1	50	59	1.48	- 1.96	0.96	5	2	0.0	0	3.5	9	30	31	1	12	9	10	4.9	
GEORGIA																																
ATHENS	802	990.2	1019.4	67	39	52.8	1.2	80	30+	23	1	0	9	34	54	4.34	- 0.76	1.59	5	3	T	0	4.4	25	25	25	22	14	8	9	4.6	
ATLANTA	1010	982.7	1020.0	66	39	52.3	0.9	82	20	21	1	0	9	35	57	4.54	- 0.83	2.72	6	3	T	0	3.8	27	34	SW	22	9	11	11	5.6	76
AUGUSTA	145	1014.2	1019.5	71	38	54.5	- 0.4	85	30+	23	5	0	11	36	56	0.88	- 3.29	0.38	6	1	0.0	0	3.9	25	35	18	22	12	8	11	5.0	
COLUMBUS	385			68	40	53.9	- 1.4	83	20	24	4	0	7	39	63	4.38	- 1.63	3.31	7		0.0	0	2.1	27	24	14	12	9	7	15	5.8	
MACON	354	1007.1	1020.2	70	39	54.3	- 2.6	86	20	22	4	0	11	35	54	1.26	- 3.68	0.68	5	3	T	0	3.4	26	42	S	22	11	6	14	5.6	81
ROME	637			67	34	50.4	0.0	84	20	21	5+	0	15			3.62	- 2.25	1.88	7		T	0										
SAVANNAH	46	1018.6	1020.3	71	43	57.0	- 1.3	88	21	28	4+	0	8	40	59	0.89	- 3.08	0.40	6	1	T	0	3.6	23	32	NW	13	11	11	9	4.9	69
HAWAII																																
HILO	27	1015.9	1017.1	81	68	74.5	3.9	88	1	63	2	0	0	67	81	10.21	- 4.49	2.18	23	1	0.0	0	0.7	7	26	SE	17	1	5	25	8.6	24
HONOLULU	7	1016.3	1016.9	81	69	74.8	2.0	86	5	65	7	0	0	64	72	2.49	- 0.40	0.88	11	0	0.0	0	7.4	4	32	NE	20	5	7	19	7.7	50
KAHULUI	48	1014.6	1016.8	79	65	72.0	- 0.2	84	5	58	9	0	0	66	83	6.93	4.71	4.94	18	1	0.0	0	9.3	4	43	N	14	5	5	21	7.5	40
LIHUE	103	1013.2	1018.4	75	66	70.7	- 0.3	82	1	61	9+	0	0	65	83	7.25	2.69	4.42	12	0	0.0	0	10.3	4	26	NE	20	1	12	18	8.2	40
IDAHO																																
BOISE	2838	916.4	1017.5	58	34	45.9	4.2	70	29	24	19	0	13	28	53	0.71	- 0.61	0.25	6	0	0.8	1	1.4	13	30	NW	17	8	8	15	6.2	71
LEWISTON	1413			58	37	47.4	4.8	68	1	28	20+	0	7			0.62	- 0.56	0.23	6		T	T						6	5	20	7.4	
POCATELLO	4454	863.5	1018.2	52	27	39.5	3.7	69	29	12	20	0	27	25	60	1.29	0.27	0.42	10	0	5.9	4	6.6	21	38	W	25	7	7	17	6.6	74
ILLINOIS																																
CAIRO U	314			58	39	48.4	0.2	79	29	20	1	0	11			7.04	2.25	2.38	13		1.8	1			46	NE	11	13	3	15	5.7	61
CHICAGO O HARE	658	992.2	1017.2	54	31	42.7	8.0	78	28	10	3	0	18	27	58	0.90	- 1.78	0.34	8	1	1.5	1	4.5	26	33	1	12	7	9	15	6.7	
CHICAGO MIDWAY	607	994.2		53	33	43.4	7.1	78	28	17	3	0	16	27	57	1.04	- 1.70	0.44	10	3	2.5	1	3.7	24	38	S	27	6	8	17	7.0	64
MOLINE	582	995.6	1017.5	54	30	41.9	6.5	80	28	11	3	0	20	26	56	1.96	- 0.43	0.70	6	2	1.1	1	4.6	25	36	SW	14	7	7	17	6.2	68
PEORIA	652	993.6	1018.0	55	31	43.0	5.4	80	28	10	3	0	17	28	60	0.93	- 1.92	0.64	7	2	1.1	1	3.3	24	37	SE	14	8	8	15	6.5	64
ROCKFORD	724	989.2	1016.8	52	29	40.4	6.4	74	28	9	3	0	22	27	63	1.00	- 1.46	0.56	5	1	0.6	T	2.4	27	31	18	14	9	7	15	6.2	
SPRINGFIELD	588	995.6	1018.2	54	31	42.8	2.6	78	28	3	13	0	16	28	59	1.25	- 1.63	0.55	8	1	4.5	3	4.0	24	36	NE	12	7	9	15	6.4	60
INDIANA																																
EVANSVILLE	381	1004.7	1019.2	58	34	45.7	0.4	81	29	16	23+	0	15	33	63	4.70	0.39	1.61	12	4	6.7	5	3.0	25	34	NE	11	10	9	12	5.9	60
FORT WAYNE	791	986.8	1017.6	49	28	38.8	2.5	72	29+	4	13	0	20	27	65	1.99	- 0.79	0.53	12	1	9.5	5	4.5	26	37	E	12	8	6	17	6.7	59
INDIANAPOLIS	792	988.5	1018.2	54	32	42.8	3.9	76	29+	9	13	0	17	29	62	3.73	0.32	1.28	12	2	8.8	5	2.8	26	38	NE	12	8	7	16	6.7	53
SOUTH BEND	773	988.8	1017.3	49	30	39.7	4.8	74	28	4	13	0	17	28	65	1.24	- 1.50	0.35	13	1	8.7	8	3.9	26	24	22	27	8	4	19	6.8	

See footnotes at end of table

CLIMATOLOGICAL DATA
ENGLISH UNITS

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	No. of days: Max. 90° F. or above	No. of days: Min. 32° F. or below	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	No. of days: .01 inch or more	No. of days: With thunderstorms	Snow, Sleet: Total	Snow, Sleet: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Fastest mile: Speed	Fastest mile: Direction	Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	Ft.	Mb.	Mb.	F.	F.	F.	F.	F.		F.				F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
IOWA																																
BURLINGTON	692			55	31	42.7	5.4	80	28	11	1	0	18	27	56	1.30	-1.41		4	2	T		3.6	27	28	29	5	9	8	14	6.0	
DES MOINES	938	982.4	1017.9	55	30	42.6	8.8	83	30	11	3	0	17	25	53	0.93	-1.16	0.73	5	5	T	T	3.2	29	38	N	31+	9	13	9	5.3	70
DUBUQUE	1056	977.0		52	28	40.2	8.3	76	28	9	3	0	20			1.26	-1.50	0.78	6		T	T						7	10	14	6.5	
SIOUX CITY	1095	976.6	1017.2	60	28	43.8	10.7	91	30	9	3	1	20	23	48	0.24	-1.22	0.16	3	3	T	T	2.4	30	43	SW	18	12	11	8	4.8	79
WATERLOO	868	984.8	1017.0	52	27	39.4	7.4	80	30	9	3	0	23	24	58	1.30	-0.75	0.71	6	3	T	T	2.7	29	37	33	30	11	8	12	5.5	
KANSAS																																
CONCORDIA	1470	963.8	1017.2	61	32	46.7	6.9	85	30	10	23+	0	16	27	51	0.02	-1.47	0.02	1	0	T	0	1.4	25	41	S	26	17	5	9	4.1	75
DODGE CITY	2582	925.2	1016.6	63	34	48.1	6.3	89	30	7	3	0	12	23	42	0.26	-0.90	0.23	3	0	0.3	T	0.2	15	50	S	17	8	8	15	6.1	81
GOODLAND	3650	888.3	1016.2	60	27	43.4	6.9	85	30	2	3	0	20	20	47	0.20	-0.86	0.16	3	0	3.0	2	3.4	29	35	2	30	16	5	10	4.6	
TOPEKA	876	985.8	1018.3	60	33	46.4	4.7	83	30	14	23	0	15	30	54	0.46	-1.55	0.30	4	1	T	T	1.8	25	42	S	14	9	12	10	5.5	75
WICHITA	1321	969.2	1017.7	61	35	48.0	3.5	82	29	14	3	0	14	30	53	1.36	-0.28	0.53	9	3	T	T	1.6	17	47	SW	17	5	15	11	6.1	68
KENTUCKY																																
COVINGTON	869	986.1	1018.3	56	34	45.2	4.6	79	29	15	3	0	13	32	62	4.24	0.45	1.20	11	3	13.0	9	3.5	25	30	31	29	6	7	18	6.8	
LEXINGTON	966	983.1	1019.0	57	35	46.0	2.8	78	29	17	3	0	15	33	64	6.76	2.01	1.98	13	5	8.6	8	4.2	22	22	6	12	9	5	17	6.5	
LOUISVILLE	477	1000.7	1018.7	57	35	45.7	2.4	80	29	20	13+	0	14	32	60	6.23	1.64	1.66	10	4	12.7	11	2.9	27	32	N	31	10	5	16	6.3	55
LOUISIANA																																
ALEXANDRIA	92	1016.3	1020.6	66	41	53.4	-5.0	79	20+	20	1	0	9			4.05	-0.92	1.81	7	2	1.5	1	1.8	21	25	32	12	7	5	19	6.9	
BATON ROUGE	64	1018.0	1020.6	69	46	57.5	-3.2	83	20+	27	1	0	3	46	70	3.34	-1.57	1.90	9	2	T	0	1.5	16	29	17	11	8	8	15	6.2	
LAKE CHARLES	9	1019.3	1020.3	68	49	58.2	-2.9	80	30	29	1	0	1	50	79	2.76	-1.48	1.39	7	2	T	0	2.9	15	29	32	12	6	7	18	6.9	
NEW ORLEANS	3	1020.0	1020.9	67	45	55.9	-5.5	79	10	26	1	0	5	47	74	3.49	-1.85	2.47	10	0	0.0	0	1.4	12	25	26	12	7	10	14	6.2	
SHREVEPORT	254	1010.2	1019.5	67	44	55.9	-0.7	82	10	23	1	0	6	45	71	1.89	-2.26	0.78	11	4	1.5	1	3.1	19	22	29	20+	5	5	21	7.3	47
MAINE																																
CARIBOU	624	989.2		34	17	25.7	2.9	55	19	-17	7	0	24			4.01	1.63	1.12	18		26.3	16						2	7	22	8.1	
PORTLAND	47	1011.5	1013.9	41	25	33.2	1.8	57	31	4	15	0	23	23	70	4.16	-0.18	1.76	11	0	11.9	6	1.5	31	34	W	30+	5	8	18	7.2	46
MARYLAND																																
BALTIMORE	148	1010.5	1016.1	58	35	46.6	3.5	81	29	19	14+	0	14	31	59	4.41	0.59	1.97	9	0	5.3	3	4.6	29	45	W	24+	7	13	11	6.0	66
MASSACHUSETTS																																
BLUE HILL OBS R	629			45	29	37.0	2.2	71	29	6	4+	0	16			10.96	6.42	6.62	14		10.2	6			60	SSW	23					46
BOSTON	15	1013.2	1014.2	46	32	39.1	1.4	64	31	11	3	0	15	26	65	7.86	3.64	4.13	13	0	6.8	4	4.6	31	38	W	24+	5	7	19	7.4	51
NANTUCKET	43	1013.5	1014.0	46	30	38.3	2.2	60	31	12	4+	0	16	31	80	4.35	-0.19	2.92	11	0	0.8	T	3.5	28	40	SW	24+	4	9	18	7.3	57
PITTSFIELD	1170			46	25	35.3	4.6	71	31+	2	7	0	23			3.84	0.62	1.08	16		17.2	10										
WORCESTER	986	976.3	1014.2	44	27	35.6	2.8	72	29	4	4+	0	20	23	66	7.67	3.56	3.89	11	1	9.2	8	4.6	29	36	29	24	4	9	18	7.4	
MICHIGAN																																
ALPENA	689	990.2	1016.3	44	20	32.0	6.3	64	28	-2	7	0	29	20	62	0.87	-1.15	0.30	7	0	5.6	8	2.7	27	31	NW	29	7	11	13	6.3	57
DETROIT	619			49	31	40.2	5.4	76	28	13	13+	0	18	28	64	1.34	-1.08	0.55	8	0	8.0		4.4	29	30	34	31					
DETROIT M WAYNE CO	633	991.9	1016.6	49	28	38.2	3.8	73	28	10	3	0	21	26	64	2.04	-0.37	0.66	11	0	10.0	8	3.6	28	32	NW	31	7	8	16	6.6	57
DETROIT WILLOW RUN	711	988.2	1017.1	48	26	36.8	1.5	74	28	8	3	0	23	24	62	2.33	-0.07	0.81	13	1	13.0	9	4.4	28	29	36	12	7	10	14	6.4	
FLINT	770	988.2	1016.5	47	26	36.4	3.7	68	28+	5	1	0	22	23	60	1.61	-0.53	0.59	13	1	11.4	7	4.0	25	25	35	2	8	7	16	6.5	
GRAND RAPIDS	784	987.1	1016.8	48	28	38.0	5.3	71	27	11	1	0	19	26	64	1.08	-1.20	0.35	10	1	4.2	3	3.6	26	30	SW	29+	7	8	16	6.6	59
HOUGHTON LAKE	1149	973.6	1016.7	44	21	32.3	5.8	67	27	-6	1	0	28	22	68	0.85	-0.84	0.29	10	0	4.9	6	2.9	27	21	21	28	7	8	16	6.6	
LANSING	841	984.4	1016.9	48	25	36.7	4.3	70	28+	7	13	0	21	24	61	1.49	-0.91	0.64	11	0	13.4	7	3.7	26	31	NW	23	9	6	16	6.3	56
MARQUETTE U	677			42	26	33.6	6.9	66	28	8	12	0	22			0.76	-1.15	0.13	16		4.1	23			32	SE	14	6	10	15	7.0	54
MUSKEGON	627	993.2	1016.7	48	30	38.9	6.0	69	27	8	1	0	18	25	61	0.81	-1.24	0.24	6	2	3.1	4	3.3	25	29	35	31	8	7	16	6.8	
SAULT STE MARIE	721	988.5	1016.1	36	17	26.7	2.9	53	28	-1	14	0	28	21	78	1.14	-0.67	0.42	10	3	2.3	25	1.9	33	37	NW	31	5	7	19	7.2	60
MINNESOTA																																
DULUTH	1428	963.1	1015.8	43	21	32.0	10.7	65	28	-3	12	0	25	18	60	1.89	0.27	0.67	10	2	4.1	6	2.6	30	38	SW	28	8	7	16	6.4	54
INTERNATIONAL FALLS	1179	971.6	1016.1	40	16	27.9	8.5	60	24	-21	12	0	27	19	71	1.66	0.63	0.46	13	0	9.5	12	1.6	30	24	16	18	9	6	16	6.4	
MINNEAPOLIS	834	985.1	1016.3	50	28	38.8	11.4	83	30	9	12	0	21	22	55	1.89	0.36	1.07	6	2	0.8	1	3.2	28	40	SW	17	9	9	13	5.9	69
ROCHESTER	1297	967.8	1016.7	50	24	36.8	8.9	76	30	5	13	0	23	22	59	0.51	-1.13	0.22	6	3	0.4	T	5.3	26	39	18	17	12	7	12	5.5	
ST CLOUD	1034	977.0	1015.7	48	24	36.0	10.4	79	30	3	12	0	23		60	1.17	-0.11	0.72	3		0.1	4						9	9	13	5.9	

See footnotes at end of table

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	No. of days: Max. 90 F. or above	No. of days: Min. 32 F. or below	Average dew point	Average relative humidity	Precipitation: Total	Departure from normal	Greatest in 24 hours	No. of days: .01 inch or more	No. of days: With thunderstorms	Snow, Sleet: Total	Snow, Sleet: Maximum depth on ground	Wind: Resultant speed	Resultant direction	Fastest mile: Speed	Fastest mile: Direction	Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	Ft.	Mb.	Mb.	F.	F.	F.	F.	F.		F.				F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
MISSISSIPPI																																
JACKSON	310	1008.8	1020.7	68	40	53.9	- 2.6	83	20	18	1	0	11	42	70	2.83	- 2.91	1.51	6	1	5.3	5	2.4	19	42	S	20	8	7	16	6.5	62
MERIDIAN	290	1009.8	1021.1	70	39	54.6	- 1.9	86	20	22	24+	0	10	41	67	2.87	- 3.45	2.12	5	2	1.5	2	1.9	21	21	18	20+	8	5	18	6.5	
MISSOURI																																
COLUMBIA	778	989.5	1018.1	58	36	46.6	4.7	80	30	15	3	0	15	32	60	0.75	- 1.90	0.49	6	1	1.6	1	2.3	25	34	NE	12+	9	9	13	6.0	61
KANSAS CITY	742	990.9	1018.2	60	37	48.1	4.8	82	30	16	3	0	13	31	56	0.73	- 1.76	0.44	5	0	T	T	2.3	22	38	SE	13	8	14	9	5.5	70
ST JOSEPH	811			62	33	47.1	6.9	86	30	10	3	0	17	30	57	0.81	- 1.52	0.35	4	1	0.0		1.6	24	32	34	31+	12	12	7	4.6	
ST LOUIS	535	998.3	1019.0	58	34	46.1	3.5	83	29	12	13	0	15	33	63	2.06	- 1.02	0.72	11	4	7.7	7	2.5	25	45	NE	12	7	11	13	6.3	58
SPRINGFIELD	1268	972.9	1018.9	58	34	45.9	1.9	81	30+	6	13	0	14	32	63	4.05	1.21	1.40	10	3	13.7	11	1.7	20	34	NE	11	11	6	14	5.9	69
MONTANA																																
BILLINGS	3567	890.3	1015.4	54	33	43.5	9.8	74	29	21	21	0	14	22	46	0.66	- 0.39	0.46	6	0	6.8	3	4.2	27	34	W	27	3	12	16	7.5	70
GLASGOW	2284	933.0		50	26	38.1	11.4	70	23	9	11	0	25			0.10	- 0.46	0.05	3		T	T						3	10	18	7.5	
GREAT FALLS	3662	886.9	1016.1	51	30	40.5	9.8	69	23	16	11	0	19	21	50	0.90	- 0.02	0.74	4	0	7.6	8	6.6	23	38	SW	29	2	9	20	7.9	72
HAVRE	2582	922.1	1015.7	52	26	39.1	12.2	66	23+	14	11	0	23	24	62	0.77	0.17	0.34	4	0	4.6	2	4.0	24	40	SW	27	5	4	22	7.6	71
HELENA	3828	880.1	1017.1	53	27	39.6	8.2	68	29	17	11	0	25	24	58	0.53	- 0.17	0.42	5	0	0.8	T	4.9	26	35	W	27	3	11	17	7.4	68
KALISPELL	2965	910.9	1017.1	51	28	39.1	7.3	63	5	20	31+	0	27	28	70	0.43	- 0.53	0.20	9	0	0.7	T	2.9	18	22	21	29	3	7	21	7.7	
MILES CITY	2629	921.8	1016.3	53	27	40.1	9.2	71	29	13	11	0	23	26	61	0.29	- 0.36		6	0	0.6		3.4	31								
MISSOULA	3190	904.5	1017.9	54	30	41.7	8.0	67	23	23	31+	0	25	27	63	0.60	- 0.13	0.35	11	0	1.5	1	2.8	30	33	NW	25	2	8	21	7.9	59
NEBRASKA																																
GRAND ISLAND	1841	950.2	1017.3	60	29	44.4	8.7	87	30	9	3	0	19	25	51	0.39	- 0.88	0.24	3	1	0.3	T	3.0	29	38	36	30+	16	5	10	4.3	
LINCOLN U	1150			59	33	46.0	7.9	87	30	11	3	0	13			0.11	- 1.62	0.05	4		T	T			52	S	26	15	5	11	4.6	80
NORFOLK	1544			57	28	42.2	8.9	87	30	8	3	0	20			0.72	- 0.87	0.28	4		T	T						13	8	10	5.1	
NORTH PLATTE	2775	917.7	1017.1	58	22	39.9	4.9	86	30	3	3	0	26	20	50	0.11	- 0.87	0.09	2	0	0.8	1	2.7	34	38	NW	18	14	9	8	4.4	81
OMAHA	977	981.4	1017.3	60	30	44.6	7.7	89	30	8	3	0	21	26	51	0.57	- 0.88	0.44	7	3	T	T	2.2	30	43	S	17	13	9	9	5.0	80
SCOTTSBLUFF	3957	879.1	1016.9	55	27	41.0	5.7	77	30	11	3	0	25	23	54	0.64	- 0.22	0.51	5	0	6.7	2	3.9	32	35	29	26	8	9	14	5.8	
VALENTINE	2587			55	23	39.1	7.8	81	30	7	22+	0	27			0.22	- 0.79	0.18	3		0.6	T			38	N	30+	13	9	9	4.8	73
NEVADA																																
ELKO	5050	844.6	1016.9	56	28	42.2	6.6	74	29	19	20	0	26	25	56	1.12	0.29	0.63	8	1	10.4	4	2.0	24	29	28	25+	6	11	14	6.5	
ELY	6253	808.3	1017.1	51	22	36.7	3.2	70	29	12	18	0	31	21	61	0.67	- 0.18	0.28	5	1	9.5	4	3.5	20	37	S	16	10	8	13	5.9	69
LAS VEGAS	2162	938.7	1015.5	71	44	57.5	2.7	86	30	35	21+	0	0	23	30	0.22	- 0.13	0.22	2	0	0.0	0	3.3	25	39	SW	16	17	5	9	3.9	90
RENO	4404	866.2	1017.3	60	25	42.4	0.9	76	29	14	20	0	29	22	48	0.84	0.16	0.68	5	0	3.5	1	2.1	24	80	SW	12	6	10	15	6.4	83
WINNEMUCCA	4299	868.3	1017.5	58	24	41.1	3.1	75	29	13	21+	0	28	22	52	0.31	- 0.50	0.22	6	0	0.6	T	2.3	23	33	NW	25	7	8	16	6.5	52
NEW HAMPSHIRE																																
CONCORD	342	1001.4	1014.2	45	24	34.8	3.1	68	31	2	7	0	21	22	62	3.80	0.54	1.93	11	0	7.4	6	2.8	30	36	NW	1	4	8	19	7.3	50
MT WASHINGTON OBS	6262			23	8	15.8	4.1	39	31+	-19	3	0	31			7.53	1.79	1.85	14	0	34.8	5			107Y	NW	2+	3	4	24	8.5	27
NEW JERSEY																																
ATLANTIC CITY	64	1013.5	1015.9	54	32	43.0	1.9	81	29	16	3	0	14	33	72	4.99	1.08	2.27	7	0	1.8	4	4.6	27	38	30	1	6	10	15	6.5	54
ATLANTIC CITY U	11			52	38	44.8	3.7	72	29	21	3	0	9			4.05	0.04	1.99	7						52	WNW	1					
NEWARK	7	1014.2	1015.2	51	35	43.1	2.6	79	29	18	3	0	12	29	63	3.59	- 0.50	1.55	10	1	1.7	1	4.3	31	39	30	1	6	10	15	7.1	
TRENTON U	56			53	36	44.9	4.2	78	29	17	3	0	11			4.44	0.60	2.25	9		1.2	1			49	NW	1	5	8	18	6.8	60
NEW MEXICO																																
ALBUQUERQUE	5311	838.1	1016.1	60	34	46.7	0.9	76	29	24	22	0	16	23	46	1.48	1.00	0.77	7	0	1.4	1	1.3	14	42	E	11	8	7	16	6.4	66
CLAYTON	4969			57	29	43.0	2.1	77	30+	9	12	0	20			0.66	0.03	0.62	3		7.0	6						13	4	14	5.6	
RATON	6379			54	22	37.8	- 0.3	73	30+	1	12	0	31			0.74	0.22	0.55	3		8.0	5						11	7	13	5.8	
ROSWELL	3617	892.0		64	32	47.7	- 1.8	83	29	17	12	0	17	33	64	1.93	1.43	1.15	6	0	9.9	1	0.2	36	30	NW	24+	8	6	17	6.6	60
SILVER CITY	5373			59	34	46.2	- 2.1	77	29	21	12	0	13			0.82	0.37	0.30	8		1.2	1						7	10	14	6.5	
NEW YORK																																
ALBANY	275	1004.1	1015.0	48	26	37.1	4.1	77	31	6	3	0	20	23	59	2.62	- 0.10	0.84	10	1	5.6	4	4.7	28	38	NW	24	4	5	22	7.7	46
BINGHAMTON	1590	955.0	1015.1	43	26	34.5	3.2	72	31+	3	3	0	18	26	74	3.25	0.36	0.78	16	1	7.0	4	5.0	29	40	W	24+	4	6	21	7.7	39
BUFFALO	705	989.8	1016.0	43	28	35.7	4.2	75	31	7	3	0	19	28	75	2.67	- 0.57	0.94	15	2	10.6	7	5.5	26	38	SW	23	6	6	19	7.2	48
J.F. KENNEDY	13	1014.2	1015.1	47	34	40.2	1.5	64	30	16	3	0	13	28	65	4.90	0.75	1.93	10	0	4.2	3	3.6	31	40	32	1	5	12	14	7.0	
NEW YORK U	132	1011.2	1014.6	51	36	43.3	2.8	76	29	15	3	0	13	28	61	4.79	0.78	1.86	10	1	6.1	3	3.0	33	38	NW	1					52
NEW YORK LA GUARDIA	11	1013.2	1015.1	50	35	42.3	1.5	69	29	17	3	0	13	28	61	4.77	0.54	2.06	12	1	2.2	3	4.0	32	40	NW	1	5	6	20	7.3	

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	No. of days: Max. 90°F. or above	No. of days: Min. 32°F. or below	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	No. of days: .01 inch or more	No. of days: With thunderstorms	Snow, Sleet: Total	Snow, Sleet: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Fastest mile: Speed	Fastest mile: Direction	Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	Ft.	Mb.	Mb.	°F.	°F.	°F.	°F.	°F.		°F.				°F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
NEW YORK																																
ROCHESTER	547	995.6	1016.3	45	27	36.0	3.7	78	31	6	3	0	18	26	67	2.38	-0.63	0.81	12	1	15.2	8	4.9	27	36	W	29	4	11	16	7.3	53
SYRACUSE	410	1000.3	1015.6	43	24	33.2	0.6	77	31	6	3	0	20	25	73	3.13	-0.47	0.97	13	0	10.7	5	4.8	27	43	W	24	5	4	22	7.4	56
NORTH CAROLINA																																
ASHEVILLE	2140	941.8	1018.8	61	32	46.6	2.0	81	20	16	2	0	17	31	61	6.65	1.83	5.13	9	4	0.1	5	2.6	33	40	34	1	11	6	14	5.4	75
CAPE HATTERAS R	7	1018.0	1018.5	61	43	52.2	1.2	77	31	23	8	0	4	41	69	1.93	-2.23	1.12	7	2	T	T	5.3	27	36	W	1	11	11	9	5.1	80
CHARLOTTE	736	990.5	1018.4	66	37	51.6	1.6	82	21+	20	5	0	12	33	55	4.96	0.57	2.79	8	2	T	T	3.9	25	29	S	12	12	13	6	4.5	84
GREENSBORO	897	986.1	1017.9	67	40	53.4	6.0	89	21	22	14	0	11	34	54	3.97	0.28	2.26	8	2	T	2	3.8	25	33	S	22	10	10	11	5.2	72
RALEIGH	434	1001.7	1017.7	67	38	52.6	3.1	89	21	20	14	0	14	32	53	2.22	-1.13	0.84	8	2	T	1	4.9	25	28	32	18+	11	10	10	4.9	75
WILMINGTON	28	1018.0	1019.2	67	42	54.5	0.3	86	21	26	4	0	8	38	59	0.97	-3.06	0.69	5	1	T	0	4.1	25	34	W	23	14	9	8	4.5	86
NORTH DAKOTA																																
BISMARCK	1647	955.6	1017.0	45	20	32.8	6.6	64	28+	-4	22	0	30	19	61	0.95	0.17	0.67	7	0	7.4	5	3.1	32	45	W	28	7	11	13	6.4	72
FARGO	896	982.7	1016.3	46	22	34.1	9.8	73	17	-1	11	0	24	25	72	1.29	0.54	0.92	7	1	2.0	2	3.7	33	47	NW	30	6	12	13	6.4	68
WILLISTON	1899	946.5	1016.5	49	22	35.7	11.4	70	23	2	11	0	30	23	66	0.10	-0.61	0.07	3	0	0.3	T	3.2	32	47	N	30	8	8	15	6.3	79
OHIO																																
AKRON	1208	971.6	1017.1	50	30	40.1	3.2	75	31	10	14	0	18	28	66	2.71	-0.61	0.48	13	2	4.1	2	3.9	27	24	36	12	3	13	15	6.9	
CINCINNATI OBS	761			56	34	44.9	2.2	80	29	13	3	0	15			4.24	0.35	1.26	10		11.4	9			24	W	23					66
CLEVELAND	777	987.5	1017.4	47	29	37.6	2.5	74	29	9	14	0	23	28	72	2.07	-1.06	0.47	14	1	7.7	3	4.1	26	38	NE	12	3	10	18	7.4	60
COLUMBUS	812	987.5	1018.1	55	32	43.3	4.4	77	29	11	3	0	18	28	57	3.01	-0.15	0.94	10	3	6.1	2	3.4	25	34	W	4	6	10	15	6.6	50
DAYTON	1002	981.0	1017.9	53	31	41.9	3.0	75	29	9	3	0	16	27	59	2.22	-0.90	0.82	11	1	13.8	10	3.9	25	33	W	4	8	7	16	6.5	56
MANSFIELD	1295			49	30	39.7	4.5	72	29	7	3	0	17	29	68	2.40	-1.38	0.61	15	1	8.1	5	5.1	25	24	25	23	9	7	15	6.4	
TOLEDO	669	991.9	1017.7	50	27	38.6	3.4	75	28	10	14+	0	22	26	62	2.26	0.00	0.69	12	0	11.2	7	3.7	27	31	N	12	7	7	17	6.5	60
YOUNGSTOWN	1178	973.2	1016.9	46	28	36.9	1.6	72	31	9	14	0	22	28	74	3.24	-0.11	0.90	13	2	4.9	2	4.5	27	28	34	31	7	7	17	7.2	
OKLAHOMA																																
OKLAHOMA CITY	1285	971.2	1018.1	62	40	50.7	2.2	81	29	16	4	0	12	39	70	2.84	0.87	0.65	9	3	13.9	6	2.8	17	40	N	12	5	7	19	7.2	50
TULSA	650	993.9	1018.7	62	38	49.8	1.7	85	29	17	4	0	12	35	62	3.49	1.06	1.25	11	3	11.8	10	2.3	17	35	N	12	7	8	16	6.4	62
OREGON																																
ASTORIA	8	1015.9	1016.7	54	40	46.7	2.2	68	20	28	9	0	4	40	81	10.42	1.50	2.13	24	0	0.0	0	3.7	18	36	17	15	0	6	25	8.8	
BURNS U	4151	873.0	1017.6	55	26	40.2	2.8	69	29	18	20	0	30	23	55	0.13	-0.84	0.06	3		0.4	T	3.2	27				7	9	15	6.4	
EUGENE	359	1004.1	1017.8	59	39	49.1	3.1	68	28	29	9	0	5	42	80	3.91	-0.41	1.40	11	1	0.0	0	3.8	20	27	18	25	2	6	23	8.3	
MEACHAM	4050	876.1	1017.3	47	30	38.8	5.5	60	4+	20	30	0	22	27	67	1.56	-2.40	0.86	9		7.4	3	1.0	21	18	24	25	5	4	22	8.0	
MEDFORD	1298	970.2	1018.3	62	35	48.1	3.8	74	31	25	10+	0	11	36	69	0.90	-0.88	0.31	5	0	0.0	0	0.6	26	32	13	12	8	6	17	6.6	
PENDLETON	1482	963.1	1017.3	59	38	48.5	3.4	75	4	30	31+	0	5	33	59	0.47	-0.73	0.36	3	0	T	0	3.1	24	35	28	25+	5	6	20	7.2	
PORTLAND	21	1016.3	1017.4	57	39	48.2	2.1	67	4	27	30	0	3	39	73	2.68	-1.15	0.56	18	1	0.0	0	2.9	17	37	S	12	1	6	24	8.5	46
SALEM	196	1010.2	1017.4	57	38	47.3	2.0	66	4	24	30	0	8	40	78	3.32	-1.36	0.63	19	0	0.0	0	3.2	19	23	18	25	4	3	24	8.2	
SEXTON SUMMIT R	3836	883.2	1017.3	48	32	40.2	1.6	60	31+	25	26+	0	17	30	73	2.02	-1.45	0.95	10		5.1	3			36	18	24	6	7	18	6.9	
PACIFIC AREA																																
JOHNSTON	7	1013.5	1014.1	81	73	77.0	-0.2	83	31+	70	26+	0	0	70	81	12.38	10.04	3.82	20	1	0.0	0	17.6	7	34	E	23	4	10	17	7.3	43
KOROR R	94	1006.1	1009.8	87	75	81.3	0.6	89	31+	72	9	0	0	75	84	8.59	0.96	2.70	24	2	0.0	0	7.3	6	28	E	11	0	10	21	8.4	84
KWAJALEIN	8	1009.1	1009.8	86	75	80.4	-0.1	87	31+	72	2+	0	0	75	83	10.28	3.82	3.77	24	0	0.0	0	16.0	6	31	6	6	0	9	22	8.3	
MAJURO	10	1009.5	1009.8	85	76	80.3	-0.3	87	22+	72	20	0	0	75	83	11.12	-0.60	2.72	26	4	0.0	0	12.3	8	29	NE	19	0	13	18	7.8	59
MARCUS ISLAND	20			77	66	71.7	-1.0	82	18	61	6	0	0			2.43	0.82	1.33	8		0.0	0			35	N	20					46
PAGO PAGO	12	1009.5	1009.8	86	73	79.7		88	18+	69	19	0	0	74	86	11.69		4.45	22	0	0.0	0	2.1	8	28	NE	16	0	6	25	8.9	55
PONAPE R	123	1003.7	1009.1	86	75	80.2	-0.4	88	16+	70	15	0	0	74	82	24.47	9.92	4.04	27	4	0.0	0	9.0	8	21	NE	28	0	1	30	9.2	32
TAGUAC GUAM R	361			84	72	77.9	-0.9	86	4	65	18	0	0			3.71	1.07	0.97	23		0.0	0			24	E	29	1	17	13	7.5	57
TRUK MOEN ISLAND	5	1008.8	1009.1	85	76	80.8	0.0	87	28+	71	5	0	0	74	81	13.91	6.16	3.17	23	4	0.0	0	10.9	6	25	NE	6	0	2	29	9.3	66
WAKE	11	1016.3	1016.5	83	72	77.2	-0.6	85	5	68	2+	0	0	66	72	0.74	-0.73	0.29	10	0	0.0	0	21.2	7	30	NE	27+	9	15	7	5.4	69
YAP R	44	1007.8	1009.6	86	76	81.1	0.1	88	3	72	1	0	0	74	80	3.72	-1.66	0.66	19	0	0.0	0	9.4	8	19	NE	11	1	8	22	8.2	67
PENNSYLVANIA																																
ALLENTOWN	387	1001.0	1015.4	52	29	40.6	3.0	79	29	11	3	0	20	27	63	3.15	-0.64	1.30	9	0	0.1	T	4.6	29	35	32	1	6	7	18	6.9	
ERIE	731	989.5	1016.9	45	28	36.4	2.8	75	31	5	2	0	21	26	69	1.69	-1.19	0.53	14	1	9.1	6	3.7	24	29	6	12	3	9	19	7.5	
HARRISBURG	338	1003.1	1015.9	54	33	43.7	3.4	82	29	15	3	0	15	30	62	3.40	-0.03	0.96	11	1	3.5	3	4.1	29	40	NW	24	7	7	17	6.9	54
PHILADELPHIA	5	1014.6	1015.6	54	35	44.4	3.4	78	29	16	3	0	11	30	61	4.98	1.18	2.39	9	1	2.2	T	3.4	30	40	NW	1	5	8	18	6.8	55
PITTSBURGH	1137	972.2	1017.2	51	29	40.4	3.6	76	31	12	14+	0	19	25	57	4.53	1.21	1.61	16	2	11.0	4	6.1	27	29	33	31	6	9	16	7.0	47

See footnotes at end of table

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temp.: Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	No. of days: Max. 90 F. or above	No. of days: Min. 32 F. or below	Average dew point	Average relative humidity	Precipitation: Total	Departure from normal	Greatest in 24 hours	No. of days: .01 inch or more	No. of days: With thunderstorms	Snow, Sleet: Total	Snow, Sleet: Maximum depth on ground	Wind: Resultant speed	Resultant direction	Fastest mile: Speed	Fastest mile: Direction	Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	Ft.	Mb.	Mb.	°F.	°F.	°F.	F.	F.		F.				F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
II PENNSYLVANIA																																
READING U	266			55	36	45.6	4.3	81	29	15	3	0	13			3.16	– 0.62	1.32	11		1.1	1			57	NW	1	8	11	12	5.9	53
SCRANTON	930	981.0	1015.8	50	31	40.4	4.2	78	29	9	3	0	16	29	67	2.73	– 0.09	1.06	15	1	2.7	1	3.3	28	34	W	24	5	6	20	7.3	49
WILLIAMSPORT	524	996.6	1016.0	52	30	41.0	3.6	79	29	12	3	0	16	30	68	3.10	– 0.63	0.91	12	1	3.2	2	3.9	28	32	31	13	6	8	17	7.0	
RHODE ISLAND																																
BLOCK ISLAND	110			44	32	37.6	0.9	58	31	10	3	0	16			6.69	2.62	3.63	11		4.4	1						6	11	14	6.8	
PROVIDENCE	51	1012.2	1014.5	46	31	38.1	1.1	64	29	9	3	0	17	25	65	7.83	3.69	4.53	11	1	5.1	4	4.0	30	37	23	24	5	10	16	7.1	52
SOUTH CAROLINA																																
CHARLESTON	40	1018.0	1019.7	70	41	55.7	– 1.0	87	30+	26	4	0	9	38	56	1.35	– 2.58	0.99	7	1	0.0	0	3.9	24	41Y	S	12	13	10	8	4.4	69
CHARLESTON U	9			66	48	57.1	– 0.4	83	30	30	1	0	1			0.60	– 3.02	0.27	6		0.0	0			31	NW	1					
COLUMBIA	213	1011.2	1019.5	71	39	54.8	0.4	87	20	23	14	0	10	36	57	1.92	– 2.34	0.65	9	3	0.0	0	3.9	26	25	31	13	14	9	8	4.4	81
GNVLE-SPARTANBURG	957	984.1	1019.0	68	39	53.3	1.9	85	30	21	1	0	12	32	50	3.68	– 1.07	2.17	7	4	0.0	0	4.0	26	31	N	3	13	8	10	4.8	79
SOUTH DAKOTA																																
ABERDEEN	1296	968.5	1016.4	50	22	36.3	8.1	74	17	3	3	0	26	23	64	2.74	1.65	2.59	6	1	3.2	3	2.7	31	35	34	31+	11	8	12	5.5	
HURON	1282	969.2	1016.6	54	23	38.6	9.9	77	30+	1	12	0	25	19	50	0.16	– 0.95	0.06	5	1	2.5	1	3.3	29	40	NW	30	9	12	10	5.6	72
RAPID CITY	3162	903.8	1016.3	55	26	40.4	9.3	75	6	7	22	0	22	21	51	0.21	– 0.80	0.08	6	0	1.3	1	5.0	33	47	NW	30	8	8	15	6.4	67
SIOUX FALLS	1418	964.1	1016.6	55	24	39.8	9.7	87	30	4	12	0	23	24	58	0.61	– 0.93	0.42	4	3	T	T	3.8	28	40	23	18	13	7	11	5.1	
TENNESSEE																																
BRISTOL	1507	964.4	1019.4	60	33	46.9	0.9	80	21	18	14+	0	17	32	61	4.95	0.97	1.54	11	3	1.0	6	3.5	27	32	24	22	6	11	14	6.2	
CHATTANOOGA	665	994.6	1019.7	63	36	49.8	– 1.4	80	30	18	5	0	13	37	64	3.70	– 1.94	1.54	9	4	T	1	2.3	25	29	W	22+	9	9	13	6.0	59
KNOXVILLE	980	983.4	1018.9	63	37	49.9	0.3	81	30	20	4	0	12	35	62	4.78	0.05	1.33	10	3	1.9	2	3.2	26	31	W	22	11	3	17	6.0	65
MEMPHIS	258	1009.5	1019.9	61	41	50.9	– 0.2	82	30+	20	24	0	9	37	61	6.52	1.45	1.96	11	5	17.3	13	2.3	22	34	NW	20	9	5	17	6.2	62
NASHVILLE	590	997.3	1019.5	61	35	47.8	– 1.3	80	29	14	4	0	14	34	64	4.47	– 0.72	1.81	8	3	8.5	7	3.9	23	29	S	15+	12	4	15	6.2	63
OAK RIDGE R	905			62	36	48.9	1.4	80	30	19	4	0	12			5.26	– 0.33	2.12	8		0.5	1			33Y		22	9	7	15	6.0	
TEXAS																																
ABILENE	1762	956.0	1018.0	63	43	53.1	– 1.9	75	30+	23	4	0	8	41	69	2.12	1.08	1.03	8	3	2.5	2	4.0	20	37	NE	20+	5	4	22	7.6	60
AMARILLO	3604	891.3	1015.2	62	36	48.7	1.1	84	29	22	23+	0	11	29	53	0.45	– 0.37	0.32	5	0	2.9	1	2.3	26	46	NNE	31	9	6	16	6.3	68
AUSTIN	597	997.3	1019.4	68	47	57.3	– 2.4	82	30	27	1	0	3	46	70	2.09	– 0.04	1.14	8	3	T	0	2.5	19	32	NW	21	3	9	19	7.4	41
BROWNSVILLE	19	1018.0	1018.5	73	55	64.0	– 3.9	83	19	35	13	0	0	55	75	1.08	0.04	0.66	5	0	0.0	0	5.9	13	34	SE	18	9	5	17	6.3	51
CORPUS CHRISTI	41	1017.6	1019.1	70	51	60.1	– 5.1	82	20	35	22+	0	0	52	77	0.90	– 0.54	0.53	5	0	0.0	0	5.7	13	45	NW	11	7	6	18	6.8	53
DALLAS	481	1001.4	1019.0	64	46	55.4	– 0.7	79	31	27	4	0	6	43	67	5.69	2.84	2.65	12	4	T	0	3.9	17	45	NE	11	3	9	19	7.5	51
DEL RIO	1026	981.7	1018.2	69	47	58.0	– 5.0	83	10	30	22	0	1	46	70	1.15	0.33	0.70	10	2	T	0	4.5	11	29	32	10	4	9	18	7.1	
EL PASO	3918	882.2	1015.0	64	42	53.0	– 1.9	82	30+	28	12	0	5	31	49	0.85	0.50	0.47	9	0	0.8	1	2.4	22	35	SW	18+	8	5	18	6.9	65
FORT WORTH	537	998.3	1019.1	64	45	54.6	– 1.3	79	31	24	4	0	6	46	77	6.39	3.88	2.60	13	5	T	0	3.2	19	41	3	11	4	7	20	7.7	
GALVESTON U	7			63	52	57.4	– 4.0	72	16+	36	22	0	0			1.93	– 0.93	0.95	7		0.0	0			42	NW	11					47
HOUSTON	50	1018.0	1020.0	70	48	59.0	– 2.3	82	30	29	1	0	1	49	75	2.92	0.25	1.52	6	1	1.0	1	3.5	17	35	30	11	3	5	23	7.9	34
LUBBOCK	3254	904.2	1016.5	61	36	48.5	– 1.1	81	29	21	12	0	11	36	68	2.77	2.04	1.70	9	5	9.7	8	1.9	23	35	1	31	6	6	19	7.2	
MIDLAND	2851	917.0	1016.1	65	42	53.5	– 1.7	83	30	28	22+	0	8	38	63	1.62	1.26	1.37	5	1	0.2	0	2.9	19	35	32	19	7	3	21	7.1	
PORT ARTHUR	16	1020.0	1020.5	68	48	58.2	– 2.9	81	11	27	1	0	4	51	81	2.51	– 0.93	1.04	7	1	1.4	T	3.8	14	40	NW	12	5	8	18	7.4	42
SAN ANGELO	1903	950.2	1017.4	66	45	55.0	– 2.0	79	25	26	22	0	4	44	70	1.88	– 0.95	0.91	8	4	0.3	T	3.6	20	35	31	20	5	7	19	7.2	
SAN ANTONIO	788	990.9	1019.2	68	48	58.0	– 3.0	82	30+	29	1	0	3	46	69	1.27	– 0.40	0.94	8	1	0.0	0	2.8	15	33	NW	11	5	9	17	7.4	43
VICTORIA	104	1015.2	1019.4	70	50	60.0	– 3.2	83	20	31	1	0	1	50	74	1.41	– 0.91	0.62	7	2	0.0	0	3.3	14	54Y	NW	11	4	8	19	7.4	
WACO	501	1000.7	1019.1	66	47	56.1	– 1.8	79	31	30	23+	0	4	48	77	2.15	– 0.20	1.35	7	2	T	0	4.6	17	31	30	12	6	7	18	7.0	
WICHITA FALLS	994	981.0	1018.1	65	42	53.7	– 0.1	81	29	21	4	0	9	43	72	2.58	1.04	1.34	6	4	3.8	4	3.1	16	45	36	11	6	5	20	7.2	
UTAH																																
MILFORD	5028	846.3		57	26	41.5	3.0	74	30+	18	27+	0	26			1.08	0.05	0.45	7		9.0	3						12	9	10	4.9	
SALT LAKE CITY	4220	872.0	1017.1	57	32	44.7	4.3	75	29	21	11	0	16	28	56	2.21	0.65	0.61	9	0	8.4	4	2.6	18	40	N	25	12	6	13	5.7	81
WENDOVER	4237	871.3	1017.6	55	35	44.7	3.2	71	29	26	21	0	11	28	41	0.40	0.01	0.39	3		T	T										
VERMONT																																
BURLINGTON	332	1001.4	1014.3	40	19	29.6	2.9	67	31	-13	7	0	27	18	62	3.23	1.12	1.36	10	1	14.5	10	1.5	27	32	N	1	3	7	21	7.8	53
VIRGINIA																																
LYNCHBURG	916			63	36	49.9	4.4	85	21	17	14	0	13			3.28	– 0.33	1.23	7		T	3			30	SW	23	11	12	8	5.0	71
NORFOLK	22	1016.3	1017.2	61	39	50.0	2.0	85	21	24	4	0	11	33	55	4.76	1.31	3.11	7	1	0.9	3	4.4	24	35	NW	1	9	10	12	5.6	74

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	No. of days: Max. 90 F. or above	No. of days: Min. 32 F. or below	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	No. of days: .01 inch or more	No. of days: With thunderstorms	Snow, Sleet: Total	Snow, Sleet: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Fastest mile: Speed	Fastest mile: Direction	Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	Ft.	Mb.	Mb.	F.	F.	F.	F.	F.		F.				F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
VIRGINIA																																
RICHMOND	164	1010.8	1017.1	66	38	52.0	4.3	90	21	20	4	1	10	34	56	4.00	0.58	1.96	8	1	2.8	4	2.8	26	29	SW	31	8	10	13	5.8	68
ROANOKE	1149	974.6	1016.9	64	39	51.3	5.8	86	21	18	14	0	12	27	43	3.03	- 0.50	1.32	8	2	T	2	5.7	28	35	28	1	10	13	8	5.3	
WALLOPS ISLAND	9			53	37	44.9		78	28	23	14+	0	9			4.25		1.35	8		1.7	3			59Y	NW	1	8	8	15	6.2	
WASHINGTON																																
OLYMPIA	195	1009.5	1016.7	55	38	46.2	2.0	65	20	26	30+	0	8	39	79	6.53	1.13	1.65	20	0	0.0	0	3.8	21	29	18	26	2	5	24	8.5	
QUILLAYUTE	179	1008.1	1015.5	52	39	45.6	2.7	68	20	28	8	0	4	41	87	15.17	4.09	3.08	25	0	T	0	3.3	16	22	W	28+	2	3	26	8.9	27
SEATTLE TACOMA	400	1000.3	1016.7	56	42	48.6	4.8	69	20	32	30	0	1	39	74	5.08	1.29	0.98	17	0	0.0	0	3.5	19	28	20	12	3	3	25	8.5	42
SPOKANE	2356	931.3	1016.1	52	32	42.1	4.0	64	22	24	30	0	16	30	66	0.71	- 0.79	0.58	8	0	T	0	5.3	19	40	W	29+	5	6	20	7.5	58
STAMPEDE PASS R	3958	878.1		39	29	34.4	4.4	53	2	23	30	0	26			6.89	- 3.71	2.09	22		58.7	64						4	1	26	8.6	
WALLA WALLA U	949			60	41	50.4	4.4	68	12+	33	30+	0	0			0.88	- 0.71	0.59	7		T	0			24	NW	5	4	5	22	7.6	51
YAKIMA	1052	978.0	1016.8	59	33	46.0	4.0	65	27+	26	30+	0	10	30	57	0.11	- 0.51	0.09	3	0	0.0	0	4.3	25	29	31	29	6	4	21	7.3	
WEST INDIES																																
SAN JUAN P.R.	13	1015.6	1018.1	82	71	76.2	0.9	89	1	66	6	0	0	66	73	1.79	- 0.41	0.52	8	0	0.0	0	6.5	5	32	E	28	9	16	6	5.2	83
SWAN ISLAND	28			83	74	78.3	- 1.7	86	29	70	24+	0	0			0.67	0.04	0.33	5		0.0	0						14	13	4	4.5	
WEST VIRGINIA																																
BECKLEY	2504	928.2	1018.1	55	34	44.3	4.4	77	21+	10	14	0	13	27	59	2.93	- 2.12	0.82	17	2	7.2	6	6.2	26	44	19	22	7	8	16	6.5	
CHARLESTON	939	983.4	1017.9	60	36	47.5	3.1	82	20	15	14+	0	13	31	59	4.79	0.45	2.22	13	1	2.0	3	5.0	24	28	24	23	7	10	14	6.5	
ELKINS	1970	945.5	1017.7	56	28	41.8	2.3	79	22	7	14	0	18	29	67	4.28	0.14	1.28	17	3	10.3	11	5.0	28	37	28	23	6	5	20	7.2	
HUNTINGTON	827	987.8	1018.5	58	34	45.8	1.0	78	20	14	3	0	19	32	64	6.05	1.85	2.49	12	1	2.2	1	3.7	25	21	25	23+	6	9	16	6.7	
PARKERSBURG U	615			57	34	45.4	2.7	78	29	14	3	0	14			5.41	1.88	1.42	12		0.6	T			33	SW	23					56
WISCONSIN																																
GREEN BAY	682	990.2	1016.3	50	27	38.0	9.8	72	27	11	3	0	24	24	61	0.97	- 0.37	0.39	9	3	0.6	T	3.0	26	30	SW	27	5	11	15	6.4	52
LA CROSSE	651	991.9	1016.8	52	29	40.5	10.0	76	30+	11	3	0	21	24	57	0.98	- 1.09	0.47	6	2	0.1	T	2.3	27	26	17	30+	13	6	12	5.6	
MADISON	858	984.4	1016.6	52	26	39.2	10.1	73	30+	8	3	0	24	25	59	0.59	- 1.25	0.43	8	2	0.5	1	3.3	27	33	S	14	10	7	14	6.2	59
MILWAUKEE	672	990.9	1016.6	51	29	40.3	9.3	75	27	14	3+	0	20	25	57	0.31	- 2.00	0.09	11	0	1.2	1	3.2	27	35	S	27+	8	5	18	6.6	66
WYOMING																																
CASPER	5338	836.1	1016.5	48	25	36.7	4.6	68	29	7	21	0	25	21	59	0.92	- 0.11	0.37	8	0	13.3	4	9.5	23	36	21	13	6	11	14	6.6	
CHEYENNE	6126	810.7	1016.6	50	26	38.0	5.6	69	30+	7	21	0	28	16	46	0.31	- 0.90	0.17	4	0	2.8	2	7.7	30	39	NW	30	8	11	12	5.6	72
LANDER	5563	827.6	1016.5	48	24	36.3	4.1	68	29	8	12	0	29	21	59	1.65	0.50	0.79	4	0	26.5	9	3.0	24	47	SW	13	7	8	16	6.4	79
SHERIDAN	3964	877.8	1017.0	52	25	38.5	7.5	73	29	7	21	0	29	23	58	0.92	- 0.50	0.28	10	0	14.0	6	2.6	31	36	NW	26	6	7	18	7.1	64

Data from airport unless otherwise specified. U indicates Urban, R indicates Rural, sites.

Precipitation data in column headed "Greatest in 24 hours" are computed on a 24-hour basis without regard to calendar day - data may include precipitation with a measurable amount from the last day of the previous month or the first day of the following month.

Wind directions under resultant direction are in tens of degrees.

Value entered in column "Fastest Mile" is the highest observed 1-minute wind speed when the direction is in tens of degrees. These stations are not equipped with a recording anemometer from which "Fastest Mile" data can be evaluated.

A Maximum hourly average.
B Number of days maximum 70°F. or above for Alaskan Stations.
Y Peak Gust.
\+ And also on an earlier date or dates.
Ø Station pressures apply to elevations shown in the "Elevations - Station Pressure" table of the annual issue of this publication.

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure: Station ⊙	Pressure: Sea level	Temperature: Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	No. of days: Max 32.2 °C or above	No. of days: Min 0 C or lower	Average dew point	Average relative humidity	Precipitation: Total	Departure from normal	Greatest in 24 hours	No. of days: 25 mm. or more	No. of days: With thunderstorms	Snow, Sleet: Total	Snow, Sleet: Maximum depth on ground	Wind: Resultant speed	Resultant direction	Fastest mile (1.6 kilometers): Speed	Fastest mile: Direction	Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	M.	Mb.	Mb.	C.	C.	C.	C.	C.		C.				C.	%	Mm.	Mm.	Mm			Mm	Mm.	M.p.s.		M.p.s							%
ALABAMA																																
BIRMINGHAM	189	998.0	1020.7	19.4	3.9	11.6	-0.9	30.0	20	- 7.2	4	0	10	2.8	58	157	4	72	7	3	T	0	1.1	25	12.1	SW	12+	9	6	16	6.1	60
HUNTSVILLE	190	997.0	1020.2	17.8	3.3	10.5	-0.5	27.8	30	- 6.7	23+	0	13	3.9	68	143	2	53	10	3	53	51	0.8	25	16.5	25	12	8	10	13	6.1	
MOBILE	64	1012.9	1021.0	21.1	7.8	14.5	-1.2	27.8	30	- 2.8	1	0	3	7.2	67	33	-151	15	11	1	T	T	0.8	19	12.5	18	11	8	10	13	5.8	
MONTGOMERY	59	1013.9	1021.1	20.6	6.1	13.2	-0.2	30.6	20	- 3.3	1	0	6	4.4	60	71	- 85	35	5	2	T	0	1.1	24	14.3	S	11	11	6	14	5.8	67
ALASKA												B																				
ANCHORAGE	35	1001.7	1006.5	1.7	- 5.6	- 2.0	2.1	6.1	1	-13.3	23	0	28	- 8.3	64	7	- 6	3	5	0	81	127	0.8	35	9.4	35	20	8	7	16	6.6	58
ANNETTE	34	1005.8	1009.9	8.9	2.2	5.6	2.3	13.9	20	- 1.7	31	0	9	1.1	77	265	22	42	27	0	76	T	3.0	13	16.1	14	20	1	4	26	9.0	
BARROW	9	1016.3	1016.9	-20.0	-28.3	-24.3	1.6	- 9.4	31+	-40.6	2	0	31	-26.7		4	1	2	5	0	51	432	2.9	9	11.6	7	8	8	8	15	6.4	
BARTER ISLAND	12	1015.9	1017.8	-18.9	-27.2	-23.2	2.8	- 8.3	31	-33.3	19	0	31	-27.2	68	T	- 5	T	0	0	T	610	1.7	11	10.7	27	4	12	8	11	5.2	
BETHEL	38	1003.4	1009.2	- 5.6	-15.6	-10.4	0.9	3.3	25	-28.3	4	0	31	-11.7	86	3	- 23	1	7	0	142	127	1.6	35	11.2	19	30+	7	4	20	7.1	
COLD BAY	29	1003.1	1006.9	1.1	- 3.3	- 0.9	0.9	6.1	13	- 8.9	3	0	28	- 3.3	83	31	- 14	9	12	0	198	51	0.9	35	24.6	13	31	2	8	21	8.1	
FAIRBANKS	133	992.9	1010.6	- 2.2	-18.9	-10.7	2.2	6.7	21	-30.6	18	0	31	-18.3	52	T	- 10	T	0	0	T	610	0.7	2	6.7	20	21	14	6	11	4.8	
JUNEAU	4	1008.1	1008.9	3.9	- 2.8	0.6	1.5	8.9	1	- 8.9	16	0	25	- 1.7	87	98	15	22	17	0	208	76	3.3	11	13.4	12	21	3	1	27	8.7	36
KING SALMON	15	1003.7	1005.9	0.6	- 7.8	- 3.6	3.3	5.6	10+	-18.3	21	0	29	- 8.3	67	20	- 4	16	7	0	191	178	1.7	3	15.6	9	24	5	6	20	7.5	
KOTZEBUE	3	1011.9	1012.4	-13.3	-22.8	-17.9	1.0	- 1.7	30	-37.2	4	0	31	-21.7	72	4	- 4	2	5	0	122	711	1.8	11	16.5	11	29	5	11	15	6.5	
MC GRATH	105	996.6	1009.7	- 2.8	-19.4	-11.3	1.9	2.2	31+	-31.1	19	0	31	-16.1	66	10	- 14	4	6	0	211	493	1.0	31	9.4	36	20	11	7	13	5.9	
NOME	4	1009.1	1009.9	- 7.2	-19.4	-13.4	0.0	- 1.1	30+	-30.0	3	0	31	-16.1	73	10	- 12	2	13	0	127	559	1.7	7	11.2	30	30+	6	3	22	7.3	45
ST. PAUL ISLAND	7	1007.5	1008.4	- 1.7	- 7.2	- 4.6	-0.2	2.2	20+	-21.7	3	0	31	- 5.6	89	21	- 6	4	18	0	323	152	2.6	3	20.6	8	4	1	8	22	8.6	
SHEMYA	37	1004.7	1008.3	2.2	- 1.7	0.1	-0.1	5.0	18	- 6.1	2	0	29	- 2.2	83	25	- 40	7	21	0	99	76	2.3	26	25.0	34	4	1	11	19	8.1	
YAKUTAT	9	1005.4	1006.4	3.9	- 3.9	- 0.1	0.3	8.3	12	-12.2	18	0	25	- 2.8	82	240	20	47	18	0	363	102	2.4	10	12.5	14	21	5	3	23	7.9	
ARIZONA																																
FLAGSTAFF	2131	786.3	1016.7	11.1	- 5.6	2.8	0.8	20.0	29	-10.0	12	0	31	- 6.7	58	29	- 8	11	8	0	257	51	0.7	19	10.3	31	18	10	8	13	5.5	
PHOENIX	340	975.6	1014.8	23.3	7.8	15.5	0.5	32.2	29	2.2	20	1	0	5.0	55	26	10	22	4	2	0	0	1.2	12	13.4Y	WNW	10	10	10	11	5.5	79
TUCSON	788	926.2	1014.5	21.7	8.3	14.8	0.4	29.4	29	2.2	21	0	0	2.8	50	45	32	24	6	2	0	0	1.3	16	13.0	W	10	12	5	14	6.1	77
WINSLOW	1492	851.0	1016.5	15.6	0.6	8.1	0.6	23.9	30	- 3.9	22	0	12	- 4.4	46	14	4	10	4	0	25	T	1.5	22	15.6	22	17	11	9	11	5.3	
YUMA	59	1007.5	1014.7	26.1	11.7	18.9	1.7	33.3	29+	6.1	19	3	0	1.7	37	8	2	7	3	1	0	0	0.7	32	11.6	N	20	14	6	11	4.6	90
ARKANSAS																																
FORT SMITH	136	1002.4	1019.2	17.8	3.9	10.9	0.3	28.9	29	- 6.7	4+	0	10	3.3	64	203	115	63	6	4	135	51	0.3	3	11.6	N	12+	6	5	20	7.0	58
LITTLE ROCK	78	1009.8	1019.5	16.7	3.9	10.4	-0.6	27.2	29	- 6.1	4+	0	10	2.2	60	141	19	61	8	7	T	T	0.9	22	15.2	NE	11	7	3	21	7.1	67
TEXARKANA	119	1006.1	1019.3	18.3	7.2	12.8	0.1	26.1	28	- 5.0	1	0	5	5.6	67	186	66	74	10	7	T	T	1.8	19	10.3	33	12+	6	6	19	7.2	
CALIFORNIA																																
BAKERSFIELD	145	1000.3	1018.2	22.2	8.9	15.4	1.6	31.1	29	3.9	18	0	0	5.0	54	26	- 1	16	4	0	0	0	0.7	1	8.9	16	12	12	9	10	5.0	
BISHOP	1252	873.7		18.9	- 1.1	9.0	0.3	27.8	30	- 6.7	17	0	22			3	- 11	2	4		T	0						15	8	8	4.4	
BLUE CANYON	1609			9.4	1.1	5.3	1.1	17.8	28	- 4.4	18	0	16			174	- 41	47	10		1242	711			13.9	22	12	9	6	16	6.2	
EUREKA U	13			13.9	6.7	10.3	1.1	22.2	21	2.2	10	0	0			98	- 36	26	14		0	0			16.5	S	12+	3	7	21	7.6	60
FRESNO	100	1006.4	1018.1	20.6	6.1	13.2	0.4	29.4	30	2.8	19+	0	0	6.7	70	38	- 12	18	4	0	0	0	0.6	34	10.3	NW	25	12	7	12	5.4	72
LONG BEACH	10	1016.3	1017.5	22.2	10.0	16.2	2.4	31.1	4	5.6	20+	0	0	7.2	61	56	21	51	4	0	0	0	1.2	24	9.4	27	10+	15	8	8	4.7	
LOS ANGELES	30	1013.2	1016.9	20.6	11.1	15.8	1.9	28.9	4	7.8	18	0	0	7.2	59	96	50	90	4	0	0	0	1.5	26	14.8Y	SW	8+	13	10	8	4.7	
LOS ANGELES U	82			22.8	11.7	17.2	1.9	31.7	28	7.8	18	0	0			85	27	77	4		0	0			8.9	SW	9	16	7	8	4.3	84
MT SHASTA R	1080			12.8	0.0	6.2	1.1	21.1	29	- 3.9	6	0	18			104	- 9	55	10		475	381										
OAKLAND	2	1018.6	1019.0	16.7	9.4	13.3	1.3	26.1	28	6.7	18+	0	0	8.3	76	78	17	37	10	0	0	0	1.7	27	12.5	16	12	11	10	10	5.3	
RED BLUFF	104	1005.4	1018.1	20.0	7.8	13.8	1.5	28.9	28	2.2	19	0	0	6.1	65	32	- 36	13	7	1	0	0	0.6	19	13.9	SE	12	9	7	15	6.2	68
SACRAMENTO	5	1017.3	1018.1	18.9	6.7	12.8	0.9	26.7	29	2.8	20	0	0	7.2	75	61	1	28	6	1	0	0	0.8	23	14.3	SW	16	15	3	13	5.2	79
SANDBERG R	1377	863.2		11.1	2.2	6.7	-0.6	22.2	29	- 3.9	18+	0	13	- 3.3	58	24	- 13	15	5		0	0			16.1	34	10	12	6	13	5.3	
SAN DIEGO	4	1016.3	1017.2	20.0	11.7	15.9	0.9	28.3	4	7.8	19	0	0	8.3	63	39	- 1	35	5	0	0	0	1.1	27	14.3	SW	8	10	12	9	5.2	74
SAN FRANCISCO	2	1018.3	1019.0	17.2	7.8	12.5	0.7	24.4	29+	4.4	20	0	0	6.7	72	77	9	31	11	0	0	0	2.4	27	17.9	S	12	11	7	13	5.5	
SAN FRANCISCO U	16			16.7	10.6	13.7	1.1	25.0	28	8.9	13	0	0			80	6	41	9		0	0			14.3	SE	12					82
SANTA MARIA	72			19.4	5.0	12.4	0.6	27.8	28	1.1	20	0	0			48	- 4	25	4		0	0						14	6	11	4.9	
STOCKTON	7			18.3	6.1	12.3	0.2	26.7	30	1.7	20	0	0	6.1	70	68	16	43	7	0	0	0			13.0	17	12	12	6	13	5.5	
COLORADO																																
ALAMOSA	2297	770.4		10.0	- 8.3	0.7	0.7	18.3	29	-13.3	12	0	31			5	- 1	4	2		122	51						13	9	9	4.6	
COLORADO SPRINGS	1873	810.0	1017.7	11.1	- 3.9	3.7	1.3	22.8	30	-13.3	12	0	25	- 9.4	45	9	- 6	8	3	0	145	102	1.0	3	17.4	31	8	13	8	10	5.0	
DENVER	1610	835.4	1015.5	13.3	- 3.9	4.8	2.3	23.3	29	-12.8	3	0	27	- 7.2	51	22	- 9	11	7	0	234	102	0.9	20	16.1	SW	30	9	10	12	5.4	79
GRAND JUNCTION	1480	852.0	1016.6	14.4	- 1.1	6.6	1.3	23.9	30	- 6.1	21	0	22	- 6.1	45	11	- 8	6	5	1	8	T	0.8	10	16.1	SW	17	14	8	9	4.3	74
PUEBLO	1428	855.4	1016.6	13.9	- 2.2	6.0	1.5	26.1	30	-11.1	12	0	22	- 7.2	47	20	7	12	4	0	236	127	0.4	29	19.2	NE	31	12	7	12	5.1	79

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	No. of days: Max 32 2 °C or above	No. of days: Min. 0 C or lower	Average dew point	Average relative humidity
	M.	Mb.	Mb.	C.	C.	C.	C.	C.		C.				C.	%
CONNECTICUT															
BRIDGEPORT	2	1014.2	1015.0	8.9	0.0	4.6	1.5	18.9	30	- 8.9	4+	0	15	- 1.7	68
HARTFORD	52	1007.5	1014.3	8.9	0.0	4.4	2.2	25.0	29	-11.1	4	0	16	- 2.8	64
NEW HAVEN	2	1014.6		8.9	0.0	4.3	1.6	18.3	30	- 9.4	3	0	14		
DELAWARE															
WILMINGTON	23	1012.9	1015.8	12.8	1.7	7.0	1.8	26.1	29	- 8.9	3	0	13	- 0.6	63
DIST.OF COLUMBIA															
WASH NATL AP	4	1013.9	1016.4	16.7	3.3	9.8	2.7	29.4	22	- 7.2	3	0	10	- 0.6	54
FLORIDA															
APALACHICOLA U	4			18.9	8.9	13.9	-2.2	24.4	30	- 1.1	1	0	1		
DAYTONA BEACH	9	1020.0	1021.4	22.2	8.9	15.6	-2.1	29.4	22+	- 0.6	2	0	2	8.3	64
FORT MYERS	5	1020.7	1020.9	25.0	11.7	18.1	-2.0	30.0	11	2.2	2	0	0	11.1	68
JACKSONVILLE	6	1020.3	1021.2	22.8	8.9	15.8	-0.9	31.7	22	0.6	1	0	0	6.7	61
KEY WEST	1	1019.3	1019.8	24.4	18.3	21.6	-0.9	28.3	12	11.7	2+	0	0	15.0	69
LAKELAND U	65			23.3	10.6	16.9	-2.2	30.0	21+	1.1	1	0	0		
MIAMI	2	1020.0	1020.2	23.3	15.6	19.4	-1.9	27.2	11	2.8	2	0	0	12.8	66
ORLANDO	33	1017.3	1021.5	23.3	9.4	16.3	-2.5	30.0	21	- 0.6	2	0	2	8.9	67
PENSACOLA	34	1016.6	1020.9	18.9	7.8	13.4	-2.7	26.7	10	- 2.8	1	0	3	7.8	71
TALLAHASSEE	17	1019.0	1021.4	22.8	4.4	13.7	-2.2	28.9	30+	- 4.4	5	0	7	5.6	65
TAMPA	6	1020.7	1021.1	22.8	9.4	16.1	-2.8	28.3	21	1.7	2	0	0	8.9	67
WEST PALM BEACH	5	1020.0	1020.7	24.4	12.2	18.3	-2.8	30.0	11	- 0.6	2	0	1	10.0	59
GEORGIA															
ATHENS	244	990.2	1019.4	19.4	3.9	11.6	0.7	26.7	30+	- 5.0	1	0	9	1.1	54
ATLANTA	308	982.7	1020.0	18.9	3.9	11.3	0.5	27.8	20	- 6.1	1	0	9	1.7	57
AUGUSTA	44	1014.2	1019.5	21.7	3.3	12.5	-0.2	29.4	30+	- 5.0	5	0	11	2.2	56
COLUMBUS	117			20.0	4.4	12.2	-0.8	28.3	20	- 4.4	4	0	7	3.9	63
MACON	108	1007.1	1020.2	21.1	3.9	12.4	-1.4	30.0	20	- 5.6	4	0	11	1.7	54
ROME	194			19.4	1.1	10.2	0.0	28.9	20	- 6.1	5+	0	15		
SAVANNAH	14	1018.6	1020.3	21.7	6.1	13.9	-0.7	31.1	21	- 2.2	4+	0	8	4.4	59
HAWAII															
HILO	8	1015.9	1017.1	27.2	20.0	23.6	2.2	31.1	1	17.2	2	0	0	19.4	81
HONOLULU	2	1016.3	1016.9	27.2	20.6	23.8	1.1	30.0	5	18.3	7	0	0	17.8	72
KAHULUI	15	1014.6	1016.8	26.1	18.3	22.2	-0.1	28.9	5	14.4	9	0	0	18.9	83
LIHUE	31	1013.2	1018.4	23.9	18.9	21.5	-0.2	27.8	1	16.1	9+	0	0	18.3	93
IDAHO															
BOISE	865	916.4	1017.5	14.4	1.1	7.7	2.3	21.1	29	- 4.4	19	0	13	- 2.2	53
LEWISTON	431			14.4	2.8	8.6	2.7	20.0	1	- 2.2	20+	0	7		
POCATELLO	1358	863.6	1018.2	11.1	- 2.8	4.2	2.1	20.6	29	-11.1	20	0	27	- 3.9	60
ILLINOIS															
CAIRO U	96			14.4	3.9	9.1	0.1	26.1	29	- 6.7	1	0	11		
CHICAGO O HARE	201	992.2	1017.2	12.2	- 0.6	5.9	4.4	25.6	28	-12.2	3	0	18	- 2.8	58
CHICAGO MIDWAY	185	994.2		11.7	0.6	6.3	3.9	25.6	28	- 8.3	3	0	16	- 2.8	57
MOLINE	177	995.6	1017.5	12.2	- 1.1	5.5	3.6	26.7	28	-11.7	3	0	20	- 3.3	56
PEORIA	199	993.6	1018.0	12.8	- 0.6	6.1	3.0	26.7	28	-12.2	3	0	17	- 2.2	60
ROCKFORD	221	989.2	1016.8	11.1	- 1.7	4.7	3.6	23.3	28	-12.8	3	0	22	- 2.8	63
SPRINGFIELD	179	995.6	1018.2	12.2	- 0.6	6.0	1.4	25.6	28	-16.1	13	0	16	- 2.2	59
INDIANA															
EVANSVILLE	116	1004.7	1019.2	14.4	1.1	7.6	0.2	27.2	29	- 8.9	23+	0	15	0.6	63
FORT WAYNE	241	986.8	1017.6	9.4	- 2.2	3.8	1.4	22.2	29+	-15.6	13	0	20	- 2.8	65
INDIANAPOLIS	241	988.5	1018.2	12.2	0.0	6.0	2.2	24.4	29+	-12.8	13	0	17	- 1.7	62
SOUTH BEND	236	988.8	1017.3	9.4	- 1.1	4.3	2.7	23.3	28	-15.6	13	0	17	- 2.2	65
IOWA															
BURLINGTON	211			12.8	- 0.6	5.9	3.0	26.7	28	-11.7	1	0	18	- 2.8	56
DES MOINES	286	982.4	1017.9	12.8	- 1.1	5.9	4.9	28.3	30	-11.7	3	0	17	- 3.9	53
DUBUQUE	322	977.0		11.1	- 2.2	4.6	4.6	24.4	28	-12.8	3	0	20		

State and Station	Precipitation: Total	Departure from normal	Greatest in 24 hours	No. of days: .25 mm or more	No. of days: With thunderstorms	Snow, Sleet: Total	Snow, Sleet: Maximum depth on ground	Wind: Resultant speed	Resultant direction	Fastest mile (1.6 kilometers): Speed	Direction	Date	No. of days (sunrise to sunset): Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	Mm.	Mm.	Mm.			Mm.	Mm.	M.p.s.		M.p.s							%
CONNECTICUT																	
BRIDGEPORT	115	7	53	10	1	41	25	1.9	33	22.8	24	24	4	13	14	7.2	
HARTFORD	116	19	34	13	1	173	76	1.9	33	17.9	NW	1	4	5	22	7.8	51
NEW HAVEN	116	- 1	47	13		58	25			15.2	NW	1	5	8	18	7.2	54
DELAWARE																	
WILMINGTON	121	19	52	8	1	33	25	1.6	29	16.1	31	1	6	9	16	6.6	
DIST.OF COLUMBIA																	
WASH NATL AP	93	11	40	8	1	76	76	1.6	29	17.0	NW	24	8	11	12	6.2	65
FLORIDA																	
APALACHICOLA U	19	- 96	10	3	3	0	0			12.1	SE	12+	14	6	11	4.5	78
DAYTONA BEACH	45	- 45	20	5	2	0	0	0.2	18	12.5	22	12	13	11	7	4.6	
FORT MYERS	17	- 50	9	3	1	0	0	0.8	7	13.0	19	12	15	11	5	4.2	
JACKSONVILLE	30	- 58	18	6	2	0	0	0.8	25	15.2	W	1	10	14	7	4.7	70
KEY WEST	111	66	79	6	1	0	0	3.0	7	14.8	NW	1	11	12	8	5.3	76
LAKELAND U	27	- 81	10	3		0	0						13	12	6	4.3	77
MIAMI	22	- 35	12	5	0	0	0	1.7	8	13.0	31	1	11	14	6	4.9	
ORLANDO	58	- 29	37	4	2	0	0	0.2	31	12.5	20	12	12	10	9	4.8	
PENSACOLA	68	- 86	36	7		0	0	0.5	16	16.1	SW	12	7	11	13	6.1	68
TALLAHASSEE	53	- 78	25	5	3	0	0	0.7	24	10.3	20	12	9	13	9	5.2	
TAMPA	31	- 64	20	3	1	0	0	0.5	36	11.2	31	1	14	9	8	4.5	86
WEST PALM BEACH	38	- 50	24	5	2	0	0	1.6	9	13.4	31	1	12	9	10	4.9	
GEORGIA																	
ATHENS	110	- 19	40	5	3	T	0	2.0	25	11.2	25	22	14	9	9	4.6	
ATLANTA	115	- 21	69	6	3	T	0	1.7	27	15.2	SW	22	9	11	11	5.6	76
AUGUSTA	22	- 84	10	6	1	0	0	1.7	25	15.6	18	22	12	8	11	5.0	
COLUMBUS	111	- 41	84	7		0	0	0.9	27	10.7	14	12	9	7	15	5.8	
MACON	32	- 93	17	5	3	T	0	1.5	26	18.8	S	22	11	6	14	5.6	81
ROME	92	- 57	48	7		T	0										
SAVANNAH	23	- 78	10	6	1	T	0	1.6	23	14.3	NW	13	11	11	9	4.9	69
HAWAII																	
HILO	259	-114	55	23	1	0	0	0.3	7	11.6	SE	17	1	5	25	8.6	24
HONOLULU	63	- 10	22	11	0	0	0	3.3	4	14.3	NE	20	5	7	19	7.7	50
KAHULUI	176	120	125	18	1	0	0	4.2	4	19.2	N	14	5	5	21	7.5	40
LIHUE	184	68	112	12	0	0	0	4.6	4	11.6	NE	20	1	12	18	8.2	40
IDAHO																	
BOISE	18	- 15	6	6	0	20	25	0.6	13	13.4	NW	17	8	8	15	6.2	71
LEWISTON	16	- 14	6	6		T	T						6	5	20	7.4	
POCATELLO	33	7	11	10	0	150	102	3.0	21	17.0	W	25	7	7	17	6.6	74
ILLINOIS																	
CAIRO U	179	57	60	13		46	25			20.6	NE	11	13	3	15	5.7	61
CHICAGO O HARE	23	- 45	9	8	1	38	25	2.0	26	14.8	I	12	7	9	15	6.7	
CHICAGO MIDWAY	26	- 43	11	10	3	64	25	1.7	24	17.0	S	27	6	8	17	7.0	64
MOLINE	50	- 11	18	6	2	28	25	2.1	25	16.1	SW	14	7	7	17	6.2	69
PEORIA	24	- 49	16	7	2	28	25	1.5	24	16.5	SE	14	8	8	15	6.5	64
ROCKFORD	25	- 37	14	5	1	15	T	1.1	27	13.9	18	14	9	7	15	6.2	
SPRINGFIELD	32	- 41	14	8	1	114	76	1.8	24	16.1	NE	12	7	9	15	6.4	60
INDIANA																	
EVANSVILLE	119	10	41	12	4	170	127	1.3	25	15.2	NE	11	10	9	12	5.9	60
FORT WAYNE	51	- 20	13	12	1	241	127	2.0	26	16.5	E	12	8	6	17	6.7	50
INDIANAPOLIS	95	8	33	12	2	224	127	1.3	26	17.0	NE	12	8	7	16	6.7	53
SOUTH BEND	31	- 38	9	13	1	221	203	1.7	26	10.7	22	27	8	4	19	6.8	
IOWA																	
BURLINGTON	33	- 36		4	2	T		1.6	27	12.5	29	5	9	8	14	6.0	
DES MOINES	24	- 29	19	5	5	T	T	1.4	29	17.0	N	31+	9	13	9	5.3	70
DUBUQUE	32	- 38	20	6		T	T						7	10	14	6.5	

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	No. of days: Max. 32.2 °C or above	No. of days: Min. 0 C or lower	Average dew point	Average relative humidity	Precipitation: Total	Departure from normal	Greatest in 24 hours	No. of days: .25 mm. or more	No. of days: With thunderstorms	Snow, Sleet: Total	Snow, Sleet: Maximum depth on ground	Wind: Resultant speed	Resultant direction	Fastest mile (1.6 kilometers): Speed	Direction	Date	No. of days (sunrise to sunset): Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	M.	Mb.	Mb.	C.	C.	C.	C.	C.		C.				C.	%	Mm.	Mm.	Mm.			Mm.	Mm.	M.p.s.		M.p.s.							%
IOWA																																
SIOUX CITY	334	976.6	1017.2	15.6	- 2.2	6.6	5.9	32.8	30	-12.8	3	1	20	- 5.0	48	6	- 31	4	3	3	T	T	1.1	30	19.2	SW	18	12	11	8	4.8	79
WATERLOO	265	984.8	1017.0	11.1	- 2.8	4.1	4.1	26.7	30	-12.8	3	0	23	- 4.4	58	33	- 19	18	6	3	T	T	1.2	29	16.5	33	30	11	8	12	5.5	
KANSAS																																
CONCORDIA	448	963.8	1017.2	16.1	0.0	8.2	3.8	29.4	30	-12.2	23+	0	16	- 2.8	51	1	- 37	1	1	0	T	0	0.6	25	18.3	S	26	17	5	9	4.1	75
DODGE CITY	787	925.2	1016.6	17.2	1.1	8.9	3.5	31.7	30	-13.9	3	0	12	- 5.0	42	7	- 23	6	3	0	8	T	0.1	15	22.4	S	17	8	8	15	6.1	81
GOODLAND	1113	888.3	1016.2	15.6	- 2.8	6.3	3.8	29.4	30	-16.7	3	0	20	- 6.7	47	5	- 22	4	3	0	76	51	1.5	29	15.6	2	30	16	5	10	4.6	
TOPEKA	267	985.8	1018.3	15.6	0.6	8.0	2.6	28.3	30	-10.0	23	0	15	- 1.1	54	12	- 39	8	4	1	T	T	0.8	25	18.8	S	14	9	12	10	5.5	75
WICHITA	403	969.2	1017.7	16.1	1.7	8.9	1.9	27.8	29	-10.0	3	0	14	- 1.1	53	35	- 7	13	9	3	T	T	0.7	17	21.0	SW	17	5	15	11	6.1	69
KENTUCKY																																
COVINGTON	265	986.1	1018.3	13.3	1.1	7.3	2.6	26.1	29	- 9.4	3	0	13	0.0	62	108	11	30	11	3	330	229	1.6	25	13.4	31	29	6	7	18	6.8	
LEXINGTON	294	983.1	1019.0	13.9	1.7	7.8	1.6	25.6	29	- 8.3	3	0	15	0.6	64	172	51	50	13	5	218	203	1.9	22	9.8	6	12	9	5	17	6.5	
LOUISVILLE	145	1000.7	1018.7	13.9	1.7	7.6	1.3	26.7	29	- 6.7	13+	0	14	0.0	60	158	42	42	10	4	323	279	1.3	27	14.3	N	31	10	5	16	6.3	55
LOUISIANA																																
ALEXANDRIA	28	1016.3	1020.6	18.9	5.0	11.9	-2.8	26.1	20+	- 6.7	1	0	9			103	- 23	46	7	2	38	25	0.8	21	11.2	32	12	7	5	19	6.9	
BATON ROUGE	20	1018.0	1020.6	20.6	7.8	14.2	-1.8	28.3	20+	- 2.8	1	0	3	7.8	70	85	- 40	48	9	2	T	0	0.7	16	13.0	17	11	8	8	15	6.2	
LAKE CHARLES	3	1019.3	1020.3	20.0	9.4	14.6	-1.6	26.7	30	- 1.7	1	0	1	10.0	79	70	- 38	35	7	2	T	0	1.3	15	13.0	32	12	6	7	18	6.9	
NEW ORLEANS	1	1020.0	1020.9	19.4	7.2	13.3	-3.1	26.1	10	- 3.3	1	0	5	8.3	74	89	- 47	63	10	0	0	0	0.6	12	11.2	26	12	7	10	14	6.2	
SHREVEPORT	77	1010.2	1019.5	19.4	6.7	13.3	-0.4	27.8	10	- 5.0	1	0	6	7.2	71	48	- 57	20	11	4	38	25	1.4	19	9.8	29	20+	5	5	21	7.3	47
MAINE																																
CARIBOU	190	989.2		1.1	- 8.3	- 3.5	1.6	12.8	19	-27.2	7	0	24			102	41	28	18		668	406						2	7	22	8.1	
PORTLAND	14	1011.5	1013.9	5.0	- 3.9	0.7	1.0	13.9	31	-15.6	15	0	23	- 5.0	70	106	- 5	45	11	0	302	152	0.7	31	15.2	W	30+	5	8	18	7.2	46
MARYLAND																																
BALTIMORE	45	1010.5	1016.1	14.4	1.7	8.1	1.9	27.2	29	- 7.2	14+	0	14	- 0.6	59	112	15	50	9	0	135	76	2.1	29	20.1	W	24+	7	13	11	6.0	66
MASSACHUSETTS																																
BLUE HILL OBS R	192			7.2	- 1.7	2.8	1.2	21.7	29	-14.4	4+	0	16			278	163	168	14		259	152			26.8	SSW	23					46
BOSTON	5	1013.2	1014.2	7.8	0.0	3.9	0.8	17.8	31	-11.7	3	0	15	- 3.3	65	200	92	105	13	0	173	102	2.1	31	17.0	W	24+	5	7	19	7.4	51
NANTUCKET	13	1013.5	1014.0	7.8	- 1.1	3.5	1.2	15.6	31	-11.1	4+	0	16	- 0.6	80	110	- 5	74	11	0	20	T	1.6	28	17.9	SW	24+	4	9	18	7.3	57
PITTSFIELD	357			7.8	- 3.9	1.8	2.6	21.7	31+	-16.7	7	0	23			98	16	27	16		437	254										
WORCESTER	301	976.3	1014.2	6.7	- 2.8	2.0	1.6	22.2	29	-15.6	4+	0	20	- 5.0	66	195	90	99	11	1	234	203	2.1	29	16.1	29	24	4	9	18	7.4	
MICHIGAN																																
ALPENA	210	990.2	1016.3	6.7	- 6.7	0.0	3.5	17.8	28	-18.9	7	0	29	- 6.7	62	22	- 29	8	7	0	142	203	1.2	27	13.9	NW	29	7	11	13	6.3	57
DETROIT	189			9.4	- 0.6	4.6	3.0	24.4	28	-10.6	13+	0	18	- 2.2	64	34	- 27	14	8	0	203		2.0	29	13.4	34	31					
DETROIT M WAYNE CO	193	991.9	1016.6	9.4	- 2.2	3.4	2.1	22.8	28	-12.2	3	0	21	- 3.3	64	52	- 9	17	11	0	254	203	1.6	28	14.3	NW	31	7	8	16	6.6	57
DETROIT WILLOW RUN	217	988.2	1017.1	8.9	- 3.3	2.7	0.8	23.3	28	-13.3	3	0	23	- 4.4	62	59	- 2	21	13	1	330	229	2.0	28	13.0	36	12	7	10	14	6.4	
FLINT	235	988.2	1016.5	8.3	- 3.3	2.4	2.1	20.0	28+	-15.0	1	0	22	- 5.0	60	41	- 13	15	13	1	290	178	1.8	25	11.2	35	2	8	7	16	6.5	
GRAND RAPIDS	239	987.1	1016.8	8.9	- 2.2	3.3	2.9	21.7	27	-11.7	1	0	19	- 3.3	64	27	- 30	9	10	1	107	76	1.6	26	13.4	SW	29+	7	8	16	6.6	59
HOUGHTON LAKE	350	973.6	1016.7	6.7	- 6.1	0.2	3.2	19.4	27	-21.1	1	0	28	- 5.6	68	22	- 21	7	10	0	124	152	1.3	27	9.4	21	28	7	8	16	6.6	
LANSING	256	984.4	1016.9	8.9	- 3.9	2.6	2.4	21.1	28+	-13.9	13	0	21	- 4.4	61	38	- 23	16	11	0	340	178	1.7	26	13.9	NW	23	9	6	16	6.3	56
MARQUETTE U	206			5.6	- 3.3	0.9	3.8	18.9	28	-13.3	12	0	22			19	- 29	3	16		104	584			14.3	SE	14	6	10	15	7.0	54
MUSKEGON	191	993.2	1016.7	8.9	- 1.1	3.8	3.3	20.6	27	-13.3	1	0	18	- 3.9	61	21	- 31	6	6	2	79	102	1.5	25	13.0	35	31	8	7	16	6.8	
SAULT STE MARIE	220	988.5	1016.1	2.2	- 8.3	- 2.9	1.6	11.7	28	-18.3	14	0	28	- 6.1	78	29	- 17	11	10	3	58	635	0.8	33	16.5	NW	31	5	7	19	7.2	60
MINNESOTA																																
DULUTH	435	963.1	1015.8	6.1	- 6.1	0.0	5.9	18.3	28	-19.4	12	0	25	- 7.8	60	48	7	17	10	2	104	152	1.2	30	17.0	SW	28	8	7	16	6.4	54
INTERNATIONAL FALLS	359	971.6	1016.1	4.4	- 8.9	- 2.3	4.7	15.6	24	-29.4	12	0	27	- 7.2	71	42	16	12	13	0	241	305	0.7	30	10.7	16	18	9	6	16	6.4	
MINNEAPOLIS	254	985.1	1016.3	10.0	- 2.2	3.8	6.3	28.3	30	-12.8	12	0	21	- 5.6	55	48	9	27	6	2	20	25	1.4	28	17.9	SW	17	9	9	13	5.9	69
ROCHESTER	395	967.8	1016.7	10.0	- 4.4	2.7	4.9	24.4	30	-15.0	13	0	23	- 5.6	59	13	- 29	6	6	3	10	T	2.4	26	17.4	18	17	12	7	12	5.5	
ST CLOUD	315	977.0	1015.7	8.9	- 4.4	2.2	5.8	26.1	30	-16.1	12	0	23		60	30	- 3	18	3		T	102						9	9	13	5.9	
MISSISSIPPI																																
JACKSON	94	1008.8	1020.7	20.0	4.4	12.2	-1.4	28.3	20	- 7.8	1	0	11	5.6	70	72	- 74	38	6	1	135	127	1.1	19	18.8	S	20	8	7	16	6.5	62
MERIDIAN	88	1009.8	1021.1	21.1	3.9	12.6	-1.1	30.0	20	- 5.6	24+	0	10	5.0	67	73	- 88	54	5	2	38	51	0.8	21	9.4	18	20+	8	5	18	6.5	
MISSOURI																																
COLUMBIA	237	989.5	1018.1	14.4	2.2	8.1	2.6	26.7	30	- 9.4	3	0	15	0.0	60	19	- 48	12	6	1	41	25	1.0	25	15.2	NE	12+	9	9	13	6.0	61
KANSAS CITY	226	990.9	1018.2	15.6	2.8	8.9	2.7	27.8	30	- 8.9	3	0	13	- 0.6	56	19	- 45	11	5	0	T	T	1.0	22	17.0	SE	13	8	14	9	5.5	70

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Date	Temperature: Lowest	Date	No. of days: Max. 32.2 °C or above	No. of days: Min. 0 C or lower	Average dew point	Average relative humidity
II	M.	Mb.	Mb.	C.	C.	C.	C.	C.		C.				C.	%
MISSOURI															
ST JOSEPH	247			16.7	0.6	8.4	3.8	30.0	30	-12.2	3	0	17	- 1.1	57
ST LOUIS	163	998.3	1019.0	14.4	1.1	7.8	1.9	28.3	29	-11.1	13	0	15	0.6	63
SPRINGFIELD	386	972.9	1018.9	14.4	1.1	7.7	1.1	27.2	30+	-14.4	13	0	14	0.0	63
MONTANA															
BILLINGS	1087	890.3	1015.4	12.2	0.6	6.4	5.4	23.3	29	- 6.1	21	0	14	- 5.6	46
GLASGOW	696	933.0		10.0	- 3.3	3.4	6.3	21.1	23	-12.8	11	0	25		
GREAT FALLS	1116	886.9	1016.1	10.6	- 1.1	4.7	5.4	20.6	23	- 8.9	11	0	19	- 6.1	50
HAVRE	787	922.1	1015.7	11.1	- 3.3	3.9	6.8	18.9	23+	-10.0	11	0	23	- 4.4	62
HELENA	1167	880.1	1017.1	11.7	- 2.8	4.2	4.6	20.0	29	- 8.3	11	0	25	- 4.4	58
KALISPELL	904	910.9	1017.1	10.6	- 2.2	3.9	4.1	17.2	5	- 6.7	31+	0	27	- 2.2	70
MILES CITY	801	921.8	1016.3	11.7	- 2.8	4.5	5.1	21.7	29	-10.6	11	0	23	- 3.3	61
MISSOULA	972	904.5	1017.9	12.2	- 1.1	5.4	4.4	19.4	23	- 5.0	31+	0	25	- 2.8	63
NEBRASKA															
GRAND ISLAND	561	950.2	1017.3	15.6	- 1.7	6.9	4.8	30.6	30	-12.8	3	0	19	- 3.9	51
LINCOLN U	351			15.0	0.6	7.8	4.4	30.6	30	-11.7	3	0	13		
NORFOLK	471			13.9	- 2.2	5.7	4.9	30.6	30	-13.3	3	0	20		
NORTH PLATTE	846	917.7	1017.1	14.4	- 5.6	4.4	2.7	30.0	30	-16.1	3	0	26	- 6.7	50
OMAHA	298	981.4	1017.3	15.6	- 1.1	7.0	4.3	31.7	30	-13.3	3	0	21	- 3.3	51
SCOTTSBLUFF	1206	879.1	1016.9	12.8	- 2.8	5.0	3.2	25.0	30	-11.7	3	0	25	- 5.0	54
VALENTINE	789			12.8	- 5.0	3.9	4.3	27.2	30	-13.9	22+	0	27		
NEVADA															
ELKO	1539	844.6	1016.9	13.3	- 2.2	5.7	3.7	23.3	29	- 7.2	20	0	26	- 3.9	56
ELY	1906	808.3	1017.1	10.6	- 5.6	2.6	1.8	21.1	29	-11.1	18	0	31	- 6.1	61
LAS VEGAS	659	938.7	1015.5	21.7	6.7	14.2	1.5	30.0	20	1.7	21+	0	0	- 5.0	30
RENO	1342	866.2	1017.3	15.6	- 3.9	5.8	0.5	24.4	29	-10.0	20	0	29	- 5.6	48
WINNEMUCCA	1310	868.3	1017.5	14.4	- 4.4	5.1	1.7	23.9	29	-10.6	21+	0	28	- 5.6	52
NEW HAMPSHIRE															
CONCORD	104	1001.4	1014.2	7.2	- 4.4	1.6	1.7	20.0	31	-16.7	7	0	21	- 5.6	62
MT WASHINGTON OBS	1909			- 5.0	-13.3	- 9.0	2.3	3.9	31+	-28.3	3	0	31		
NEW JERSEY															
ATLANTIC CITY	20	1013.5	1015.9	12.2	0.0	6.1	1.1	27.2	29	- 8.9	3	0	14	0.6	72
ATLANTIC CITY U	3			11.1	3.3	7.1	2.1	22.2	29	- 6.1	3	0	9		
NEWARK	2	1014.2	1015.2	10.6	1.7	6.2	1.4	26.1	29	- 7.8	3	0	12	- 1.7	63
TRENTON U	17			11.7	2.2	7.2	2.3	25.6	29	- 8.3	3	0	11		
NEW MEXICO															
ALBUQUERQUE	1619	838.1	1016.1	15.6	1.1	8.2	0.5	24.4	29	- 4.4	22	0	16	- 5.0	46
CLAYTON	1515			13.9	- 1.7	6.1	1.2	25.0	30+	-12.8	12	0	20		
RATON	1944			12.2	- 5.6	3.2	-0.2	22.8	30+	-17.2	12	0	31		
ROSWELL	1102	892.0		17.8	0.0	8.7	-1.0	28.3	29	- 8.3	12	0	17	0.6	64
SILVER CITY	1638			15.0	1.1	7.9	-1.2	25.0	29	- 6.1	12	0	13		
NEW YORK															
ALBANY	84	1004.1	1015.0	8.9	- 3.3	2.8	2.3	25.0	31	-14.4	3	0	20	- 5.0	59
BINGHAMTON	485	955.0	1015.1	6.1	- 3.3	1.4	1.8	22.2	31+	-16.1	3	0	18	- 3.3	74
BUFFALO	215	989.8	1016.0	6.1	- 2.2	2.1	2.3	23.9	31	-13.9	3	0	19	- 2.2	75
J.F. KENNEDY	4	1014.2	1015.1	8.3	1.1	4.6	0.8	17.8	30	- 8.9	3	0	13	- 2.2	65
NEW YORK U	40	1011.2	1014.6	10.6	2.2	6.3	1.6	24.4	29	- 9.4	3	0	13	- 2.2	61
NEW YORK LA GUARDIA	3	1013.2	1015.1	10.0	1.7	5.7	0.8	20.6	29	- 8.3	3	0	13	- 2.2	61
ROCHESTER	167	995.6	1016.3	7.2	- 2.8	2.2	2.1	25.6	31	-14.4	3	0	18	- 3.3	67
SYRACUSE	125	1000.3	1015.6	6.1	- 4.4	0.7	0.3	25.0	31	-14.4	3	0	20	- 3.9	73
NORTH CAROLINA															
ASHEVILLE	652	941.8	1018.8	16.1	0.0	8.1	1.1	27.2	20	- 8.9	2	0	17	- 0.6	61
CAPE HATTERAS R	2	1018.0	1018.5	16.1	6.1	11.2	0.7	25.0	31	- 5.0	8	0	4	5.0	69
CHARLOTTE	224	990.5	1018.4	18.9	2.8	10.9	0.9	27.8	21+	- 6.7	5	0	12	0.6	55
GREENSBORO	273	986.1	1017.9	19.4	4.4	11.9	3.3	31.7	21	- 5.6	14	0	11	1.1	54
RALEIGH	132	1001.7	1017.7	19.4	3.3	11.4	1.7	31.7	21	- 6.7	14	0	14	0.0	53

State and Station	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	No. of days: 25 mm. or more	No. of days: With thunderstorms	Snow, Sleet: Total	Snow, Sleet: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Fastest mile (1.6 kilometers): Speed	Fastest mile: Direction	Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
II	Mm.	Mm.	Mm.			Mm.	Mm.	M.p.s.		M.p.s.							%
MISSOURI																	
ST JOSEPH	21	- 39	9	4	1	0		0.7	24	14.3	34	31+	12	12	7	4.6	
ST LOUIS	52	- 26	18	11	4	196	178	1.1	25	20.1	NE	12	7	11	13	6.3	58
SPRINGFIELD	103	31	36	10	3	348	279	0.8	20	15.2	NE	11	11	6	14	5.9	60
MONTANA																	
BILLINGS	17	- 10	12	6	0	173	76	1.9	27	15.2	W	27	3	12	16	7.5	70
GLASGOW	3	- 12	1	3		T	T						3	10	18	7.5	
GREAT FALLS	23	- 1	19	4	0	193	203	3.0	23	17.0	SW	29	2	9	20	7.9	72
HAVRE	20	4	9	4	0	117	51	1.8	24	17.9	SW	27	5	4	22	7.6	71
HELENA	13	- 4	11	5	0	20	T	2.2	26	15.6	W	27	3	11	17	7.4	68
KALISPELL	11	- 13	5	9	0	18	T	1.3	18	9.8	21	29	3	7	21	7.7	
MILES CITY	7	- 9		6	0	15		1.5	31								
MISSOULA	15	- 3	9	11	0	38	25	1.3	30	14.8	NW	25	2	8	21	7.9	59
NEBRASKA																	
GRAND ISLAND	10	- 22	6	3	1	8	T	1.3	29	17.0	36	30+	16	5	10	4.3	
LINCOLN U	3	- 41	1	4		T	T			23.2	S	26	15	5	11	4.6	80
NORFOLK	18	- 22	7	4		T	T						13	8	10	5.1	
NORTH PLATTE	3	- 22	2	2	0	20	25	1.2	34	17.0	NW	18	14	9	8	4.4	81
OMAHA	14	- 22	11	7	3	T	T	1.0	30	19.2	S	17	13	9	9	5.0	80
SCOTTSBLUFF	16	- 6	13	5	0	170	51	1.7	32	15.6	29	26	8	9	14	5.8	
VALENTINE	6	- 20	5	3		15	T			17.0	N	30+	13	9	9	4.8	73
NEVADA																	
ELKO	28	7	16	8	1	264	102	0.9	24	13.0	28	25+	6	11	14	6.5	
ELY	17	- 5	7	5	1	241	102	1.6	20	16.5	S	16	10	8	13	5.9	69
LAS VEGAS	6	- 3	6	2	0	0	0	1.5	25	17.4	SW	16	17	5	9	3.9	90
RENO	21	4	17	5	0	89	25	0.9	24	35.8	SW	12	6	10	15	6.4	83
WINNEMUCCA	8	- 13	6	6	0	15	T	1.0	23	14.8	NW	25	7	8	16	6.5	52
NEW HAMPSHIRE																	
CONCORD	97	14	49	11	0	188	152	1.3	30	16.1	NW	1	4	8	19	7.3	50
MT WASHINGTON OBS	191	45	47	14	0	884	127			47.8Y	NW	2+	3	4	24	8.5	27
NEW JERSEY																	
ATLANTIC CITY	127	27	58	7	0	46	102	2.1	27	17.0	30	1	6	10	15	6.5	54
ATLANTIC CITY U	103	1	51	7						23.2	WNW	1					
NEWARK	91	- 13	39	10	1	43	25	1.9	31	17.4	30	1	6	10	15	7.1	
TRENTON U	113	15	57	9		30	25			21.9	NW	1	5	8	18	6.8	60
NEW MEXICO																	
ALBUQUERQUE	38	25	20	7	0	36	25	0.6	14	18.8	E	11	8	7	16	6.4	66
CLAYTON	17	1	16	3		178	152						13	4	14	5.6	
RATON	19	6	14	3		203	127						11	7	13	5.8	
ROSWELL	49	36	29	6	0	251	25	0.1	36	13.4	NW	24+	8	6	17	6.6	60
SILVER CITY	21	9	8	8		30	25						7	10	14	6.5	
NEW YORK																	
ALBANY	67	- 3	21	10	1	142	102	2.1	28	17.0	NW	24	4	5	22	7.7	46
BINGHAMTON	83	9	20	16	1	178	102	2.2	29	17.9	W	24+	4	6	21	7.7	39
BUFFALO	68	- 14	24	15	2	269	178	2.5	26	17.0	SW	23	6	6	19	7.2	48
J.F. KENNEDY	124	19	49	10	0	107	76	1.6	31	17.9	32	1	5	12	14	7.0	
NEW YORK U	122	20	47	10	1	155	76	1.3	33	17.0	NW	1					52
NEW YORK LA GUARDIA	121	14	52	12	1	56	76	1.8	32	17.9	NW	1	5	6	20	7.3	
ROCHESTER	60	- 16	21	12	1	386	203	2.2	27	16.1	W	29	4	11	16	7.3	53
SYRACUSE	80	- 12	25	13	0	272	127	2.1	27	19.2	W	24	5	4	22	7.4	56
NORTH CAROLINA																	
ASHEVILLE	169	46	130	9	4	T	127	1.2	33	17.9	34	1	11	6	14	5.4	75
CAPE HATTERAS R	49	- 57	28	7	2	T	T	2.4	27	16.1	W	1	11	11	9	5.1	90
CHARLOTTE	126	14	71	8	2	T	T	1.7	25	13.0	S	12	12	13	6	4.5	84
GREENSBORO	101	7	57	8	2	T	51	1.7	25	14.8	S	22	10	10	11	5.2	72
RALEIGH	56	- 29	21	8	2	T	25	2.2	25	12.5	32	18+	11	10	10	4.9	75

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure: Station O	Pressure: Sea level	Temperature: Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	No. of days: Max 32.2 °C or above	No. of days: Min 0 °C or lower	Average dew point	Average relative humidity	Precipitation: Total	Departure from normal	Greatest in 24 hours	No of days: .25 mm or more	No of days: With thunderstorms	Snow Sleet: Total	Snow Sleet: Maximum depth on ground	Wind: Resultant speed	Resultant direction	Fastest mile (1.6 kilometers): Speed	Direction	Date	No. of days (sunrise to sunset): Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	M.	Mb.	Mb.	C.	C.	C.	C.	C.		C.				C.	%	Mm.	Mm.	Mm.			Mm.	Mm.	M.p.s		M.p.s.							%
NORTH CAROLINA																																
WILMINGTON	9	1018.0	1019.2	19.4	5.6	12.5	0.2	30.0	21	- 3.3	4	0	8	3.3	59	25	- 78	18	5	1	T	0	1.8	25	15.2	W	23	14	9	8	4.5	86
NORTH DAKOTA																																
BISMARCK	502	955.6	1017.0	7.2	- 6.7	0.4	3.7	17.8	28+	-20.0	22	0	30	- 7.2	61	24	4	17	7	0	188	127	1.4	32	20.1	W	28	7	11	13	6.4	72
FARGO	273	982.7	1016.3	7.8	- 5.6	1.2	5.4	22.8	17	-18.3	11	0	24	- 3.9	72	33	14	23	7	1	51	51	1.7	33	21.0	NW	30	6	12	13	6.4	68
WILLISTON	579	946.5	1016.5	9.4	- 5.6	2.1	6.3	21.1	23	-16.7	11	0	30	- 5.0	66	3	- 15	2	3	0	8	T	1.4	32	21.0	N	30	8	8	15	6.3	79
OHIO																																
AKRON	368	971.6	1017.1	10.0	- 1.1	4.5	1.8	23.9	31	-12.2	14	0	18	- 2.2	66	69	- 15	12	13	2	104	51	1.7	27	10.7	36	12	3	13	15	6.9	
CINCINNATI OBS	232			13.3	1.1	7.2	1.2	26.7	29	-10.6	3	0	15			108	9	32	10		290	229			10.7	W	23					66
CLEVELAND	237	987.5	1017.4	8.3	- 1.7	3.1	1.4	23.3	29	-12.8	14	0	23	- 2.2	72	53	- 27	12	14	1	196	76	1.8	26	17.0	NE	12	3	10	18	7.4	60
COLUMBUS	247	987.5	1018.1	12.8	0.0	6.3	2.4	25.0	29	-11.7	3	0	18	- 2.2	57	76	- 4	24	10	3	155	51	1.5	25	15.2	W	4	6	10	15	6.6	50
DAYTON	305	981.0	1017.9	11.7	- 0.6	5.5	1.7	23.9	29	-12.8	3	0	16	- 2.8	59	56	- 23	21	11	1	351	254	1.7	25	14.8	W	4	8	7	16	6.5	56
MANSFIELD	395			9.4	- 1.1	4.3	2.5	22.2	29	-13.9	3	0	17	- 1.7	68	61	- 35	15	15	1	206	127	2.3	25	10.7	25	23	9	7	15	6.4	
TOLEDO	204	991.9	1017.7	10.0	- 2.8	3.7	1.9	23.9	28	-12.2	14+	0	22	- 3.3	62	57	0	18	12	0	284	178	1.7	27	13.9	N	12	7	7	17	6.5	60
YOUNGSTOWN	359	973.2	1016.9	7.8	- 2.2	2.7	0.9	22.2	31	-12.8	14	0	22	- 2.2	74	82	- 3	23	13	2	124	51	2.0	27	12.5	34	31	7	7	17	7.2	
OKLAHOMA																																
OKLAHOMA CITY	392	971.2	1018.1	16.7	4.4	10.4	1.2	27.2	29	- 8.9	4	0	12	3.9	70	72	22	17	9	3	353	152	1.3	17	17.9	N	12	5	7	19	7.2	50
TULSA	198	993.9	1018.7	16.7	3.3	9.9	0.9	29.4	29	- 8.3	4	0	12	1.7	62	89	27	32	11	3	300	254	1.0	17	15.6	N	12	7	8	16	6.4	62
OREGON																																
ASTORIA	2	1015.9	1016.7	12.2	4.4	8.2	1.2	20.0	20	- 2.2	9	0	4	4.4	81	265	38	54	24	0	0	0	1.7	18	16.1	17	15	0	6	25	8.8	
BURNS U	1265	873.0	1017.6	12.8	- 3.3	4.6	1.6	20.6	29	- 7.8	20	0	30	- 5.0	55	3	- 21	2	3		10	T	1.4	27				7	9	15	6.4	
EUGENE	109	1004.1	1017.8	15.0	3.9	9.5	1.7	20.0	28	- 1.7	9	0	5	5.6	80	99	- 10	36	11	1	0	0	1.7	20	12.1	18	25	2	6	23	8.3	
MEACHAM	1234	876.1	1017.3	8.3	- 1.1	3.8	3.1	15.6	4+	- 6.7	30	0	22	- 2.8	67	40	- 61	22	9		188	76	0.4	21	8.0	24	25	5	4	22	8.0	
MEDFORD	396	970.2	1018.3	16.7	1.7	8.9	2.1	23.3	31	- 3.9	10+	0	11	2.2	69	23	- 22	8	5	0	0	0	0.3	26	14.3	13	12	8	6	17	6.6	
PENDLETON	452	963.1	1017.3	15.0	3.3	9.2	1.9	23.9	4	- 1.1	31+	0	5	0.6	59	12	- 19	9	3	0	T	0	1.4	24	15.6	28	25+	5	6	20	7.2	
PORTLAND	6	1016.3	1017.4	13.9	3.9	9.0	1.2	19.4	4	- 2.8	30	0	3	3.9	73	68	- 29	14	18	1	0	0	1.3	17	16.5	S	12	1	6	24	8.5	46
SALEM	60	1010.2	1017.4	13.9	3.3	8.5	1.1	18.9	4	- 4.4	30	0	8	4.4	78	84	- 35	16	19	0	0	0	1.4	19	10.3	18	25	4	3	24	8.2	
SEXTON SUMMIT R	1169	883.2	1017.3	8.9	0.0	4.6	0.9	15.6	31+	- 3.9	26+	0	17	- 1.1	73	51	- 37	24	10		130	76			16.1	18	24	6	7	18	6.9	
PACIFIC AREA																																
JOHNSTON	2	1013.5	1014.1	27.2	22.8	25.0	-0.1	28.3	31+	21.1	26+	0	0	21.1	81	314	255	97	20	1	0	0	7.9	7	15.2	E	23	4	10	17	7.3	43
KOROR R	29	1006.1	1009.8	30.6	23.9	27.4	0.3	31.7	31+	22.2	9	0	0	23.9	84	218	24	69	24	2	0	0	3.3	6	12.5	E	11	0	10	21	8.4	84
KWAJALEIN	2	1009.1	1009.8	30.0	23.9	26.9	-0.1	30.6	31+	22.2	2+	0	0	23.9	83	261	97	96	24	0	0	0	7.2	6	13.9	6	6	0	9	22	8.3	
MAJURO	3	1009.5	1009.8	29.4	24.4	26.8	-0.2	30.6	22+	22.2	20	0	0	23.9	83	282	- 15	69	26	4	0	0	5.5	8	13.0	NE	19	0	13	18	7.8	59
MARCUS ISLAND	6			25.0	18.9	22.1	-0.6	27.8	18	16.1	6	0	0			62	21	34	8		0	0			15.6	N	20					46
PAGO PAGO	4	1009.5	1009.8	30.0	22.8	26.5		31.1	18+	20.6	19	0	0	23.3	86	297		113	22	0	0	0	0.9	8	12.5	NE	16	0	6	25	8.9	55
PONAPE R	37	1003.7	1009.1	30.0	23.9	26.8	-0.2	31.1	16+	21.1	15	0	0	23.3	82	622	252	103	27	4	0	0	4.0	8	9.4	NE	28	0	1	30	9.2	32
TAGUAC GUAM R	110			28.9	22.2	25.5	-0.5	30.0	4	18.3	18	0	0			94	27	25	23		0	0			10.7	E	29	1	17	13	7.5	57
TRUK MOEN ISLAND	2	1008.8	1009.1	29.4	24.4	27.1	0.0	30.6	28+	21.7	5	0	0	23.3	81	353	156	81	23	4	0	0	4.9	6	11.2	NE	6	0	2	29	9.3	66
WAKE	3	1016.3	1016.5	28.3	22.2	25.1	-0.3	29.4	5	20.0	2+	0	0	18.9	72	19	- 19	7	10	0	0	0	9.5	7	13.4	NE	27+	9	15	7	5.4	69
YAP R	13	1007.8	1009.6	30.0	24.4	27.3	0.1	31.1	3	22.2	1	0	0	23.3	90	94	- 42	17	19	0	0	0	4.2	8	8.5	NE	11	1	8	22	8.2	67
PENNSYLVANIA																																
ALLENTOWN	118	1001.0	1015.4	11.1	- 1.7	4.8	1.7	26.1	29	-11.7	3	0	20	- 2.8	63	80	- 16	33	9	0	T	T	2.1	29	15.6	32	1	6	7	18	6.9	
ERIE	223	989.5	1016.9	7.2	- 2.2	2.4	1.6	23.9	31	-15.0	2	0	21	- 3.3	69	43	- 30	13	14	1	231	152	1.7	24	13.0	6	12	3	9	19	7.5	
HARRISBURG	103	1003.1	1015.9	12.2	0.6	6.5	1.9	27.8	29	- 9.4	3	0	15	- 1.1	62	86	- 1	24	11	1	89	76	1.8	29	17.9	NW	24	7	7	17	6.9	54
PHILADELPHIA	2	1014.6	1015.6	12.2	1.7	6.9	1.9	25.6	29	- 8.9	3	0	11	- 1.1	61	126	30	61	9	1	56	T	1.5	30	17.9	NW	1	5	8	18	6.8	55
PITTSBURGH	347	972.2	1017.2	10.6	- 1.7	4.7	2.0	24.4	31	-11.1	14+	0	19	- 3.9	57	115	31	41	16	2	279	102	2.7	27	13.0	33	31	6	9	16	7.0	47
READING U	81			12.8	2.2	7.6	2.4	27.2	29	- 9.4	3	0	13			80	- 16	34	11		28	25			25.5	NW	1	8	11	12	5.9	53
SCRANTON	283	981.0	1015.8	10.0	- 0.6	4.7	2.3	25.6	29	-12.8	3	0	16	- 1.7	67	69	- 2	27	15	1	69	25	1.5	28	15.2	W	24	5	6	20	7.3	49
WILLIAMSPORT	160	996.6	1016.0	11.1	- 1.1	5.0	2.0	26.1	29	-11.1	3	0	16	- 1.1	68	79	- 16	23	12	1	81	51	1.7	28	14.3	31	13	6	8	17	7.0	
RHODE ISLAND																																
BLOCK ISLAND	34			6.7	0.0	3.1	0.5	14.4	31	-12.2	3	0	16			170	67	92	11		112	25						6	11	14	6.8	
PROVIDENCE	16	1012.2	1014.5	7.8	- 0.6	3.4	0.6	17.8	29	-12.8	3	0	17	- 3.9	65	199	94	115	11	1	130	102	1.8	30	16.5	23	24	5	10	16	7.1	52
SOUTH CAROLINA																																
CHARLESTON	12	1018.0	1019.7	21.1	5.0	13.2	-0.6	30.6	30+	- 3.3	4	0	9	3.3	56	34	- 66	25	7	1	0	0	1.7	24	18.3Y	S	12	13	10	8	4.4	69
CHARLESTON U	3			18.9	8.9	13.9	-0.2	28.3	30	- 1.1	1	0	1			15	- 77	7	6		0	0			13.9	NW	1					
COLUMBIA	65	1011.2	1019.5	21.7	3.9	12.7	0.2	30.6	20	- 5.0	14	0	10	2.2	57	49	- 59	17	9	3	0	0	1.7	26	11.2	31	13	14	9	8	4.4	81

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	No. of days: Max. 32.2 °C or above	No. of days: Min. 0 °C or lower	Average dew point	Average relative humidity
	M.	Mb.	Mb.	C.	C.	C.	C.	C.		C.				C.	%
SOUTH CAROLINA															
GNVLE-SPARTANBURG	292	984.1	1019.0	20.0	3.9	11.8	1.1	29.4	30	- 6.1	1	0	12	0.0	50
SOUTH DAKOTA															
ABERDEEN	395	968.5	1016.4	10.0	- 5.6	2.4	4.5	23.3	17	-16.1	3	0	26	- 5.0	64
HURON	391	969.2	1016.6	12.2	- 5.0	3.7	5.5	25.0	30+	-17.2	12	0	25	- 7.2	50
RAPID CITY	964	903.8	1016.3	12.8	- 3.3	4.7	5.2	23.9	6	-13.9	22	0	22	- 6.1	51
SIOUX FALLS	432	964.1	1016.6	12.8	- 4.4	4.3	5.4	30.6	30	-15.6	12	0	23	- 4.4	58
TENNESSEE															
BRISTOL	459	964.4	1019.4	15.6	0.6	8.3	0.5	26.7	21	- 7.8	14+	0	17	0.0	61
CHATTANOOGA	203	994.6	1019.7	17.2	2.2	9.9	-0.8	26.7	30	- 7.8	5	0	13	2.8	64
KNOXVILLE	299	983.4	1018.9	17.2	2.8	9.9	0.2	27.2	30	- 6.7	4	0	12	1.7	62
MEMPHIS	79	1009.5	1019.9	16.1	5.0	10.5	-0.1	27.8	30+	- 6.7	24	0	9	2.8	61
NASHVILLE	180	997.3	1019.5	16.1	1.7	8.8	-0.7	26.7	29	-10.0	4	0	14	1.1	64
OAK RIDGE R	276			16.7	2.2	9.4	0.8	26.7	30	- 7.2	4	0	12		
TEXAS															
ABILENE	537	956.0	1018.0	17.2	6.1	11.7	-1.1	23.9	30+	- 5.0	4	0	8	5.0	69
AMARILLO	1098	891.3	1015.2	16.7	2.2	9.3	0.6	28.9	29	- 5.6	23+	0	11	- 1.7	53
AUSTIN	182	997.3	1019.4	20.0	8.3	14.1	-1.3	27.8	30	- 2.8	1	0	3	7.8	70
BROWNSVILLE	6	1018.0	1018.5	22.8	12.8	17.8	-2.2	28.3	19	1.7	13	0	0	12.8	75
CORPUS CHRISTI	12	1017.6	1019.1	21.1	10.6	15.6	-2.8	27.8	20	1.7	22+	0	0	11.1	77
DALLAS	147	1001.4	1019.0	17.8	7.8	13.0	-0.4	26.1	31	- 2.8	4	0	6	6.1	67
DEL RIO	313	981.7	1018.2	20.6	8.3	14.4	-2.8	28.3	10	- 1.1	22	0	1	7.8	70
EL PASO	1194	882.2	1015.0	17.8	5.6	11.7	-1.1	27.8	30+	- 2.2	12	0	5	- 0.6	49
FORT WORTH	164	998.3	1019.1	17.8	7.2	12.6	-0.7	26.1	31	- 4.4	4	0	6	7.8	77
GALVESTON U	2			17.2	11.1	14.1	-2.2	22.2	14+	2.2	22	0	0		
HOUSTON	15	1018.0	1020.0	21.1	8.9	15.0	-1.3	27.8	30	- 1.7	1	0	1	9.4	75
LUBBOCK	992	904.2	1016.5	16.1	2.2	9.2	-0.6	27.2	29	- 6.1	12	0	11	2.2	68
MIDLAND	869	917.0	1016.1	18.3	5.6	11.9	-0.9	28.3	30	- 2.2	22+	0	8	3.3	63
PORT ARTHUR	5	1020.0	1020.5	20.0	8.9	14.6	-1.6	27.2	11	- 2.8	1	0	4	10.6	81
SAN ANGELO	580	950.2	1017.4	18.9	7.2	12.8	-1.1	26.1	25	- 3.3	22	0	4	6.7	70
SAN ANTONIO	240	990.9	1019.2	20.0	8.9	14.4	-1.7	27.8	30+	- 1.7	1	0	3	7.8	69
VICTORIA	32	1015.2	1019.4	21.1	10.0	15.6	-1.8	28.3	20	- 0.6	1	0	1	10.0	74
WACO	153	1000.7	1019.1	18.9	8.3	13.4	-1.0	26.1	31	- 1.1	23+	0	4	8.9	77
WICHITA FALLS	303	981.0	1018.1	18.3	5.6	12.1	-0.1	27.2	29	- 6.1	4	0	9	6.1	72
UTAH															
MILFORD	1533	846.3		13.9	- 3.3	5.3	1.7	23.3	30+	- 7.8	27+	0	26		
SALT LAKE CITY	1286	872.0	1017.1	13.9	0.0	7.1	2.4	23.9	29	- 6.1	11	0	16	- 2.2	56
WENDOVER	1291	871.3	1017.6	12.8	1.7	7.1	1.8	21.7	29	- 3.3	21	0	11	- 2.2	41
VERMONT															
BURLINGTON	101	1001.4	1014.3	4.4	- 7.2	- 1.3	1.6	19.4	31	-25.0	7	0	27	- 7.8	62
VIRGINIA															
LYNCHBURG	279			17.2	2.2	9.9	2.4	29.4	21	- 8.3	14	0	13		
NORFOLK	7	1016.3	1017.2	16.1	3.9	10.0	1.1	29.4	21	- 4.4	4	0	11	0.6	55
RICHMOND	50	1010.8	1017.1	18.9	3.3	11.1	2.4	32.2	21	- 6.7	4	1	10	1.1	56
ROANOKE	350	974.6	1016.9	17.8	3.9	10.7	3.2	30.0	21	- 7.8	14	0	12	- 2.8	43
WALLOPS ISLAND	3			11.7	2.8	7.2		25.6	28	- 5.0	14+	0	9		
WASHINGTON															
OLYMPIA	59	1009.5	1016.7	12.8	3.3	7.9	1.1	18.3	20	- 3.3	30+	0	8	3.9	79
QUILLAYUTE	55	1008.1	1015.5	11.1	3.9	7.6	1.5	20.0	20	- 2.2	8	0	4	5.0	87
SEATTLE TACOMA	122	1000.3	1016.7	13.3	5.6	9.2	2.7	20.6	20	0.0	30	0	1	3.9	74
SPOKANE	718	931.3	1016.1	11.1	0.0	5.6	2.2	17.8	22	- 4.4	30	0	16	- 1.1	66
STAMPEDE PASS R	1206	878.1		3.9	- 1.7	1.3	2.4	11.7	2	- 5.0	30	0	26		
WALLA WALLA U	289			15.6	5.0	10.2	2.4	20.0	12+	0.6	30+	0	0		
YAKIMA	321	978.0	1016.8	15.0	0.6	7.8	2.2	18.3	27+	- 3.3	30+	0	10	- 1.1	57
WEST INDIES															
SAN JUAN P.R.	4	1015.6	1018.1	27.8	21.7	24.6	0.5	31.7	1	18.9	6	0	0	18.9	73

State and Station	Precipitation: Total	Departure from normal	Greatest in 24 hours	No. of days: .25 mm. or more	No. of days: With thunderstorms	Snow, Sleet: Total	Snow, Sleet: Maximum depth on ground	Wind: Resultant speed	Resultant direction	Fastest mile (1.6 kilometers): Speed	Direction	Date	No. of days (sunrise to sunset): Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	Mm.	Mm.	Mm.			Mm.	Mm.	M.p.s.		M.p.s.							%
SOUTH CAROLINA																	
GNVLE-SPARTANBURG	93	- 27	55	7	4	0	0	1.8	26	13.9	N	3	13	8	10	4.8	70
SOUTH DAKOTA																	
ABERDEEN	70	42	66	6	1	81	76	1.2	31	15.6	34	31+	11	8	12	5.5	
HURON	4	- 24	2	5	1	64	25	1.5	29	17.9	NW	30	9	12	10	5.6	72
RAPID CITY	5	- 20	2	6	0	33	25	2.2	33	21.0	NW	30	8	8	15	6.4	67
SIOUX FALLS	15	- 24	11	4	3	T	T	1.7	28	17.9	23	18	13	7	11	5.1	
TENNESSEE																	
BRISTOL	126	25	39	11	3	25	152	1.6	27	14.3	24	22	6	11	14	6.2	
CHATTANOOGA	94	- 49	39	9	4	T	25	1.0	25	13.0	W	22+	9	9	13	6.0	59
KNOXVILLE	121	1	34	10	3	48	51	1.4	26	13.9	W	22	11	3	17	6.0	65
MEMPHIS	166	37	50	11	5	439	330	1.0	22	15.2	NW	20	9	5	17	6.2	62
NASHVILLE	114	- 18	46	8	3	216	178	1.7	23	13.0	S	15+	12	4	15	6.2	63
OAK RIDGE R	134	- 8	54	8		13	25			14.8Y		22	9	7	15	6.0	
TEXAS																	
ABILENE	54	27	26	8	3	64	51	1.8	20	16.5	NE	20+	5	4	22	7.6	60
AMARILLO	11	- 9	8	5	0	74	25	1.0	26	20.6	NNE	31	9	6	16	6.3	68
AUSTIN	53	- 1	29	8	3	T	0	1.1	19	14.3	NW	21	3	9	19	7.4	41
BROWNSVILLE	27	1	17	5	0	0	0	2.6	13	15.2	SE	18	9	5	17	6.3	51
CORPUS CHRISTI	23	- 14	13	5	0	0	0	2.5	13	20.1	NW	11	7	6	18	6.8	53
DALLAS	145	72	67	12	4	T	0	1.7	17	20.1	NE	11	3	9	19	7.5	51
DEL RIO	29	8	18	10	2	T	0	2.0	11	13.0	32	10	4	9	18	7.1	
EL PASO	22	13	12	9	0	20	25	1.1	22	15.6	SW	18+	8	5	18	6.9	65
FORT WORTH	162	99	66	13	5	T	0	1.4	19	18.3	3	11	4	7	20	7.7	
GALVESTON U	49	- 24	24	7		0	0			18.8	NW	11					47
HOUSTON	74	6	39	6	1	25	25	1.6	17	15.6	30	11	3	5	23	7.9	34
LUBBOCK	70	52	43	9	5	246	203	0.8	23	15.6	1	31	6	6	19	7.2	
MIDLAND	41	32	35	5	1	5	0	1.3	19	15.6	32	19	7	3	21	7.1	
PORT ARTHUR	64	- 24	26	7	1	36	T	1.7	14	17.9	NW	12	5	8	18	7.4	42
SAN ANGELO	48	24	23	8	4	8	T	1.6	20	15.6	31	20	5	7	19	7.2	
SAN ANTONIO	32	- 10	24	8	1	0	0	1.3	15	14.8	NW	11	5	9	17	7.4	43
VICTORIA	36	- 23	16	7	2	0	0	1.5	14	24.1Y	NW	11	4	8	19	7.4	
WACO	55	- 5	34	7	2	T	0	2.1	17	13.9	30	12	6	7	18	7.0	
WICHITA FALLS	66	26	34	6	4	97	102	1.4	16	20.1	36	11	6	5	20	7.2	
UTAH																	
MILFORD	27	1	11	7		229	76						12	9	10	4.9	
SALT LAKE CITY	56	17	15	9	0	213	102	1.2	18	17.9	N	25	12	6	13	5.7	81
WENDOVER	10	0	10	3		T	T										
VERMONT																	
BURLINGTON	82	28	35	10	1	368	254	0.7	27	14.3	N	1	3	7	21	7.8	53
VIRGINIA																	
LYNCHBURG	83	- 8	31	7		T	76			13.4	SW	23	11	12	8	5.0	71
NORFOLK	121	33	79	7	1	23	76	2.0	24	15.6	NW	1	9	10	12	5.6	74
RICHMOND	102	15	50	8	1	71	102	1.3	26	13.0	SW	31	8	10	13	5.8	68
ROANOKE	77	- 13	34	8	2	T	51	2.5	28	15.6	28	1	10	13	8	5.3	
WALLOPS ISLAND	108		34	8		43	76			26.4Y	NW	1	8	8	15	6.2	
WASHINGTON																	
OLYMPIA	166	29	42	20	0	0	0	1.7	21	13.0	18	26	2	5	24	8.5	
QUILLAYUTE	385	104	78	25	0	T	0	1.5	16	9.8	W	28+	2	3	26	8.9	27
SEATTLE TACOMA	129	33	25	17	0	0	0	1.6	19	12.5	20	12	3	3	25	8.5	42
SPOKANE	18	- 20	15	8	0	T	0	2.4	19	17.9	W	29+	5	6	20	7.5	58
STAMPEDE PASS R	175	- 94	53	22		1491	1626						4	1	26	8.6	
WALLA WALLA U	22	- 18	15	7		T	0			10.7	NW	5	4	5	22	7.6	51
YAKIMA	3	- 13	[illegible]	3	0	0	0	1.9	25	13.0	31	29	6	4	21	7.3	
WEST INDIES																	
SAN JUAN P.R.	45	- 10	13	8	0	0	0	2.9	5	14.3	E	28	9	16	6	5.2	83

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No. of days: Max 32.2 °C or above	Temperature: No. of days: Min. 0 C or lower	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No of days: 25 mm. or more	Precipitation: No of days: With thunderstorms	Precipitation: Snow, Sleet: Total	Precipitation: Snow, Sleet: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile (1.6 kilometers): Speed	Wind: Fastest mile (1.6 kilometers): Direction	Wind: Fastest mile (1.6 kilometers): Date	No. of days (sunrise to sunset): Clear, 0-3	No. of days (sunrise to sunset): Partly cloudy, 4-7	No. of days (sunrise to sunset): Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	M.	Mb.	Mb.	C.	C.	C.	C.	C.		C.				C.	%	Mm.	Mm.	Mm.			Mm.	Mm.	M.p.s.		M.p.s.							%
WEST INDIES																																
SWAN ISLAND	9			28.3	23.3	25.7	-0.9	30.0	29	21.1	24+	0	0			17	1	8	5		0	0						14	13	4	4.5	
WEST VIRGINIA																																
BECKLEY	763	928.2	1018.1	12.8	1.1	6.8	2.4	25.0	21+	-12.2	14	0	13	- 2.8	59	74	- 54	21	17	2	183	152	2.8	26	19.7	19	22	7	8	16	6.5	
CHARLESTON	286	983.4	1017.9	15.6	2.2	8.6	1.7	27.8	20	- 9.4	14+	0	13	- 0.6	59	122	11	56	13	1	51	76	2.2	24	12.5	24	23	7	10	14	6.5	
ELKINS	600	945.5	1017.7	13.3	- 2.2	5.4	1.3	26.1	22	-13.9	14	0	18	- 1.7	67	109	4	33	17	3	262	279	2.2	28	16.5	28	23	6	5	20	7.2	
HUNTINGTON	252	987.8	1018.5	14.4	1.1	7.7	0.6	25.6	20	-10.0	3	0	19	0.0	64	154	47	63	12	1	56	25	1.7	25	9.4	25	23+	6	9	16	6.7	
PARKERSBURG U	187			13.9	1.1	7.4	1.5	25.6	29	-10.0	3	0	14			137	48	36	12		15	T			14.8	SW	23					56
WISCONSIN																																
GREEN BAY	208	990.2	1016.3	10.0	- 2.8	3.3	5.4	22.2	27	-11.7	3	0	24	- 4.4	61	25	- 9	10	9	3	15	T	1.3	26	13.4	SW	27	5	11	15	6.4	52
LA CROSSE	198	991.9	1016.8	11.1	- 1.7	4.7	5.6	24.4	30+	-11.7	3	0	21	- 4.4	57	25	- 28	12	6	2	T	T	1.0	27	11.6	17	30+	13	6	12	5.6	
MADISON	262	984.4	1016.6	11.1	- 3.3	4.0	5.6	22.8	30+	-13.3	3	0	24	- 3.9	59	15	- 32	11	8	2	13	25	1.5	27	14.8	S	14	10	7	14	6.2	59
MILWAUKEE	205	990.9	1016.6	10.6	- 1.7	4.6	5.2	23.9	27	-10.0	3+	0	20	- 3.9	57	8	- 51	2	11	0	30	25	1.4	27	15.6	S	27+	8	5	18	6.6	66
WYOMING																																
CASPER	1627	836.1	1016.5	8.9	- 3.9	2.6	2.6	20.0	29	-13.9	21	0	25	- 6.1	59	23	- 3	9	8	0	338	102	4.2	23	16.1	21	13	6	11	14	6.6	
CHEYENNE	1867	810.7	1016.6	10.0	- 3.3	3.3	3.1	20.6	30+	-13.9	21	0	28	- 8.9	46	8	- 23	4	4	0	71	51	3.4	30	17.4	NW	30	8	11	12	5.6	72
LANDER	1696	827.6	1016.5	8.9	- 4.4	2.4	2.3	20.0	29	-13.3	12	0	29	- 6.1	59	42	13	20	4	0	673	229	1.3	24	21.0	SW	13	7	8	16	6.4	79
SHERIDAN	1208	877.8	1017.0	11.1	- 3.9	3.6	4.2	22.8	29	-13.9	21	0	29	- 8.0	58	23	- 13	7	10	0	356	152	1.2	31	16.1	NW	26	6	7	18	7.1	64

Data from airport unless otherwise specified. U indicates Urban, R indicates Rural, sites.

Precipitation data in column headed "Greatest in 24 hours" are computed on a 24-hour basis without regard to calendar day - data may include precipitation with a measurable amount from the last day of the previous month or the first day of the following month.

Wind directions under resultant direction are in tens of degrees.

Value entered in column "Fastest Mile" is the highest observed 1-minute wind speed when the direction is in tens of degrees. These stations are not equipped with a recording anemometer from which "Fastest Mile" data can be evaluated.

A Maximum hourly average.
B Number of days maximum 21.1°C. or above for Alaskan Stations.
Y Peak Gust.
\+ And also on an earlier date or dates.
Ø Station pressures apply to elevations shown in the "Elevations - Station Pressure" table of the annual issue of this publication.

Data in this table are obtained by conversion from data in the English Units table.

HEATING DEGREE DAYS

(Base 65°F.)

MARCH 1968

State and station	Current season: This month	Current season: Period July through this month	Normals July through this month
ALABAMA			
BIRMINGHAM	387	3037	2434
HUNTSVILLE	445	3510	2913
MOBILE	251	1768	1518
MONTGOMERY	308	2422	2201
ALASKA			
ANCHORAGE	1129	8292	8977
ANNETTE	708	5229	5610
BARROW	2388	16162	15828
BARTER ISLAND	2325	15957	15642
BETHEL	1603	10435	10815
COLD BAY	1067	7415	7547
FAIRBANKS	1613	11900	12434
JUNEAU	984	7352	7283
KING SALMON	1216	9395	9296
KOTZEBUE	2026	12840	12858
MC GRATH	1646	11806	12255
NOME	1769	11518	11354
ST. PAUL ISLAND	1271	8042	8439
SHEMYA	1008	7189	7269
YAKUTAT	1020	7751	7185
ARIZONA			
FLAGSTAFF	861	5655	5884
PHOENIX	167	1292	1690
TUCSON	200	1359	1719
WINSLOW	564	5018	4395
YUMA	41	828	1188
ARKANSAS			
FORT SMITH	420	3315	3126
LITTLE ROCK	440	3416	3084
TEXARKANA	326	2589	2428
CALIFORNIA			
BAKERSFIELD	181	1627	1998
BISHOP	514	3454	3742
BLUE CANYON	722	3953	4333
EUREKA U	441	3218	3548
FRESNO	278	2109	2286
LONG BEACH	130	896	1435
LOS ANGELES	135	873	1447
LOS ANGELES U	99	695	1140
MT SHASTA R	669	4461	4691
OAKLAND	278	1938	2345
RED BLUFF	250	2040	2300
SACRAMENTO	299	2193	2449
SANDBERG R	644	3483	3462
SAN DIEGO	135	826	1196
SAN FRANCISCO	317	2150	2396
SAN FRANCISCO U	254	1981	2303
SANTA MARIA	326	1848	2287
STOCKTON	331	2318	2456
COLORADO			
ALAMOSA	975	7725	7225
COLORADO SPRINGS	812	5375	5438
DENVER	751	5154	5371
GRAND JUNCTION	648	5489	5087
PUEBLO	683	5233	4844
CONNECTICUT			
BRIDGEPORT	762	4998	4872
HARTFORD	771	5576	5476
NEW HAVEN	774	5190	5064
DELAWARE			
WILMINGTON	626	4754	4425
DIST.OF COLUMBIA			
WASH NATL AP	471	4029	3862
FLORIDA			
APALACHICOLA U	249	1536	1275
DAYTONA BEACH	185	942	864
FORT MYERS	82	338	442
JACKSONVILLE	188	1300	1218
KEY WEST	17	33	108
LAKELAND U	140	706	661
MIAMI	57	239	214
ORLANDO	149	742	760
PENSACOLA	285	1833	1427
TALLAHASSEE	266	1688	1449
TAMPA	157	820	683
WEST PALM BEACH	77	344	253
GEORGIA			
ATHENS	378	3101	2766
ATLANTA	389	3215	2790
AUGUSTA	327	2693	2307
COLUMBUS	345	2560	2287
MACON	338	2764	2073
ROME	444	3468	3115
SAVANNAH	270	2113	1774
IDAHO			
BOISE	586	4718	5045
LEWISTON	539	4165	4787
POCATELLO	783	6023	6018
ILLINOIS			
CAIRO U	514	3926	3579
CHICAGO O HARE	682	5690	5773
CHICAGO MIDWAY	666	5418	5416
MOLINE	711	5887	5730
PEORIA	673	5659	5383
ROCKFORD	754	6094	6018
SPRINGFIELD	684	5394	4921
INDIANA			
EVANSVILLE	595	4596	4130
FORT WAYNE	806	6038	5506
INDIANAPOLIS	680	5171	5051
SOUTH BEND	779	5881	5615
IOWA			
BURLINGTON	685	5601	5478
DES MOINES	685	5729	6069
DUBUQUE	763	6363	6492
SIOUX CITY	654	5989	6215
WATERLOO	786	6666	6506
KANSAS			
CONCORDIA	567	4955	4940
DODGE CITY	526	4408	4499
GOODLAND	662	5004	5356
TOPEKA	572	4847	4716
WICHITA	525	4349	4257
KENTUCKY			
COVINGTON	609	4850	4702
LEXINGTON	581	4635	4253
LOUISVILLE	590	4441	4231
LOUISIANA			
ALEXANDRIA	365	2577	1852
BATON ROUGE	270	1956	1527
LAKE CHARLES	238	1727	1420
NEW ORLEANS	303	1749	1346
SHREVEPORT	308	2357	2103
MAINE			
CARIBOU	1211	8080	8258
PORTLAND	981	6508	6353
MARYLAND			
BALTIMORE	566	4537	4237
MASSACHUSETTS			
BLUE HILL OBS R	860	5775	5453
BOSTON	797	5256	4877
NANTUCKET	818	5013	4757
PITTSFIELD	917	6662	6487
WORCESTER	904	6222	5975
MICHIGAN			
ALPENA	1017	7229	7127
DETROIT	766	5472	5448
DETROIT M WAYNE CO	823	5963	5641
DETROIT WILLOW RUN	870	6062	5465
FLINT	881	6291	5933
GRAND RAPIDS	827	6168	6025
HOUGHTON LAKE	1005	7260	7076
LANSING	869	6384	5988
MARQUETTE U	963	7090	6977
MUSKEGON	801	5848	5714
SAULT STE MARIE	1179	8052	7560
MINNESOTA			
DULUTH	1017	8196	8472
INTERNATIONAL FALLS	1142	8968	9161
MINNEAPOLIS	808	7018	7392
ROCHESTER	868	7173	7271
ST CLOUD	892	7553	7782
MISSISSIPPI			
JACKSON	362	2750	2125
MERIDIAN	341	2629	2208
MISSOURI			
COLUMBIA	572	4662	4589
KANSAS CITY	528	4418	4308
ST JOSEPH	553	4810	4988
ST LOUIS	587	4694	4452
SPRINGFIELD	590	4300	4159
MONTANA			
BILLINGS	658	5520	6092
GLASGOW	826	7115	7863
GREAT FALLS	753	5780	6538
HAVRE	797	6685	7543
HELENA	780	6393	6902
KALISPELL	795	6228	6948
MILES CITY	767	6548	6769
MISSOULA	718	6080	6894
NEBRASKA			
GRAND ISLAND	634	5490	5812
LINCOLN U	587	5195	5261
NORFOLK	700	6070	6200
NORTH PLATTE	770	6077	5860
OMAHA	631	5492	5619
SCOTTSBLUFF	738	5800	5761
VALENTINE	798	6299	6474
NEVADA			
ELKO	700	5094	6211
ELY	870	6032	6380
LAS VEGAS	231	2112	2592
RENO	694	4684	5276
WINNEMUCCA	735	4949	5672
NEW HAMPSHIRE			
CONCORD	928	6647	6374
MT WASHINGTON OBS	1521	11236	11024
NEW JERSEY			
ATLANTIC CITY	674	5191	4244
ATLANTIC CITY U	618	4188	4060
NEWARK	676	4680	4520
TRENTON U	614	4602	4448
NEW MEXICO			
ALBUQUERQUE	559	3845	3979
CLAYTON	673	4568	4525
RATON	837	5498	5321
ROSWELL	529	3582	3561
SILVER CITY	574	3474	3357
NEW YORK			
ALBANY	857	6295	6027
BINGHAMTON	940	6607	6229
BUFFALO	901	6016	6010
J.F. KENNEDY	761	5003	4560
NEW YORK U	668	4708	4336
NEW YORK LA GUARDIA	698	4706	4267
ROCHESTER	894	6047	5824
SYRACUSE	979	6110	5893
NORTH CAROLINA			
ASHEVILLE	566	4343	4034
CAPE HATTERAS R	391	2762	2410
CHARLOTTE	413	3302	3013
GREENSBORO	374	3522	3524
RALEIGH	391	3417	3179
WILMINGTON	342	2608	2251
NORTH DAKOTA			
BISMARCK	990	7904	7760
FARGO	952	7851	8105
WILLISTON	900	7556	8064
OHIO			
AKRON	763	5600	5307
CINCINNATI OBS	619	4859	4343
CLEVELAND	845	5610	5346
COLUMBUS	667	5461	5036
DAYTON	708	5305	4996
MANSFIELD	778	5737	5555
TOLEDO	814	5964	5649
YOUNGSTOWN	865	6230	5569
OKLAHOMA			
OKLAHOMA CITY	444	3561	3502
TULSA	479	3674	3600
OREGON			
ASTORIA	557	3683	4112
BURNS U	762	5378	5844
EUGENE	486	3256	3886
MEACHAM	804	5699	6282
MEDFORD	515	3733	4256
PENDLETON	505	3900	4463
PORTLAND	515	3440	3889
SALEM	541	3438	3920
SEXTON SUMMIT R	762	4627	4901
PENNSYLVANIA			
ALLENTOWN	750	5647	5148
ERIE	881	5823	5518
HARRISBURG	654	5092	4719
PHILADELPHIA	633	4540	4584
PITTSBURGH	758	5605	5273
PITTSBURGH U	668	5125	4752
READING U	595	4717	4468
SCRANTON	754	5778	5528
WILLIAMSPORT	739	5460	5265
RHODE ISLAND			
BLOCK ISLAND	846	5101	4749
PROVIDENCE	827	5403	5133
SOUTH CAROLINA			
CHARLESTON	307	2459	1979
CHARLESTON U	264	1994	1752
COLUMBIA	327	2921	2403
GNVLE-SPARTANBURG	368	3203	2876
SOUTH DAKOTA			
ABERDEEN	883	7285	7482
HURON	812	6658	7248
RAPID CITY	755	5979	6278
SIOUX FALLS	776	6646	6918
TENNESSEE			
BRISTOL	553	4335	3814
CHATTANOOGA	465	3574	3079
KNOXVILLE	467	3775	3253
MEMPHIS	444	3302	3063
NASHVILLE	531	4004	3349
OAK RIDGE R	494	3863	3533
TEXAS			
ABILENE	366	2735	2510
AMARILLO	504	3765	367[illegible]
AUSTIN	265	2030	1660
BROWNSVILLE	126	793	600
CORPUS CHRISTI	202	1316	914
DALLAS	315	2380	2267
DEL RIO	246	1802	1486
EL PASO	377	2663	2595
FORT WORTH	330	2482	2306
GALVESTON U	233	1354	1205
HOUSTON	229	1466	1360
LUBBOCK	507	3557	3346
MIDLAND	360	2712	2501
PORT ARTHUR	244	1653	1408
SAN ANGELO	304	2369	2189
SAN ANTONIO	254	1858	1507
VICTORIA	208	1465	1152
WACO	288	[illegible]	1964
WICHITA FALLS	357	2890	2706
UTAH			
MILFORD	720	5280	5612
SALT LAKE CITY	622	4965	5276
WENDOVER	624	4926	5142
VERMONT			
BURLINGTON	1089	[illegible]	7112
VIRGINIA			
LYNCHBURG	468	4286	3821
NORFOLK	471	3751	3168
RICHMOND	416	3910	3593
ROANOKE	423	4106	3824
WALLOPS ISLAND	619	4390	
WASHINGTON			
OLYMPIA	575	3953	4302
QUILLAYUTE	596	4062	4532
SEATTLE TACOMA	[illegible]	3324	4217
SPOKANE	[illegible]	5251	5701
STAMPEDE PASS R	942	6565	7291
WALLA WALLA U	447	3600	4241
YAKIMA	583	4570	5217
WEST VIRGINIA			
BECKLEY	634	5363	4769
CHARLESTON	539	4675	4071
ELKINS	711	5648	4985
HUNTINGTON	590	4747	4041
PARKERSBURG U	604	4827	4294
WISCONSIN			
GREEN BAY	832	7001	6941
LA CROSSE	754	6364	6735
MADISON	792	6659	6833
MILWAUKEE	758	6091	6486
WYOMING			
CASPER	868	6335	6243
CHEYENNE	833	5821	6123
LANDER	881	6896	6682
SHERIDAN	813	6534	6525

Data from airport unless otherwise specified.
U indicates Urban, R indicates Rural, sites.

STATE	TORNADOES					HAILSTORMS				WINDSTORMS				LIGHTNING				‡ HEAVY SNOWSTORMS AND BLIZZARDS				# ICE STORMS				Ø ALL OTHER			
	NUMBER	DAYS	DEATHS	INJURIES	†DAMAGE	DEATHS	INJURIES	†DAMAGE PROP-ERTY	†DAMAGE CROPS	DEATHS	INJURIES	†DAMAGE PROP-ERTY	†DAMAGE CROPS	DEATHS	INJURIES	†DAMAGE PROP-ERTY	†DAMAGE CROPS	DEATHS	INJURIES	†DAMAGE PROP-ERTY	†DAMAGE CROPS	DEATHS	INJURIES	†DAMAGE PROP-ERTY	†DAMAGE CROPS	DEATHS	INJURIES	†DAMAGE PROP-ERTY	†DAMAGE CROPS
Alabama										0	0	5	0													0	0	0	5
Alaska *																													
Arizona *																													
Arkansas										0	1	4	0					0	4	3	0								
California										0	0	3	0	0	0	3	0									1	0	5	0
Colorado *																													
Connecticut										0	2	4	0					0	0	4	0					0	0	5	0
Delaware										0	0	4	0					0	0	4	0								
Florida	4	2	0	0	4																								
Georgia	6	3	0	0	5	0	0	3	0	1	2	5	0	0	1	3	0												
Hawaii																										0	0	°4	C
Idaho *																													
Illinois *																													
Indiana *																													
Iowa	2	1	0	0	3	0	0	4	0	0	0	4	0													0	0	5	0
Kansas						0	0	4	0	0	0	4	0	0	0	3	0	0	0	4	0								
Kentucky																				?									
Louisiana	4	1	0	0	4	0	0	°5	C	0	0	°5	C					0	2	0	0					0	0	0	6
Maine										0	0	4	0					0	0	4	0					0	0	4	0
Maryland										0	0	5	0					0	0	5	0								
Massachusetts										0	0	4	0					0	0	5	0	0	0	2	0	0	0	8	0
Michigan	1	1	0	0	5													0	1	?	0					0	0	4	0
Minnesota	1	1	0	0	4					0	0	4	0									0	1	5	0				
Mississippi	1	1	0	0	4	0	0	5	4	0	0	4	0	0	0	5	0	0	0	?	?								
Missouri *																													
Montana *																													
Nebraska *																													
Nevada										1	8	6	4																
New Hampshire										0	0	4	0					0	0	4	0					0	0	6	0
New Jersey										2		4																	
New Mexico *																													
New York											2	4																	
North Carolina	2	1	0	0	5					0	3	5	0													0	0	4	0
North Dakota																						0	?	5	0				
Ohio														0	0	4		5	70	6						0	65	5	
Oklahoma						0	0	5	0									0	0	6	0								
Oregon *																													
Pacific Area *																													
Pennsylvania										0	5	5	0	0	0	4	0												
Puerto Rico *																													
Rhode Island																		0	0	4	0					0	0	7	0
South Carolina	3	2	0	0	4					0	0	4	0																
South Dakota																						0	0	?	0				
Tennessee						0	0	?	0	0	0	5	0	0	0	3	0	0	?	?	0					0	0	4	0
Texas	3	2	0	0	4	0	0	5	0	1	3	4	0	0	1	0	0									1	0	0	0
Utah *																													
Vermont										0	0	4	0					0	0	3	0								
U. S. Virgin Is.																										1	0	0	0
Virginia										0	1	4	0													0	0	2	0
Washington *																													
West Virginia *																													
Wisconsin	1	1	0	1	5									0	2	0	0												
Wyoming N																													

C Crop damage
° Includes crop damage
N No report received by printing deadline

* No occurrence of storms or unusual weather phenomena.
‡ Includes heavy sleet storm.
# Freezing drizzle and freezing rain, commonly known as glaze.
Ø For breakdown of "All Others", and for detailed listing of other storms, see the Environmental Data Service, ESSA, monthly publication STORM DATA.

† Storm damages are placed in categories varying from 1 to 9 as follows:
1 Less than $50
2 $50 to $500
3 $500 to $5,000
4 $5,000 to $50,000
5 $50,000 to $500,000
6 $500,000 to $5,000,000
7 $5,000,000 to $50,000,000
8 $50,000,000 to $500,000,000
9 $500,000,000 to $5,000,000,000

GENERAL SUMMARY OF RIVER AND FLOOD CONDITIONS

MARCH 1968

Elmer R. Nelson, Office of Hydrology

The most disastrous floods during the month occurred in southeastern New England. Severe flash flooding occurred along small streams and brooks in eastern New Hampshire and Rhode Island. This flooding was considered the worst since August 1955. The affected areas were declared Federal disaster areas. Preliminary estimates of flood damage were placed at near $125 million. (See the article "Floods in Southern New England" following this summary)

ST. LAWRENCE DRAINAGE

Lake Huron.--The Cass River at Vassar, Mich., exceeded flood stage by 0.02 foot on the 27th. This rise resulted from heavy runoff due to the melting of a snow cover 5 to 8 inches deep. Warm weather prevailed over the basin from the 24th to the 27th.

ATLANTIC SLOPE DRAINAGE

Other Floods.--Schoharie Creek at Burtonsville, N. Y., reached flood stage at 1:00 a.m. on the 19th and remained at this level for about 5 hours. At Middleburgh, N. Y., the creek was out of its banks for 7 hours, beginning at 10:00 p.m. on the 18th. The Mohawk River at Schenectady, N. Y., approached within 1 foot of flood stage on the 18th. Unusually warm temperatures, snowmelt and ice breakup caused these rises.

Minor flooding developed on the Millstone River at Blackwells Mills, N. J., and on Assunpink Creek at Trenton, N. J., from the heavy rain on the 12-13th. The Raritan River at Bound Brook, N. J., crested 0.5 foot below flood stage. Heavy rain (1-2 inches) on the 17-18th caused additional minor overflows on the Millstone River and Assunpink Creek. East Branch Delaware River at Fishs Eddy, N. Y., was out of its banks on the 17th and 18th. The rains of 1.1 to 1.6 inches plus snowmelt over the upper Delaware and Lackawaxen Basins caused moderate rises and a breakup of the ice. A slight overflow occurred at Fishs Eddy, N. Y., when the ice broke up. There was a general ice cover on the Delaware River above the Water Gap but it moved out with a minimum of trouble from gorging.

The Ramapo River at Mahwah and Pompton Lakes, N. J., the Passaic at Chatham, N. J., and the Rancocas Creek at Pemberton, N. J., reached near bankfull stages. Damage from the minor flooding was insignificant.

The lower Chemung and lower Susquehanna Rivers in New York were out of their banks on the 23d and 24th. Light to moderate rain on the 22d-23d and snowmelt caused the light overflows. The precipitation on the 24th which was a mixture of snow and rain had little effect on the rivers, except to keep them full. No damages resulted from the light flooding.

Heavy precipitation (1.5 to 2.5 inches) on the 11th and 12th caused minor flooding on the Neuse and lower Cape Fear Rivers. Precipitation in excess of 4 inches was reported at Kinston, N. C. The Cape Fear River rose rapidly to near bankfull stage in the upper portion to 6 feet above flood stage in the lower reaches. The Neuse River rose to around bankfull stage to 2 feet above flood stage. No damage was reported.

Heavy rain on the 10-13th (2 to 3.5 inches) and 16-17th (1 to 1.5 inches) caused the Rocky and Lumber Rivers in North Carolina and the Pee Dee River in South Carolina to overflow their banks. The Rocky River at Norwood, N. C., exceeded flood stage by 0.1 foot on the 13th. The Lumber River at Lumberton, N. C., was out of its banks from the 13th to the 28th, cresting on the 19th, 1.2 feet above flood stage. The Pee Dee River at Peedee, S. C., was in flood from the 15th to the 25th. The crest on the 21st was 1.5 feet above flood stage. Minor inconvenience was experienced from the overflows. Operations on the Pee Dee River were suspended from the 13th through the end of the month.

The flooding on the Broad River at Gaffney and Blair, S. C., was due to heavy rain (1-5 inches) on the 11th and 12th. Crests ranged from 0.9 foot above flood stage at Gaffney on the 13th to 5.9 feet above flood stage at Blair, S. C., on the 14th. The Saluda River at Pelzer and Gaffney crested just below flood stage on the 13th. Minor lowland flooding occurred on the Congaree River at Columbia, S. C., and on the Wateree at Camden, S. C. Little or no damage resulted from the flooding.

Minor flooding occurred on the Ocmulgee River at Macon, Ga., on the 13-16th. The crest on the 14th was 2.4 feet above flood stage.

EAST GULF OF MEXICO DRAINAGE

The Apalachicola River at Blountstown, Fla., was out of its banks from the 13th to the 23d. The lower Chattahoochee and upper Flint Rivers approached flood stage but did not exceed it. This flooding was due to intense rains on the 10-13th ranging from 3 to 6 inches. Moderate losses resulted from the flooding around Blountstown.

Minor flooding occurred on the Etowah River at Canton, Ga., on the 13th. This rise was due to rainfall amounts of about 3 inches in the local area. Damage from the overflow was negligible.

The flooding on the Tibbee River at Tibbee, Miss., and on the Noxubee River at Macon, Miss., on the 24-25th was due to heavy rains on the 21st and 22d. There was little damage from the overflows.

Heavy rains, averaging 1-1/2 inches over the headwaters of the Pearl, on the 11th, resulted in light overflow at Jackson, Miss., and Bogalusa, La., between the 15th and 19th. Very heavy rain mixed with snow followed on the 21st and 23d, causing the Pearl River to rise to near or slightly above flood stage at all gaging stations. The highest water recorded was at Jackson, Miss., where the river rose 7.5 feet above flood stage. The U. S. Corps of Engineers estimated the total loss at $182,000.

MISSISSIPPI SYSTEM

Upper Mississippi Basin.--Heavy rain over southeastern Missouri and southern Illinois on the 15th produced rapid rises on streams in the area. The Big River at Byrnesville, Mo., exceeded flood stage by 1.2 feet on the 17th. The Meramec River at Pacific, Mo., rose above flood stage on the 17th and continued in flood until the 19th. It crested 3.4 feet above flood stage on the 18th. The Big Muddy River rose out of its banks at Murphysboro, Ill., on the 21st and continued in flood into April. It crested 6.6 feet above flood stage on the 26th. The extent of actual flooding was limited to farmland immediately adjacent to the rivers. No flood damage was reported as no winter grains had been planted.

Missouri Basin.--The Yellowstone River in the Miles City, Mont., area exceeded flood stage by 2.5 feet on the 2d. This overflow was due to local ice jams.

Ohio Basin.--Ice conditions on the Allegheny River in the vicinity of West Hickory, Pa., and East Brady, Pa., fluctuated the river levels from one-half to three-quarters bankfull stages the first half of the month.

A warming trend beginning on the 15th deteriorated the heavy ice gorges, with the ice moving out on the 18th without any overflows.

Minor flooding occurred on the Little Kanawha River at Creston, W. Va., on the 13th. Upstream at Glenville, W. Va., the crest was 1.5 feet below flood stage. Moderate rises occurred on the Coal, Greenbrier, and Elk Rivers in West Virginia with crests 2 to 3 feet below flood stage. This flooding was due to moderate to heavy rains on the 11th and 12th. The precipitation in the Kanawha Basin averaged 1.5 to 1.75 inches with the heaviest amount of about 2.5 inches occurring in Huntington, W. Va., area. Minor flooding occurred on the Hocking River in Ohio on the 23d. This flooding was due to moderate to heavy rain on the 20th-22d. Flood damage, if any, was only minor.

Paint Creek at Bourneville, Ohio, exceeded flood stage by 0.4 foot on the 22d. Minor flooding occurred on the Scioto River at Piketon, Ohio, on the 22-24th. Upstream from Piketon, the crests ranged from three-quarters to near bankfull during the same period. This rise followed a 4-day rain, with considerable snowfall from the 19th through the 23d. The rainfall over the lower Scioto averaged 2.4 inches while there was 3 to 9 inches of snowfall, averaging 1.4 inches over the upper Scioto.

The flooding along the Green River in Kentucky during the last decade of the month was due to periodic moderate to heavy rain from the 10th through the 31st. Heavy amounts of wet snow fell on the 22d and 23d with total amounts up to 12 inches in depth. Rapid melting of snow on the ground during the next 2 days contributed to the flooding. The river had receded within its banks at all points, except at Calhoun, Ky., by the end of the month.

The flooding on the lower White River in Indiana on the 27-30th was due to runoff from melting snow. Snowfall was heavy during the month. Four inches of snow was reported on the 12th and 8 inches on the 22-23d. The Skillet Fork at Wayne City, Ill., exceeded flood stage by nearly 2.5 feet on the 21st. The little Wabash River at Wilcox, Ill., was out of its banks on the 17th-23d. It crested on the 22d, 3.2 feet above flood stage. The Saline River at Harrisburg, Ill., crested 8.3 feet above flood stage on the 22d.

Minor flooding occurred on the upper Cumberland River at Barbourville and Williamsburg, Ky., on the 13th. Reservoirs below Williamsburg, Ky., absorbed the increased flow without a major rise. This overflow was due to heavy rain (1.75 to 2.25 inches) on the 12th. No damage resulted from the light flooding.

Heavy rainfall (1 to 6 inches) on the 12th resulted in minor flooding along the main stem of the French Broad. The rain was the heaviest in the headwaters with several stations reporting amounts of 5 to 6 inches. The crest at Asheville, N. C., was slightly below flood stage. Other crests ranged from lightly over flood stage at Hot Springs, N. C., to nearly 2 feet above bankfull stage at Rosman, N. C. Flood damage, if any, was minor.

Heavy rain on the 11th and 12th in the Tennessee Basin in Tennessee resulted in minor flooding on South Chickamauga Creek, Elk and Duck Rivers. The crests ranged from slightly over bankfull stage on South Chickamauga Creek to nearly 4 feet above flood stage on the Elk River at Fayetteville, Tenn. No damage was reported. The main stem of the Tennessee River began overflowing at Gilbertsville, Ky., on the 23d and was still above flood stage at the end of the month. It crested on the 28th nearly 4 feet above flood stage.

The main stem of the Ohio River exceeded flood stage in the reach below the Wabash River at Shawneetown, Ill., and Fords Ferry, Ky., on the 19th. Flooding continued in this reach until April 15. In the reach above to Newburgh, Ind., flood stage was exceeded on the 24th and 25th and the river continued above bankfull stage up to April 2. The only other flooding reported along the Ohio River was at Tell City, Ind., Brookport, Ill., and Grand Chain, Ill., between the 26th and 31st. Crests ranged from 0.4 foot above flood stage at Grand Chain, Ill., to nearly 8 feet above flood stage at Fords Ferry, Ky.

White Basin.--The Black River at Black Rock, Ark., rose above flood stage on the 20th and continued in flood to April 14. There were three crests; the first occurred on the 22d and was 8.5 feet above flood stage. The other crests in April were 4.5 feet lower. Upstream at Pocahontas, Ark., the Black River was out of its banks from March 22 to April 1. The crest on March 26 was 2.4 feet above flood stage.

The Cache River at Patterson, Ark., exceeded flood stage on the 13th and continued in flood through April. The first crest occurred on March 29 and was 2.3 feet above flood stage. Other crests during April were slightly lower.

The White River exceeded flood stage from Calico Rock, Ark., to its mouth during the last 10 days of March. In the reach from Calico Rock, Ark., to Augusta, Ark., the river receded within its banks by the 26th. The flooding was not extreme in comparison to past years. The highest crest occurred at Batesville, Ark., where the White River rose 5.6 feet above flood stage on the 21st.

Arkansas Basin.--The Caney River at Ramona, Okla., exceeded flood stage by 0.9 foot on the 20th. It was above bankfull stage on the 19th and 20th. The greatest flood since September 1961 occurred on Bird Creek at Avant and Sperry, Okla., on the 19th-21st. Downstream at Owasso, Okla., the flooding was the highest since April 1964. The Illinois River at Watts, Okla., crested 1.2 feet above flood stage on the 21st. Downstream at Tahlequah, Okla., the highest water since 1966 was reported. The Fourche Maline River at Red Oak, Okla., crested 2.7 feet above flood stage on the 20th. It receded within its banks on the 21st. The Poteau River at Panama, Okla., overflowed twice during the month. The second crest on the 21st was nearly 10.5 feet higher than the first crest on the 13th. At Poteau, Okla., below Wister Reservoir, the highest stage observed was almost 4 feet above flood stage. This was the first time that flooding had been reported at Poteau since May 1961. Approximately 3 feet of overflow occurred on the Petit Jean River in Arkansas directly above and below Blue Mountain Dam between the 20th and 22d. The Fourche La Fave River at Houston, Ark., exceeded flood stage by nearly 4.5 feet on the 22d. It was in flood from the 21st to the 27th.

The Arkansas River was out of its banks in the reach from Van Buren, Ark., to Morrilton, Ark., (except at Ozark, Ark.) between the 20th and 22d. The crests ranged from 0.4 foot above flood stage at Morrilton, Ark., to 2.2 feet above flood stage at Dardanelle, Ark. The flooding was minor but very significant due to the major construction projects in progress along the main stem in Arkansas.

Red Basin.--Flooding in the Red Basin during March was confined to tributary streams in southeastern Oklahoma, southern Arkansas, and northeastern Texas. The Blue River at Blue, Okla., crested 4.5 feet above flood stage on the 21st. There were three rises on the Clear Boggy at Caney, Okla. The first overflow occurred

on the 13th and 14th, with a crest of nearly 2 feet above flood stage on the 13th. The second period of flooding occurred on the 20th-23d with a crest of 3.5 feet above flood stage on the 21st. A third rise was in progress at the end of the month. The Muddy Boggy River at Farris, Okla., rose 3.5 feet above flood stage on the 21st. The Kiamichi River at Belzoni, Okla., crested nearly 9 feet above flood stage on the 21st. It was out of its banks from the 13th to the 24th.

The Little River crested less than 1 foot above flood stage at Idabel and Horatio, Okla., on the 22d. The Sulphur River rose about 8 feet above flood stage at Hagansport and Naples, Tex., between the 9th and 30th. Minor damage resulted to some highways from the high water. Two young men were drowned in Mountain Fork River near Smithville, Okla. The Saline River at Benton, Ark., exceeded flood stage by 0.8 foot on the 21st. The Ouachita River at Camden, Ark., overflowed twice during the month. The crests averaged about 3.5 feet above flood stage on the 16th and 25th.

Lower Mississippi Basin.--The St. Francis River rose above flood stage at Fisk, Mo., and St. Francis, Ark., on the 21st. It continued in flood until April 13 at Fisk, Mo., and April 19 at St. Francis, Ark. The crests ranged from 3.5 to 4 feet above flood stage at Fisk, Mo., to about 2.5 feet above flood stage at St. Francis, Ark. There was no damage to property below Wappapello Reservoir during March.

WEST GULF OF MEXICO DRAINAGE

The Calcasieu River at Hineston, La., overflowed slightly on the 4th and 5th and again on the 25-27th. No damage was reported.

Lake Fork Creek at Quitman, Tex., was out of its banks on the 12-15th. It crested on the 13th, 2.6 feet above flood stage. The upper Sabine River in Texas from Edgewood to Gladewater rose above flood stage on the 11-16th. It continued above flood stage through March and receded within its banks at Gladewater, Tex., on April 17. The crests ranged from 2 to 6 feet above flood stage.

The lower Trinity exceeded flood stage at Moss Bluff, Tex., on the 7-10th, and crested 0.7 foot above bankfull stage on the 8th. Heavy rains on the 10-11th in the upper Trinity resulted in flooding in the reach from Dallas to Long Lake, Tex., beginning on the 11-14th and in the lower Trinity at Moss Bluff, Tex., on the 14th. Richland Creek near Richland, Tex., was out of its banks on the 11th through the 13th, reaching about 2 feet over its banks on the 12th. Chambers Creek, near Corsicana, Tex., exceeded flood stage by about 4 feet on the 12th. The upper Trinity receded within its banks at Dallas, Tex., on the 12th and at Long Lake, Tex., on the 23d. Rains of 2 to 3 inches over the West and East Forks of the Trinity on the 18-20th caused rapid flooding on the upper Trinity. The Elm Fork at Carrollton, Tex., exceeded flood stage by 1 foot on the 20th and receded within its banks on the same day. The upper Trinity at Dallas, Tex., was out of its banks on the 20th and 22d and again on the 27th and 28th. At Rosser, Tex., the Trinity exceeded flood stage by 5 feet on the 23d and was in flood from the 21st to the 26th. At Trinidad, Long Lake, and Moss Bluff, Tex., the flooding continued into April.

Heavy rains on the 6th and 7th and again on the 11th and 12th caused flooding on the San Jacinto, Little, and Navasota Rivers in Texas. The San Jacinto River topped the spillway at Lake Houston on the 12th and continued in flood at the end of the month. The Little River at Cameron, Tex., rose 2 feet above flood stage on the 12th and receded within its banks on the 13th. The Navasota River near Easterly, Tex., was out of its banks on the 13-16th and crested 2.4 feet above flood stage on the 14th.

PACIFIC SLOPE DRAINAGE

Sacramento Basin.--Several storms during February caused rises along the main stem of the Sacramento River in California with overflow at all of the fixed-sill weirs of the Sacramento Flood Control bypass system. This flooding continued to March 5 at Tisdale Weir, Calif. The crests occurred during the latter part of February and ranged from 1 to 4 feet above flood state. Agricultural land in the bypasses were flooded.

FLOOD STAGE DATA

(All dates in March unless otherwise specified) MARCH 1968

River and station	Flood stage	Above flood stages -dates		Crest *	
		From—	To—	Stage	Date
ST. LAWRENCE DRAINAGE	Ft.			Ft.	
Lake Huron					
Cass: Vassar, Mich.	14	27	27	14.0	27
ATLANTIC SLOPE DRAINAGE					
Pemigewasset: Plymouth, N. H.	11	21	23	14.3	22
Nashua: East Pepperell, Mass.	8	19	23	11.8	20
Charles: Charles River Village, Mass.	4	17	31	8.7	22
Blackstone: Northbridge, Mass.	9	18	19	10.9	19
Woonsocket, R. I.	9	18	21	14.6	19
Housatonic: Gaylordsville, Conn.	8	19	20	8.0	19-20
Connecticut: North Walpole, N. H.	28	24	24	29.9	24
Montague City, Mass.	28	24	25	31.8	24
Holyoke, Mass.	9	24	25	9.2	25
Hartford, Conn.	16	22	29	21.5	25
Bodkin Rock, Conn.	8	22	29	12.4	26
Schoharie Creek: Burtonsville, N. Y.	6	6	6	6.0	19
Middleburgh,N.Y.	12	18	19	12.35	19
Millstone: Black Wells Mills,N.J.	7	13	14	7.5	13
		18	19	7.7	19
East Branch Delaware: Fishs Eddy, N. Y.	11	17	18	11.8	17
Assunpink Creek: Trenton-Nottingham Way, N. J.	5	13	13	6.4	13
		18	18	5.15	18
Chemung: Chemung, N. Y.	12	23	24	13.5	24
Susquehanna: Bainbridge, N. Y.	13	24	24	13.4	24
Conklin, N. Y.	11	23	24	11.6	23
Vestal, N. Y.	18	23	23	18.2	24
Neuse: Neuse, N. C.	14	15	16	14.35	16
Smithfield, N. C.	13	15	19	14.95	17
Goldsboro, N. C.	14	21	22	14.3	22
Cape Fear: Wm. O. Huske Lock & Dam, N. C.	42	13	16	48.6	14
Lock No. 2, Elizabethtown, N. C.	20	14	17	25.5	15
Rocky: Norwood, N. C.	15	13	13	15.1	13
Lumber: Lumberton, N. C.	8	13	28	9.2	19
Pee Dee: Peedee, S. C.	19	15	25	20.5	21
Broad: Gaffney, S. C.	10	13	14	10.9	13
Blair, S. C.	14	12	15	19.9	14
Ocmulgee: Macon, Ga.	18	13	16	20.4	14
EAST GULF OF MEXICO DRAINAGE					
Apalachicola: Blountstown, Fla.	15	13	23	19.9	16
Etowah: Canton, Ga.	17	13	13	17.8	13
Tibee: Tibee, Miss.	23	24	25	23.6	24
Noxubee: Macon, Miss.	26	24	25	30.0	24
Pearl: Edinburg, Miss.	20	25	28	22.1	26
Jackson, Miss.	18	15	18	19.6	18
		24	1/	25.5	27
Bogalusa, La.	15	17	19	15.5	18
		22	1/	17.8	27
MISSISSIPPI SYSTEM					
Upper Mississippi Basin					
Big: Byrnsville, Mo.	16	17	17	17.2	17
Meramac: Pacific, Mo.	11	17	19	15.4	18
Big Muddy: Murphysboro, Ill.	16	21	1/	22.6	26
Ohio Basin					
Little Kanawha: Creston, W. Va.	20	13	13	21.9	13
Hocking: Enterprise, Ohio	12	23	24	12.7	23
Athens, Ohio	17	24	24	17.1	24
Paint Creek: Bourneville, Ohio	10	22	22	10.35	22
Scioto: Piketon, Ohio	16	22	24	20.8	23
Green: Munfordville, Ky.	28	24	24	28.6	24

River and station	Flood stage	Above flood stages -dates		Crest *	
		From—	To—	Stage	Date
MISSISSIPPI SYSTEM	Ft.			Ft.	
Green: Brownsville, Ky.	18	24	25	18.3	24
Lock 4, Woodbury, Ky.	33	24	28	34.6	26
Lock 2, Calhoun, Ky.	23	23	Apr. 19	26.7	30
				27.9	Apr. 11
White: Petersburg, Ind.	16	27	29	E16.15	18
Hazleton, Ind.	16	E28	E30	16+	
Skillet Fork: Wayne City, Ill.	15	20	22	17.45	21
Little Wabash: Wilcox, Ill.	16	17	23	19.2	22
Saline Harrisburg, Ill.	13	20	24	21.3	22
Cumberland: Barbourville, Ky.	27	13	13	29.4	13
Williamsburg, Ky.	21	13	13	22.5	13
French Broad: Rosman, N. C.	8	12	12	9.75	12
Blantyre, N. C.	17	12	14	18.4	13
Marshall, N. C.	10	12	12	11.0	12
Hot Springs, N. C.	13	12	12	13.1	12
South Chickamauga Creek: Chicamauga (nr), Tenn.	10	13	13	10.2	13
Elk: Fayetteville, Tenn.	659	11	13	662.9	12
Duck: Shelbyville, Tenn.	719	12	13	721.0	12
Shelbyville (nr), Tenn.	23	12	13	24.1	12
Tennessee: Gilbertsville, Ky.	320	23	1/	323.83	28
Ohio: Tell City, Ind.	38	26	28	39.0	28
Dam 47, Newburgh, Ind.	38	24	31	41.8	28
Dam 48, Cypress, Ind.	38	25	Apr. 1	41.2	29
Mt. Vernon, Ind.	35	25	Apr. 2	38.3	29
Dam 49, Uniontown, Ky.	37	25	Apr. 2	39.2	30
Shawneetown, Ill.	33	19	Apr. 15	39.1	30
Dam 50, Fords Ferry, Ky.	34	19	Apr. 15	41.6	Apr. 10
Dam 52, Brookport, Ill.	37	27	31	38.0	28
Dam 53, Grand Chain, Ill.	42	28	30	42.4	28
White Basin					
Black: Pocahontas, Ark.	17	22	Apr. 1	19.4	26
Black Rock, Ark.	14	20	Apr. 14	22.5	22
				18.8	Apr. 1
				18.7	Apr. 4
Cache: Patterson, Ark.	7	13	1/	#9.3	29
				9.0	Apr.10,11,12
White: Calico Rock, Ark.	19	21	21	21.15	21
Batesville, Ark.	23	20	22	28.6	21
Newport, Ark.	26	22	24	27.1	23
Augusta, Ark.	32	24	26	#32.2	25
Georgetown, Ark.	21	25	Apr. 13	#22.6	28
Des Arc, Ark.	24	28	Apr. 9	#24.8	30-31
Clarendon, Ark.	26	26	1/	28.3	Apr. 3, 4
St. Charles, Ark.	25	Apr. 1	1/	26.3	Apr. 10
Arkansas Basin					
Caney: Ramona, Okla.	27	19	20	27.9	20
Bird Creek: Avant, Okla.	16	19	19	24.3	19
Sperry, Okla.	21	19	21	27.0	20
Owasso, Okla.	24.5	20	22	28.8	21
Illinois: Watts, Okla.	13	E20	E21	14.2	21
Tahlequah, Okla.	11	20	22	14.5	22
Fourche Maline: Red Oak, Okla.	15	20	21	17.65	20
Poteau: Poteau, Okla.	24	20	22	27.9	20
Panama, Okla.	24	13	14	26.9	13
		20	23	34.4	21
Petit Jean: Booneville, Ark.	18	20	21	21.3	20
Danville, Ark.	20	21	22	22.9	21
Fourche La Fave: Houston, Ark.	25	21	27	29.4	22
Arkansas: Van Buren, Ark.	22	21	22	23.1	21

FLOOD STAGE DATA

(All dates in March unless otherwise specified)

River and station	Flood stage	Above flood stages -dates From—	To—	Crest * Stage	Date
MISSISSIPPI SYSTEM	Ft.			Ft.	
Arkansas: Dardanelle, Ark.	22	20	21	24.2	21
Morrilton, Ark.	30	21	21	30.35	21
Red Basin					
Blue: Blue, Okla.	21	20	22	25.5	21
Clear Boggy: Caney, Okla.	19	13 20 31	14 23 1/	20.8 22.55	13 21
Muddy Boggy: Farris, Okla.	36	21	22	39.5	21
Kiamichi: Bel Zoni, Okla.	28	13	24	36.7	21
Little: Idabel, Okla.	30	22	23	30.75	22
Horatio, Okla.	27	22	24	27.6	22
Sulphur: Hagansport, Tex.	38	9 19	16 25	45.9 45.6	12 21
Naples, Tex.	22	12	30	30.3	15
Saline: Benton, Ark.	20	21	21	#20.8	21
Ouachita: Camden, Ark.	26	14 23	18 27	#29.4 #29.7	16 25
Lower Mississippi Basin					
St. Francis: Fisk, Mo.	20	21	Apr. 13	23.8 23.5	24 Apr. 7
St. Francis, Ark.	18	21	Apr. 19	20.6 20.5 20.3	27 Apr. 4 Apr. 8-10
WEST GULF OF MEXICO DRAINAGE					
Calcasieu: Hineston, La.	12	4 25	5 27	12.4 12.9	4 26
Lake Fork Creek: Quitman, Tex.	16	12	15	18.6	13
Sabine: Edgewood, Tex.	12	11	Apr. 9	14.2 14.2	13 Apr. 4
WEST GULF OF MEXICO DRAINAGE	Ft.			Ft.	
Sabine: Mineola, Tex.	14	12	Apr. 12	17.5 17.2	14 Apr. 6
Gladewater, Tex.	26	16	Apr. 17	32.1 29.5	20 Apr. 13
Elm Fork: Carrollton, Tex.	6	20	20	7.0	20
Trinity: Dallas, Tex.	30	11 20 27	12 22 28	33.0 36.1 30.5	12 21 28
Rosser, Tex.	26	12 21 Apr. 2	15 26 Apr. 4	28.8 30.8 26.9	12 23 Apr. 2
Trinidad, Tex.	28	12 23	19 Apr. 11	25.6 36.1	15 26
Long Lake, Tex.	35	14 29	23 Apr. 18	39.8 40.9	19 Apr. 9
Liberty, Tex.	24	22	28	25.2	25
Moss Bluff, Tex.	4	7 14	10 1/	4.65 7.15	8 27-28
San Jacinto: Lake Houston, Tex.	44.5	12	1/	44.9	15
Little: Cameron, Tex.	30	12	13	32.1	12
Navasota: Easterly (nr), Tex.	14	13	16	16.4	14
PACIFIC SLOPE DRAINAGE					
Sacramento: Colusa Weir, Calif.	62	Feb. 20	3	66.0	Feb. 26
Tisdale Weir, Calif.	46	Feb. 18	5	48.6	Feb. 27
Fremont Weir, Calif.	34	Feb. 22	4	35.2 35.3	Feb. 25 Feb. 29

* Provisional
\# Highest stage observed
\+ No reading available below 20 feet
E Estimated
1/ Continued at end of month

FLOODS IN SOUTHERN NEW ENGLAND

MARCH 1968

Elmer R. Nelson, Office of Hydrology

Severe flash flooding occurred along most of the smaller rivers and streams in eastern Massachusetts and Rhode Island on March 17-22.

The major rivers in eastern Massachusetts and Rhode Island began overflowing their banks on March 18. Flash flooding of local drainages began causing extensive residential and commercial damage in Saugus, Peabody, South Quincy, and Bellingham, Mass. Severe industrial flooding occurred in South Quincy, Mass.

On March 19, practically every town in eastern Massachusetts, from about Worcester east, and most of Rhode Island reported moderate to severe flash flooding of small streams and brooks. Extensive damage to homes, small businesses, automobiles, roads, and manufacturing plants occurred. One of the hardest hit towns was Easton, Mass., which was inundated when a dam failed on Flyaway Pond on the Cowesett River.

Shortly before noon on the 20th, the affected areas of Massachusetts and Rhode Island were declared federal disaster areas. Massachusetts Civil Defense officials estimated that 20,000 homes had been severely damaged. This flooding was considered the worst since August 1955. Record to near record flooding occurred on many streams in southeastern New England. Comparative crest stage data for selected stations, furnished by the U. S. Geological Survey, are given in Table 1.

COMPARATIVE CREST STAGE DATA
FOR SELECTED STATIONS IN SOUTHEASTERN NEW ENGLAND

TABLE 1

River and station	Years of Record	March 1968		Previous Maximum Crests of Record	
		Crest	Date	Crest	Date
		Feet		Feet	
Assabet: Maynard, Mass.	27	7.80	19	8.94	8/20/55
Concord: Lowell, Mass.	32	9.15	22	8.97	8/23/55
Parker: Byfield, Mass.	23	5.41	20	5.49	1/27/58
Ipswich: South Middleton, Mass.	30	7.07	20	6.99	10/7/62
Ipswich, Mass.	38	8.41	21	7.70	3/15/36
Aberjona: Winchester, Mass.	29	13.74	19	13.64	8/19/55
Charles: Charles River Village, Mass.	31	8.72	22	9.24	8/23/55
Waltham, Mass.	37	5.38	22	4.79	3/19/36
Adamsville Brook: Adamsville, R. I.	28	7.67	18	7.14	9/20/60
Taunton: State Farm, Mass.	39	14.47	20	13.02	8/21/55
Wading: West Mansfield, Mass.	15	6.60	19	6.22	8/20/55
Norton, Mass.	43	11.45	19	10.98	8/20/55
Branch: Forestdale, R. I.	28	11.90	18	10.52	8/19/55
Woonasquatucket: Centerdale, R.I.	27	7.7	19	7.03	9/11/54
South Branch Pawtuxet: Washington, R. I.	28	5.09	18	4.11	9/12/54
Pawtuxet: Cranston, R. I.	29	11.53	18	9.95	5/27/67
Wood: Hope Valley, R. I.	27	8.26	18	7.45	9/12/54

____ Exceeded previous maximum stage of record

TABLE 2 MARCH 1968

River and station	Flood stage	Above flood stages -dates		Crest *	
		From—	To—	Stage	Date
	Ft.			*Ft.*	
Pemigewasset: Plymouth, N. H.	11	21	23	14.3	22
Nashua: East Pepperell, Mass.	8	19	23	11.8	20
Charles: Charles River Village, Mass.	4	17	31	8.7	22
Blackstone: Northbridge, Mass.	9	18	19	10.9	19
Woonsocket, R. I.	9	18	21	14.6	19
Housatonic: Gaylordsville, Conn.	8	19	20	8.0	19-20
Connecticut: North Walpole, N.H.	28	24	24	29.9	24
Montague City, Mass.	28	24	25	31.8	24
Holyoke, Mass.	9	24	25	9.2	25
Hartford, Conn.	16	22	29	21.5	25
Middletown (Bodkin Rock), Conn.	8	22	29	12.4	26

* Provisional

The flooding in southern New England was due to heavy rain on the 17-19th together with snowmelt and breaking up of river ice. The heavy rain began in the early afternoon of the 17th and continued until the early morning of the 19th. Storm totals ranged mostly from 5 to 7 inches, with some higher amounts within the triangular area formed by Boston, Cape Cod Canal, and central Rhode Island. Western Massachusetts and western Connecticut recorded around 1 inch, ranging to over 3-1/2 inches in eastern Connecticut. A list of rainfall totals for the area of heaviest rain is given in the following table:

STORM TOTALS FOR EASTERN MASSACHUSETTS AND RHODE ISLAND
March 17-19, 1968

Table 3

Station	Total Rainfall (Inches)
MASSACHUSETTS	
Ashburnham	3.74
Bedford	3.28
Blue Hill Observatory	7.72
Boston	5.10
Bridgewater	6.00
Buffumville Dam	4.25
Foxboro	5.67
Hingham	7.01
Lowell	2.97
Northbridge	4.49
Norwood	4.08
Southbridge	3.17
Worcester	4.91
RHODE ISLAND	
Clayville	5.08
Providence	4.96
Woonsocket	5.71

Ice-jam flooding occurred in the Connecticut Valley along Vermont and New Hampshire shorelines on March 22-29. A severe ice-jam flood occurred on the Israel River at Lancaster, N. H. At Lee, Mass., a dam failure on a tributary to the Housatonic River caused major damage downstream.

A preliminary estimate of flood damage in Massachusetts by Civil Defense authorities places the total near $100 million. In addition, a loss of $15 to $20 million was reported at Lee, Mass. Rhode Island Civil Defense authorities estimated the damage in Rhode Island at around $5 million. At least 100 homes were damaged in Lancaster, N. H., with damage to businesses estimated at $674,000. Unknown amounts of damage, although on a much lesser scale, occurred along the Connecticut River shorelines of Vermont, New Hampshire, Massachusetts, and Connecticut. Two fatalities occurred at Lee, Mass. A third fatality occurred earlier when a photographer fell off the bank of the Housatonic River in Massachusetts and drowned.

Flood bulletins issued by the Weather Bureau were timely and accurate. The first river statement issued at 7:30 p.m. on March 17 warned about flash flooding in eastern Connecticut and Rhode Island. This was followed by a flash-flood bulletin at 1:30 a.m. on the 18th, calling for flash flooding in eastern Connecticut, eastern Massachusetts, and Rhode Island. Further bulletins were issued as necessary until rivers and streams subsided.

RAWINSONDE DATA

Average monthly values

MARCH 1968

ALBANY, N. Y. — 1005 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	86	-.7	-6.1	28	1.4
1000	31	123			24	1.3
950	31	537	.4	-6.5	29	4.3
900	31	968	-.9	-7.7	29	6.8
850	31	1,424	-2.4	-10.6	30	8.5
800	31	1,904	-4.1	-13.1	29	8.9
750	31	2,413	-6.1	-14.1	29	10.3
700	31	2,949	-8.5	-16.5	28	11.5
650	31	3,520	-11.2	-18.8	29	12.8
600	31	4,133	-14.6	-21.7	28	13.3
550	31	4,785	-18.8	-25.9	28	15.2
500	31	5,491	-23.4	-32.2	28	16.6
450	31	6,255	-28.8	-37.3	29	18.4
400	31	7,087	-34.7	-42.5	29	19.1
350	31	8,006	-41.5	-47.1	29	20.0
300	31	9,037	-48.2		29	21.3
250	31	10,221	-54.0		29	23.0
200	31	11,643	-55.8		29	25.0
175	31	12,498	-53.7		28	22.0
150	31	13,489	-53.3		28	20.2
125	31	14,659	-54.7		28	16.9
100	31	16,082	-56.4		27	15.9
80	31	17,498	-56.3		28	14.1
70	31	18,345	-56.4		28	10.9
60	31	19,326	-56.0		28	8.8
50	31	20,485	-56.0		28	8.5
40	31	21,905	-55.8		29	7.5
30	31	23,736	-55.9		28	8.7
25	30	24,897	-55.0		28	9.5
20	30	26,326	-54.2		28	11.6
15	24	28,182	-52.1		27	17.1
10	7	30,997	-42.3			
7						
5						

ALBUQUERQUE, N. MEX. — 838 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1,619	2.7	-4.7	09	1.2
1000	31	162				
950	31	584				
900	31	1,033				
850	31	1,502				
800	31	1,995	3.7	-7.4	24	.5
750	31	2,514	.8	-9.9	30	2.7
700	31	3,068	-2.7	-13.6	29	4.5
650	31	3,649	-6.8	-17.1	28	6.6
600	31	4,273	-10.7	-22.1	27	6.9
550	31	4,931	-15.2	-26.7	27	8.7
500	31	5,650	-20.3	-31.2	27	10.5
450	31	6,415	-26.2	-37.3	26	12.1
400	31	7,263	-32.6	-42.6	26	12.8
350	31	8,192	-39.0	-46.9	26	15.7
300	31	9,232	-46.7		26	19.5
250	31	10,421	-54.1		26	25.5
200	31	11,841	-56.4		27	27.9
175	31	12,690	-55.9		27	26.0
150	31	13,668	-57.6		27	23.2
125	30	14,811	-59.9		27	21.2
100	30	16,198	-61.6		27	17.6
80	29	17,576	-61.8		27	11.8
70	28	18,403	-61.4		27	8.8
60	28	19,361	-60.2		27	6.3
50	27	20,505	-58.6		28	4.8
40	25	21,910	-57.4		30	2.7
30	24	23,738	-54.8		28	4.8
25	22	24,898	-53.6		28	5.9
20	22	26,338	-51.8		28	8.3
15	16	28,205	-48.2		28	15.3
10	12	30,923	-42.7		28	26.7

AMARILLO, TEXAS — 891 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1,095	3.5	-2.1	31	1.9
1000	31	148				
950	31	573				
900	31	1,020				
850	31	1,483	6.0	-4.3	29	4.9
800	31	1,978	4.2	-7.8	30	4.8
750	31	2,500	1.9	-11.8	29	4.6
700	31	3,055	-1.8	-14.7	28	5.5
650	31	3,637	-6.2	-17.6	28	6.2
600	31	4,262	-10.5	-22.0	27	7.1
550	31	4,923	-14.9	-27.0	27	8.4
500	31	5,642	-19.8	-31.8	26	10.4
450	31	6,415	-25.1	-36.2	26	13.1
400	31	7,263	-31.2	-41.5	26	16.6
350	31	8,196	-38.4	-46.4	26	20.1
300	31	9,239	-46.2		26	24.7
250	31	10,430	-53.9		26	29.4
200	31	11,849	-57.0		26	31.4
175	31	12,696	-56.5		26	28.9
150	31	13,673	-57.4		26	27.2
125	31	14,819	-59.9		26	24.3
100	31	16,205	-62.4		26	19.7
80	30	17,584	-62.1		27	13.2
70	28	18,411	-61.4		27	8.6
60	27	19,367	-60.6		27	6.1
50	26	20,505	-59.2		28	4.8
40	25	21,907	-57.8		29	4.0
30	24	23,732	-55.3		28	6.3
25	24	24,899	-53.9		28	7.8
20	23	26,345	-52.0		28	9.3
15	20	28,235	-48.1		27	16.6
10	13	30,975	-41.0		27	21.3

* ANCHORAGE, ALASKA — 1001 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	45	-3.6	-8.3	34	.9
1000	31	53			35	1.6
950	31	465	-2.6	-11.3	04	2.4
900	31	887	-4.3	-13.2	06	2.8
850	31	1,336	-7.0	-15.3	09	2.6
800	31	1,806	-10.0	-17.5	11	3.6
750	31	2,302	-13.1	-21.1	12	4.1
700	31	2,823	-16.4	-25.0	13	4.2
650	31	3,375	-20.0	-28.0	14	3.6
600	31	3,965	-24.2	-32.4	15	2.9
550	31	4,592	-28.6	-36.3	16	1.4
500	31	5,270	-33.2	-40.7	21	1.2
450	31	5,998	-38.4	-43.5	25	1.8
400	31	6,804	-44.2		26	2.6
350	31	7,688	-49.9		27	3.7
300	31	8,684	-54.7		27	4.1
250	31	9,846	-55.2		25	4.9
200	31	11,281	-52.1		25	5.6
175	31	12,146	-51.9		24	6.5
150	31	13,144	-52.0		24	7.4
125	31	14,324	-52.2		24	8.3
100	31	15,768	-52.2		25	9.6
80	31	17,209	-52.9		25	11.3
70	31	18,069	-53.0		25	12.1
60	31	19,063	-53.6		25	13.4
50	31	20,232	-54.6		26	14.8
40	31	21,656	-56.0		26	16.4
30	29	23,465	-58.2		27	18.3
25	29	24,609	-59.3		27	19.4
20	28	26,011	-60.5		27	21.3
15	25	27,605	-61.8		27	21.7
10	13	30,353	-61.8			

* ANNETTE, ALASKA — 1006 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	37	4.2	1.0	12	3.4
1000	31	81			12	4.3
950	31	496	1.3	-1.2	15	7.1
900	31	930	-1.8	-4.0	16	9.1
850	31	1,383	-4.7	-6.7	17	10.5
800	31	1,858	-7.6	-10.7	18	10.7
750	31	2,358	-10.5	-15.4	19	10.7
700	31	2,886	-13.9	-19.4	19	9.6
650	31	3,443	-17.8	-23.9	19	11.0
600	31	4,040	-21.5	-28.0	20	11.6
550	31	4,672	-25.8	-32.4	20	11.3
500	31	5,361	-30.5	-37.3	21	10.6
450	31	6,093	-36.0	-41.2	22	11.1
400	31	6,911	-42.1	-42.4	22	12.7
350	31	7,802	-48.3		23	14.0
300	30	8,800	-53.4		24	14.8
250	30	9,968	-54.5		24	12.8
200	30	11,404	-52.3		24	11.4
175	30	12,269	-51.6		24	11.2
150	30	13,269	-51.6		25	10.8
125	30	14,451	-52.2		25	9.9
100	30	15,891	-53.2		25	9.8
80	30	17,325	-53.7		25	9.5
70	30	18,181	-54.1		25	9.3
60	30	19,170	-54.3		26	9.7
50	30	20,336	-55.4		26	9.8
40	30	21,754	-56.7		26	8.5
30	29	23,573	-58.3		25	10.4
25	28	24,726	-59.2		26	11.4
20	27	26,114	-60.4		26	12.4
15	23	27,911	-60.8		27	15.8
10	21	30,431	-59.9		27	15.7
7	13	32,670	-57.6		27	17.6
5	7	34,808	-55.5			

ATHENS, GEORGIA — 991 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	246	5.2	.2	27	1.5
1000	31	167				
950	31	589	8.6	-.8	27	5.3
900	31	1,036	6.9	-3.4	27	6.6
850	31	1,504	4.9	-6.4	28	7.5
800	31	1,997	3.0	-10.3	28	8.1
750	31	2,516	.5	-13.7	27	8.6
700	31	3,070	-2.0	-16.3	27	11.2
650	31	3,651	-5.1	-18.4	27	13.2
600	31	4,281	-9.1	-23.2	27	15.1
550	31	4,941	-13.5	-27.4	27	16.7
500	31	5,669	-18.2	-31.2	27	19.8
450	31	6,438	-23.2	-35.4	27	22.3
400	31	7,301	-29.2	-40.3	27	25.9
350	31	8,243	-35.8	-46.0	27	30.9
300	31	9,298	-43.5		27	36.6
250	31	10,503	-51.6		28	43.3
200	30	11,922	-57.4		27	47.1
175	30	12,764	-57.8		27	44.0
150	30	13,734	-59.3		27	37.9
125	30	14,870	-61.6		27	30.5
100	30	16,242	-64.6		27	22.5
80	30	17,607	-63.9		27	15.7
70	30	18,427	-62.9		28	11.8
60	30	19,379	-61.3		28	8.2
50	30	20,517	-58.8		28	6.8
40	30	21,928	-56.3		29	6.5
30	30	23,764	-53.6		28	8.0
25	30	24,940	-51.9		27	9.6
20	28	26,401	-49.8		27	12.5
15	23	28,283	-46.5		27	18.2
10	16	31,011	-41.1		27	28.4
7	6	33,509	-39.6			
5						

* BARROW, ALASKA — 1016 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	8	-25.4	-27.7	09	2.6
1000	31	125	-22.3	-24.5	09	4.0
950	31	510	-16.2	-18.9	10	4.2
900	31	915	-13.6	-19.0	11	4.4
850	31	1,350	-13.5	-20.3	12	3.5
800	31	1,810	-14.5	-22.3	13	3.1
750	31	2,300	-16.4	-24.4	15	2.4
700	31	2,813	-19.2	-27.3	17	2.5
650	31	3,361	-22.4	-30.3	18	2.8
600	31	3,945	-26.2	-33.5	19	3.2
550	30	4,566	-30.4	-37.6	21	4.1
500	30	5,239	-35.0	-41.1	20	4.4
450	30	5,964	-40.1	-45.2	19	4.7
400	30	6,762	-45.6		18	4.5
350	30	7,640	-51.8		16	4.6
300	30	8,625	-57.1		18	4.7
250	30	9,770	-59.2		22	6.9
200	30	11,172	-57.7		23	7.7
175	30	12,016	-56.9		24	9.8
150	30	12,991	-57.1		24	10.8
125	30	14,142	-57.5		24	12.6
100	30	15,547	-58.2		24	14.7
80	30	16,950	-58.8		25	17.5
70	29	17,785	-59.5		25	18.9
60	28	18,759	-60.1		25	20.5
50	28	19,893	-61.0		25	22.7
40	27	21,277	-62.1		25	24.3
30	25	23,075	-63.4		25	26.5
25	22	24,198	-64.2		26	27.7
20	16	25,597	-64.8		25	29.2
15	9	27,369	-65.7			

BARTER IS., ALASKA — 1016 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	15	-24.4	-29.3	11	1.7
1000	31	130	-20.4	-23.3	11	3.7
950	31	516	-14.3	-17.9	11	3.7
900	31	927	-11.1	-16.3	12	2.8
850	31	1,366	-11.3	-17.8	12	2.7
800	31	1,830	-12.6	-19.7	13	2.4
750	31	2,316	-14.7	-22.4	15	1.9
700	31	2,841	-17.5	-24.8	20	1.2
650	31	3,387	-20.8	-28.6	23	1.9
600	31	3,980	-24.7	-32.5	24	2.9
550	31	4,602	-29.1	-36.4	24	3.5
500	31	5,284	-33.7	-40.3	23	2.7
450	31	6,009	-39.0	-43.4	24	2.9
400	31	6,814	-44.9		24	3.7
350	31	7,695	-50.9		23	2.9
300	31	8,685	-56.7		24	3.2
250	31	9,833	-58.5		25	4.0
200	31	11,245	-55.8		25	7.0
175	31	12,096	-55.3		25	8.4
150	31	13,079	-55.1		25	10.7
125	31	14,241	-55.9		25	12.2
100	31	15,659	-56.4		25	14.4
80	30	17,077	-57.1		25	17.9
70	30	17,920	-57.6		26	19.0
60	30	18,890	-58.4		26	20.7
50	30	20,034	-59.3		26	22.4
40	28	21,433	-60.4		26	24.2
30	27	23,231	-61.9		26	28.2
25	26	24,368	-62.7		26	28.6
20	19	25,770	-64.3		26	29.7
15	12	27,542	-64.5		25	31.7

BETHEL, ALASKA — 1003 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	39	-11.7	-13.4	36	1.9
1000	30	64			02	1.6
950	30	462	-7.0	-12.0	01	2.0
900	30	884	-7.5	-13.4	36	.6
850	30	1,328	-9.1	-15.4	30	1.1
800	30	1,795	-11.3	-19.0	29	1.2
750	30	2,286	-14.1	-22.5	30	.8
700	30	2,808	-17.2	-25.7	29	1.4
650	30	3,359	-20.4	-28.1	28	2.3
600	30	3,949	-24.1	-32.0	28	2.7
550	30	4,575	-28.2	-36.3	27	3.0
500	30	5,255	-33.0	-40.6	28	3.6
450	30	5,982	-38.3	-42.5	27	3.8
400	30	6,789	-44.2	-44.6	27	4.2
350	30	7,671	-50.4		27	5.0
300	30	8,664	-55.7		27	4.7
250	30	9,819	-56.8		25	5.5
200	30	11,242	-53.6		24	6.4
175	30	12,102	-52.9		24	6.9
150	30	13,096	-52.6		24	7.8
125	29	14,267	-52.8		24	9.1
100	29	15,706	-52.5		24	11.3
80	29	17,146	-53.0		25	12.4
70	29	18,005	-53.2		25	13.7
60	29	18,997	-53.7		25	14.8
50	29	20,167	-54.4		25	16.0
40	29	21,591	-55.8		25	18.4
30	29	23,414	-57.7		26	20.8
25	28	24,559	-58.9		27	23.0
20	23	25,976	-59.6		27	24.8
15	16	27,794	-60.0		26	30.3

* BISMARCK, N. DAK. — 956 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	505	-4.4	-8.7	32	.8
1000	31	143				
950	31	549			33	.7
900	31	982	.8	-8.5	29	3.0
850	31	1,440	-.5	-10.8	31	4.6
800	31	1,923	-2.7	-12.5	30	6.2
750	31	2,431	-5.3	-15.8	31	7.3
700	31	2,971	-8.6	-18.2	31	8.7
650	31	3,537	-12.2	-22.2	31	9.9
600	31	4,150	-15.8	-26.8	30	11.3
550	31	4,798	-20.0	-31.0	30	12.1
500	31	5,501	-25.2	-34.3	30	13.5
450	31	6,255	-30.9	-38.2	30	15.2
400	31	7,084	-37.0	-43.0	30	16.8
350	31	7,995	-43.7	-47.9	30	18.0
300	31	9,016	-51.0		30	18.9
250	31	10,186	-56.8		29	18.8
200	31	11,596	-56.4		29	17.5
175	31	12,449	-54.1		29	17.3
150	30	13,437	-53.4		28	16.1
125	30	14,608	-54.1		28	14.3
100	29	16,036	-54.8		28	12.7
80	29	17,460	-55.5		28	10.6
70	29	18,309	-56.0		29	8.7
60	29	19,291	-55.9		29	7.2
50	29	20,452	-55.7		30	6.3
40	28	21,872	-55.9		30	6.1
30	27	23,701	-56.6		32	5.9
25	26	24,849	-57.5		31	6.1
20	25	26,261	-57.1		31	8.6
15	23	28,083	-55.0		29	11.6
10	20	30,680	-52.3		28	18.3
7	12	32,964	-46.5		28	25.2
5	7	35,108	-44.0			

BOISE, IDAHO — 917 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	867	3.8	-2.8	15	1.4
1000	31	155				
950	31	576				
900	31	1,019	6.5	-3.6	16	.9
850	31	1,487	4.6	-6.6	23	1.1
800	31	1,979	1.5	-9.0	27	2.6
750	31	2,494	-2.2	-12.0	28	4.6
700	31	3,040	-6.1	-15.2	27	5.8
650	31	3,614	-9.8	-19.5	27	7.2
600	31	4,230	-13.9	-24.5	27	8.6
550	31	4,884	-18.3	-28.3	27	9.5
500	31	5,592	-23.0	-32.4	27	10.5
450	31	6,351	-28.7	-37.3	27	12.0
400	31	7,189	-35.0	-42.3	27	12.8
350	31	8,106	-42.4	-48.0	27	12.5
300	31	9,130	-50.7		27	13.7
250	31	10,299	-57.3		28	15.8
200	31	11,701	-58.5		28	15.6
175	31	12,544	-56.6		28	15.1
150	31	13,524	-55.9		27	14.5
125	31	14,682	-56.9		28	13.2
100	31	16,093	-57.4		27	10.5
80	31	17,502	-57.7		27	7.8
70	31	18,345	-57.4		27	6.2
60	31	19,319	-56.9		27	5.7
50	31	20,473	-57.1		28	3.6
40	30	21,882	-56.8		26	2.7
30	29	23,707	-56.9		28	3.7
25	25	24,869	-56.7		28	3.3
20	20	26,277	-56.2		28	5.2
15	12	28,121	-53.5		27	11.0
10	6	30,793	-48.0			
7						

BOOTHVILLE, LA. — 1020 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1	11.6	10.1	04	.9
1000	31	166	12.6	8.2	12	1.5
950	31	596	10.9	4.5	17	2.9
900	31	1,046	9.4	-.4	20	3.7
850	31	1,519	7.7	-3.5	23	4.5
800	31	2,017	6.5	-6.1	25	5.7
750	31	2,548	4.9	-11.4	25	8.6
700	31	3,106	2.3	-13.3	26	10.3
650	31	3,698	-.5	-15.8	26	12.0
600	31	4,337	-4.4	-19.2	26	13.9
550	31	5,014	-8.6	-24.4	26	15.7
500	31	5,750	-13.7	-29.2	26	19.4
450	31	6,539	-19.1	-32.8	26	22.4
400	31	7,409	-25.3	-37.9	26	25.7
350	31	8,365	-32.5	-43.6	26	30.0
300	31	9,434	-40.2	-49.4	26	36.5
250	31	10,655	-49.1		26	41.0
200	31	12,091	-57.1		26	41.7
175	31	12,929	-60.2		26	39.2
150	31	13,885	-62.9		26	34.9
125	31	14,997	-66.5		26	30.2
100	31	16,339	-69.0		27	22.8
80	31	17,670	-68.7		27	14.9
70	31	18,473	-66.4		27	10.1
60	30	19,414	-63.2		27	6.6
50	28	20,548	-59.6		27	4.1
40	28	21,953	-56.3		30	3.5
30	27	23,795	-52.8		31	3.3
25	26	24,978	-51.0		28	3.0
20	26	26,437	-48.3		28	4.8
15	23	28,357	-44.2		27	6.3
10	18	31,117	-38.3			

* BROWNSVILLE, TEXAS — 1017 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	7	14.3	12.1	13	1.3
1000	31	150	14.9	12.1	14	2.9
950	31	584	12.9	9.5	16	5.6
900	31	1,039	11.4	4.6	18	5.6
850	31	1,517	10.8	.7	19	5.3
800	31	2,022	9.8	-4.5	22	6.1
750	31	2,557	8.0	-8.0	23	5.5
700	31	3,124	5.3	-9.6	25	5.7
650	31	3,721	1.4	-12.8	25	8.2
600	31	4,365	-2.7	-18.1	26	10.5
550	31	5,039	-7.0	-23.9	25	13.3
500	31	5,786	-12.1	-28.1	25	16.2
450	31	6,578	-17.7	-32.3	26	19.7
400	31	7,457	-23.8	-38.1	26	22.4
350	31	8,419	-30.9	-43.8	26	26.4
300	31	9,494	-39.3	-50.4	25	30.8
250	31	10,718	-48.1		26	34.1
200	31	12,159	-56.7		26	37.7
175	31	12,997	-60.8		26	35.1
150	31	13,947	-64.1		26	32.0
125	30	15,051	-67.7		26	26.9
100	27	16,378	-71.4		26	20.3
80	24	17,691	-72.5		26	11.2
70	22	18,477	-69.8		26	7.1
60	22	19,408	-65.0		26	3.8
50	22	20,532	-60.5		25	.6
40	21	21,935	-57.0		13	.3
30	20	23,781	-52.8		09	2.0
25	20	24,961	-51.5		12	.9
20	19	26,414	-48.9		11	1.4
15	18	28,315	-44.7		20	1.6
10	16	31,071	-39.7		17	4.1
7	12	33,523	-36.6			

BUFFALO, N. Y. — 990 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	218	.0	-3.6	25	2.1
1000	31	134				
950	31	551	.6	-6.6	26	6.0
900	31	979	-1.0	-9.1	28	7.1
850	31	1,434	-2.6	-12.4	28	7.7
800	31	1,913	-4.7	-14.2	28	8.3
750	31	2,423	-6.6	-16.4	29	10.5
700	31	2,958	-8.5	-18.1	29	11.8
650	31	3,530	-11.1	-21.5	29	13.8
600	31	4,142	-14.5	-24.4	28	14.5
550	31	4,795	-18.7	-27.3	28	15.6
500	31	5,500	-23.5	-32.7	28	17.0
450	31	6,258	-28.9	-38.3	28	18.9
400	31	7,096	-35.2	-43.1	28	20.4
350	31	8,014	-42.1	-46.5	27	20.8
300	31	9,041	-49.2		28	21.8
250	31	10,221	-55.1		28	24.3
200	31	11,639	-56.1		28	23.6
175	31	12,493	-54.2		29	20.7
150	31	13,483	-53.8		28	19.3
125	29	14,645	-54.2		28	16.8
100	29	16,071	-55.5		28	12.2
80	26	17,485	-56.5		28	10.6
70	28	18,331	-56.4		28	9.7
60	28	19,310	-56.1		29	7.3
50	28	20,469	-55.9		29	6.9
40	28	21,689	-55.7		29	5.6
30	28	23,721	-55.5		29	5.5
25	28	24,884	-54.9		29	6.3
20	26	26,315	-54.0		29	8.0
15	21	28,173	-52.9		28	10.7
10	16	30,800	-49.0			
7	6	33,107	-45.5			

CAPE HATTERAS, N. C. — 1017 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	4	9.1	4.5	30	1.8
1000	31	147	10.5	3.5	28	3.5
950	31	572	8.9	-.8	28	6.6
900	31	1,020	6.3	-3.5	28	7.3
850	31	1,487	4.0	-6.0	28	7.9
800	31	1,978	2.1	-9.5	27	8.8
750	31	2,495	-.3	-12.6	28	10.9
700	31	3,046	-3.3	-15.6	28	12.3
650	31	3,626	-6.1	-19.9	28	14.1
600	31	4,253	-9.7	-24.9	28	15.8
550	31	4,912	-13.8	-28.2	28	16.7
500	31	5,637	-18.8	-32.7	28	18.1
450	31	6,404	-24.3	-37.6	29	19.5
400	31	7,263	-30.7	-42.9	29	21.7
350	31	8,198	-37.4	-47.4	29	25.6
300	31	9,247	-44.4		29	28.8
250	31	10,451	-51.1		28	33.4
200	31	11,885	-55.0		28	35.6
175	31	12,738	-55.6		28	35.4
150	31	13,717	-57.3		27	32.1
125	30	14,864	-59.5		27	27.9
100	30	16,251	-61.8		27	23.2
80	26	17,632	-62.2		27	16.7
70	26	18,459	-60.8		28	12.7
60	26	19,421	-59.4		28	9.3
50	26	20,567	-57.3		28	7.7
40	26	21,983	-55.6		28	6.8
30	23	23,830	-52.9		28	7.2
25	22	25,007	-51.1		28	9.1
20	21	26,471	-49.0		27	11.2
15	19	28,369	-46.1		27	14.6
10	9	31,100	-38.5			

See reference note at end of table

RAWINSONDE DATA

Average monthly values

MARCH 1968

* CARIBOU, MAINE — 989 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	191	-5.7	-8.8	33	1.6
1000	31	106			17	.5
950	31	512	-5.7	-8.9	28	3.6
900	31	931	-6.8	-10.4	29	5.5
850	31	1,377	-8.2	-11.6	29	6.8
800	31	1,847	-8.9	-13.3	28	7.6
750	31	2,348	-9.8	-14.9	28	9.3
700	31	2,877	-11.9	-18.4	28	11.0
650	31	3,439	-14.6	-22.2	28	12.9
600	31	4,045	-17.5	-26.0	27	14.0
550	31	4,691	-21.2	-30.4	27	15.9
500	31	5,389	-25.7	-35.1	27	18.2
450	31	6,141	-30.5	-39.4	28	21.9
400	31	6,974	-36.4	-44.3	28	23.8
350	31	7,887	-42.9	-46.3	27	25.3
300	31	8,910	-49.5		27	26.3
250	31	10,090	-54.2		27	26.7
200	31	11,517	-54.7		27	24.4
175	31	12,375	-53.3		27	21.6
150	31	13,370	-52.5		27	19.7
125	31	14,547	-53.0		27	17.2
100	31	15,982	-54.2		27	14.0
80	31	17,411	-54.9		27	13.3
70	31	18,263	-55.3		27	13.4
60	31	19,246	-55.6		27	12.0
50	31	20,407	-55.8		27	12.1
40	31	21,827	-55.7		28	12.0
30	31	23,657	-56.2		29	9.8
25	31	24,814	-56.4		28	9.0
20	29	26,229	-56.1		28	10.4
15	28	28,059	-55.6		28	12.6
10	23	30,659	-53.0		27	20.9
7	14	32,987	-48.4		28	27.2
5						
4						

CHARLESTON, S. C. — 1018 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	13	7.1	2.2	26	1.8
1000	31	164	11.2	3.1	27	2.9
950	31	594	10.5	-.2	28	5.6
900	31	1,041	8.0	-3.6	28	6.8
850	31	1,511	5.6	-6.9	28	6.1
800	31	2,004	3.2	-9.2	28	7.4
750	31	2,528	1.1	-12.9	27	9.1
700	31	3,079	-1.0	-16.0	27	10.6
650	31	3,665	-3.7	-18.6	27	12.2
600	31	4,296	-7.5	-22.6	27	14.5
550	31	4,965	-12.1	-26.4	28	17.5
500	31	5,690	-17.2	-31.5	28	19.9
450	31	6,470	-22.5	-35.7	28	22.6
400	31	7,329	-28.1	-40.2	28	25.9
350	31	8,274	-34.7	-46.2	28	30.9
300	31	9,334	-42.3	-48.0	28	35.2
250	31	10,544	-50.2		28	37.4
200	31	11,980	-55.8		28	39.9
175	31	12,827	-57.1		26	39.5
150	31	13,799	-58.9		27	35.8
125	31	14,936	-61.9		27	29.7
100	30	16,311	-64.4		27	22.8
80	31	17,671	-64.4		27	16.3
70	30	18,489	-62.9		27	12.3
60	30	19,444	-60.3		28	9.5
50	30	20,585	-58.1		28	7.8
40	29	22,000	-55.2		26	5.2
30	26	23,845	-52.7		28	7.8
25	23	25,019	-51.1		27	7.2
20	19	26,470	-48.5		28	11.8
15	15	28,361	-45.4		27	12.8
10	7	31,072	-41.3			
7						
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4						

CHIHUAHUA, MEXICO — 857 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1,428	6.9	.2	24	1.4
1000	31	138				
950	31	563				
900	31	1,016				
850	31	1,496	7.8	.1	24	1.2
800	31	1,997	7.2	-2.8	25	2.8
750	31	2,521	4.3	-6.1	26	3.4
700	31	3,084	1.3	-9.8	25	5.0
650	31	3,670	-1.9	-14.0	25	6.9
600	31	4,310	-6.0	-19.0	25	9.8
550	31	4,976	-10.5	-23.2	25	11.9
500	31	5,713	-15.3	-26.2	26	14.4
450	31	6,490	-20.5	-30.6	26	17.7
400	31	7,363	-26.9	-36.1	25	19.8
350	31	8,313	-34.1	-41.4	25	22.6
300	31	9,374	-42.0	-47.3	25	25.4
250	30	10,582	-50.3		25	28.5
200	29	12,020	-56.5		26	30.0
175	29	12,862	-59.0		26	30.1
150	29	13,825	-61.3		25	27.0
125	29	14,945	-65.1		26	27.4
100	28	16,292	-67.5		26	24.3
80	27	17,635	-67.0		26	22.3
70	26	18,445	-66.4		26	19.6
60	21	19,382	-63.1		26	14.9
50	21	20,514	-59.5		26	9.1
40	20	21,915	-57.4		26	4.3
30	16	23,733	-54.7		25	2.2
25	15	24,917	-53.2		25	3.5
20	9	26,385	-50.5			
15	6	28,279	-46.9			
10						
7						
5						
4						

* COLD BAY, ALASKA — 1005 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	30	-1.7	-3.8	31	1.0
1000	29	66			31	2.4
950	29	469	-4.1	-6.4	32	2.5
900	29	897	-6.1	-8.9	32	3.6
850	29	1,344	-7.2	-13.0	32	4.1
800	29	1,816	-9.4	-16.1	32	4.5
750	29	2,307	-12.0	-20.1	32	4.5
700	29	2,838	-15.0	-23.3	31	4.9
650	29	3,389	-18.4	-26.7	30	4.2
600	29	3,988	-22.2	-29.2	28	4.7
550	29	4,617	-26.6	-33.7	28	4.8
500	29	5,305	-31.4	-38.5	28	6.3
450	29	6,038	-36.8	-42.9	29	5.6
400	29	6,849	-42.7	-45.2	28	5.3
350	29	7,739	-48.3		27	5.8
300	29	8,743	-53.5		26	7.6
250	29	9,909	-55.5		26	11.2
200	28	11,343	-53.0		26	12.1
175	28	12,207	-51.9		26	10.9
150	28	13,208	-51.3		26	11.0
125	28	14,393	-51.1		26	11.6
100	28	15,844	-51.3		26	11.9
80	27	17,300	-51.0		26	12.8
70	27	18,168	-51.2		26	12.6
60	27	19,167	-51.9		26	12.9
50	27	20,347	-52.2		26	13.7
40	27	21,788	-53.2		26	14.3
30	27	23,636	-54.3		27	15.6
25	27	24,801	-55.6		28	17.9
20	27	26,219	-56.9		28	18.9
15	25	28,051	-58.5		29	21.8
10	21	30,594	-58.9		29	27.4
7	13	32,925	-56.5		30	35.5
5	9	35,043	-54.5			
4	5	36,535	-53.2			

COLUMBIA, MO. — 989 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	238	3.8	-.7	21	1.0
1000	31	149				
950	31	566	4.8	-2.2	24	4.9
900	31	1,008	4.1	-4.5	27	6.8
850	31	1,471	2.6	-7.1	28	6.9
800	31	1,960	.4	-10.7	29	7.0
750	31	2,473	-2.4	-13.4	28	7.1
700	31	3,021	-5.2	-16.3	28	7.8
650	31	3,598	-8.4	-19.4	28	8.9
600	31	4,218	-11.9	-22.7	28	9.9
550	31	4,873	-16.4	-26.7	27	11.2
500	31	5,589	-21.3	-31.1	27	12.6
450	31	6,352	-26.9	-36.4	27	14.7
400	31	7,198	-33.0	-41.6	27	17.1
350	31	8,124	-40.0	-45.9	26	18.8
300	31	9,160	-47.4		26	23.2
250	31	10,345	-54.9		26	29.5
200	31	11,756	-58.3		27	30.5
175	30	12,599	-56.4		27	28.8
150	30	13,579	-56.3		27	26.2
125	30	14,734	-57.7		27	22.2
100	30	16,135	-59.4		27	17.9
80	30	17,527	-60.4		28	12.0
70	30	18,359	-59.7		28	10.0
60	29	19,320	-59.1		28	8.2
50	29	20,464	-58.6		29	6.0
40	28	21,866	-57.7		29	5.1
30	26	23,684	-56.0		29	6.1
25	26	24,845	-55.4		29	7.2
20	24	26,271	-53.9		28	9.3
15	21	28,126	-51.3		27	12.7
10	11	30,747	-49.0			
7						
5						
4						

DAYTON, OHIO — 982 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	297	1.8	-2.0	24	.8
1000	31	151				
950	31	568	2.8	-4.0	26	4.6
900	31	1,003	1.9	-6.7	28	6.9
850	31	1,463	.2	-9.6	28	8.3
800	31	1,948	-1.8	-11.8	28	9.2
750	31	2,459	-3.9	-14.2	27	10.9
700	31	3,003	-6.4	-18.0	28	12.0
650	31	3,577	-9.6	-21.3	28	13.5
600	31	4,193	-13.4	-24.2	28	16.2
550	31	4,849	-17.5	-28.3	28	17.5
500	31	5,558	-22.3	-33.3	28	18.6
450	31	6,319	-27.8	-38.4	28	20.0
400	31	7,160	-34.0	-43.1	28	21.0
350	31	8,082	-40.8	-47.8	27	22.6
300	31	9,114	-48.0		27	26.3
250	31	10,296	-55.0		28	29.5
200	31	11,709	-57.0		28	31.1
175	31	12,558	-55.3		27	29.2
150	31	13,540	-56.0		28	26.4
125	31	14,696	-57.2		27	22.8
100	31	16,101	-58.8		27	19.3
80	31	17,502	-58.8		27	14.8
70	30	18,342	-58.6		27	11.2
60	29	19,309	-58.2		27	7.7
50	29	20,458	-57.7		28	7.2
40	29	21,869	-56.6		29	6.2
30	27	23,704	-54.7		28	6.5
25	25	24,874	-53.8		28	7.1
20	24	26,313	-52.4		27	9.8
15	20	28,167	-51.2		27	12.3
10	15	30,784	-48.8		26	17.4
7	6	33,035	-48.3			
5						

DEL RIO, TEXAS — 981 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	314	10.7	8.0	10	1.6
1000	31	154				
950	31	587	10.1	6.3	15	4.1
900	31	1,032	9.1	4.2	19	4.4
850	31	1,506	7.9	1.0	20	4.1
800	31	2,005	6.3	-3.5	25	3.6
750	31	2,531	4.5	-8.3	28	5.0
700	31	3,093	1.8	-12.0	27	6.8
650	31	3,684	-1.7	-16.0	26	9.2
600	31	4,320	-6.0	-20.0	25	12.3
550	31	4,990	-10.9	-24.0	25	15.0
500	31	5,723	-15.7	-28.6	25	18.3
450	31	6,505	-21.0	-31.7	26	21.4
400	31	7,372	-27.1	-38.0	26	25.0
350	31	8,320	-34.1	-43.7	26	29.3
300	31	9,381	-42.2	-49.5	26	33.4
250	31	10,593	-49.9		26	39.3
200	31	12,029	-56.4		26	43.4
175	31	12,872	-58.8		26	39.8
150	31	13,834	-61.1		26	34.5
125	31	14,956	-64.6		26	29.6
100	29	16,304	-67.7		26	20.2
80	29	17,645	-67.3		26	13.5
70	29	18,452	-66.2		26	8.7
60	29	19,391	-63.3		26	3.5
50	28	20,522	-59.4		29	2.4
40	28	21,928	-56.4		28	1.3
30	27	23,766	-53.5		28	3.8
25	27	24,944	-51.6		28	4.0
20	26	26,401	-49.3		28	5.7
15	21	28,298	-45.0		27	5.9
10	17	31,092	-37.3		27	8.8
7	14	33,551	-36.8		27	16.3
5	9	35,797	-36.0			

DENVER, COLO. — 837 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1,611	-1.1	-6.5	17	1.9
1000	31	163				
950	31	583				
900	31	1,024				
850	31	1,484				
800	31	1,972	2.7	-10.1	27	2.1
750	31	2,490	-.4	-13.1	29	3.6
700	31	3,041	-4.0	-16.7	30	4.9
650	31	3,618	-7.9	-20.0	29	6.7
600	31	4,239	-12.1	-24.3	29	7.3
550	31	4,893	-16.7	-29.6	28	6.8
500	31	5,608	-21.8	-34.3	28	7.4
450	31	6,368	-27.8	-39.4	29	9.5
400	31	7,210	-34.3	-45.2	29	9.9
350	31	8,129	-41.6	-50.4	29	12.1
300	31	9,156	-49.3		27	13.9
250	31	10,330	-56.8		27	16.6
200	31	11,737	-57.6		27	18.9
175	31	12,583	-56.2		27	18.4
150	31	13,564	-56.0		27	18.2
125	31	14,720	-57.0		27	16.2
100	31	16,126	-58.7		27	13.1
80	30	17,531	-59.0		27	9.1
70	29	18,369	-58.7		28	7.1
60	29	19,340	-58.1		28	5.1
50	29	20,490	-57.5		29	3.4
40	26	21,901	-56.9		30	2.2
30	25	23,729	-56.3		31	2.9
25	22	24,898	-55.4		31	4.0
20	21	26,320	-54.1		29	7.3
15	11	28,165	-52.3			
10	6	30,871	-46.8			
7						
5						

DODGE CITY, KANS. — 925 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	791	2.7	-5.1	32	1.2
1000	31	150				
950	31	571				
900	31	1,011	5.5	-5.5	33	2.6
850	31	1,479	4.9	-8.6	32	3.0
800	31	1,971	3.0	-11.9	32	3.6
750	31	2,488	-.1	-14.8	31	5.3
700	31	3,041	-3.7	-17.7	31	6.2
650	31	3,617	-7.4	-21.8	29	7.2
600	31	4,241	-11.7	-24.7	28	8.0
550	31	4,898	-16.1	-29.3	28	8.3
500	31	5,613	-21.4	-34.3	28	9.9
450	31	6,377	-27.0	-39.9	27	12.3
400	31	7,221	-33.6	-44.9	27	13.6
350	31	8,144	-40.5	-49.3	27	16.0
300	30	9,173	-47.8		26	21.3
250	30	10,356	-55.3		26	26.6
200	30	11,768	-57.3		26	26.4
175	30	12,614	-56.5		26	26.1
150	30	13,592	-56.9		26	23.6
125	30	14,743	-58.3		27	21.1
100	30	16,141	-60.2		27	16.4
80	28	17,529	-60.2		27	10.5
70	28	18,362	-59.9		27	7.3
60	28	19,324	-59.2		27	5.3
50	27	20,470	-58.6		28	4.1
40	26	21,873	-57.9		30	3.1
30	23	23,699	-55.6		30	5.7
25	23	24,863	-54.6		29	7.0
20	21	26,295	-53.2		28	9.8
15	11	28,200	-48.2			
10						
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5						

EL PASO, TEXAS — 882 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1,193	7.1	-.1	24	.9
1000	31	145				
950	31	575				
900	31	1,031				
850	31	1,499	8.5	-2.5	25	2.3
800	31	1,998	5.4	-4.6	27	4.2
750	31	2,521	2.2	-7.6	26	5.5
700	31	3,077	-1.1	-10.9	26	6.3
650	31	3,661	-5.0	-14.9	26	8.3
600	31	4,288	-9.2	-18.6	26	9.6
550	31	4,952	-13.4	-24.7	26	11.5
500	31	5,676	-18.1	-29.8	26	13.4
450	31	6,449	-23.6	-34.1	27	16.2
400	31	7,306	-29.8	-39.2	26	19.2
350	31	8,245	-36.6	-43.7	26	23.5
300	31	9,296	-44.4		26	27.6
250	31	10,497	-51.9		26	31.8
200	31	11,925	-56.8		27	33.0
175	31	12,769	-57.4		27	31.6
150	31	13,740	-59.3		27	27.9
125	31	14,873	-62.1		26	25.6
100	31	16,243	-64.8		26	18.5
80	31	17,602	-64.8		27	13.3
70	31	18,418	-63.7		27	7.8
60	31	19,366	-62.4		26	4.7
50	31	20,497	-59.8		27	3.1
40	31	21,898	-57.5		28	2.5
30	31	23,725	-54.9		27	6.0
25	30	24,899	-53.2		28	6.3
20	24	26,336	-50.8		27	8.9
15	21	28,214	-46.8		27	13.0
10	10	30,909	-42.9			
7						
5						

ELY, NEV. — 808 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1,908	-3.5	-7.0	20	2.6
1000	31	186				
950	31	598				
900	31	1,043				
850	31	1,506				
800	31	1,989	-.8	-6.9	20	2.2
750	31	2,504	-1.2	-9.9	32	.6
700	31	3,053	-4.9	-13.3	30	1.9
650	31	3,625	-8.6	-18.0	31	3.4
600	31	4,248	-12.7	-22.5	28	4.4
550	31	4,902	-16.8	-27.0	28	5.2
500	31	5,617	-21.8	-32.8	28	5.5
450	31	6,378	-27.5	-38.4	28	6.7
400	31	7,223	-34.0	-43.1	29	7.1
350	31	8,145	-41.3	-48.6	29	7.9
300	31	9,175	-49.1		29	7.9
250	31	10,353	-56.1		28	9.6
200	31	11,760	-58.5		26	14.3
175	31	12,603	-56.7		28	16.3
150	30	13,576	-57.0		27	14.9
125	30	14,728	-57.9		27	13.2
100	30	16,131	-59.2		27	10.8
80	30	17,527	-59.2		26	8.5
70	30	18,362	-59.2		27	7.0
60	30	19,329	-58.5		27	3.9
50	30	20,475	-58.1		26	2.8
40	30	21,882	-57.4		26	2.3
30	29	23,705	-56.1		26	1.6
25	29	24,864	-55.5		27	3.1
20	26	26,294	-54.2		27	5.2
15	26	28,151	-51.5		27	10.0
10	17	30,837	-46.4		27	15.6
7	9	33,221	-43.0			

EMPALME, MEXICO — 1014 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	12	14.5	7.9	34	1.0
1000	31	132	18.1	6.7	36	1.8
950	31	569	17.5	2.7	03	1.9
900	31	1,031	14.7	-.2	07	.6
850	31	1,512	11.6	-2.7	19	1.6
800	31	2,015	8.6	-7.1	21	2.5
750	31	2,545	5.6	-11.2	23	3.2
700	30	3,105	2.2	-14.5	25	4.1
650	30	3,698	-1.3	-18.5	26	4.9
600	30	4,332	-5.5	-22.0	27	6.9
550	30	5,004	-10.1	-25.2	27	9.1
500	29	5,740	-15.0	-28.9	27	12.7
450	29	6,526	-20.4	-32.6	27	17.4
400	29	7,391	-26.4	-37.4	27	20.0
350	29	8,341	-33.6	-43.0	27	21.3
300	29	9,402	-41.8	-47.0	27	25.5
250	29	10,613	-49.8		27	28.3
200	28	12,049	-55.1		27	30.2
175	27	12,890	-58.3		27	31.2
150	27	13,853	-60.7		27	26.7
125	27	14,976	-64.9		27	21.7
100	27	16,325	-68.0		27	16.4
80	27	17,663	-68.0		26	10.9
70	26	18,465	-66.4		26	8.4
60	23	19,411	-63.4		26	4.8
50	21	20,541	-59.6		25	2.5
40	21	21,949	-56.2		26	3.1
30	19	23,785	-53.3		25	4.9
25	15	24,956	-52.0		28	6.5
20	12	26,398	-50.2		28	8.7
15	8	28,269	-46.7			
10						
7						

* FAIRBANKS, ALASKA — 993 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	135	-13.5	-20.9	01	1.6
1000	31	80			02	1.9
950	31	482	-6.1	-13.3	08	2.4
900	31	900	-7.1	-14.1	13	3.1
850	31	1,345	-8.5	-16.2	14	2.8
800	31	1,814	-11.1	-19.5	15	2.6
750	31	2,308	-13.8	-22.7	15	2.4
700	31	2,828	-17.4	-26.1	16	2.4
650	31	3,376	-21.2	-29.9	17	2.3
600	31	3,966	-25.4	-33.7	16	2.1
550	31	4,587	-29.9	-37.3	18	2.4
500	31	5,265	-34.6	-41.9	18	2.5
450	31	5,991	-39.7	-45.0	18	2.1
400	31	6,790	-45.3		20	1.9
350	31	7,670	-51.0		19	1.8
300	31	8,662	-55.7		19	2.5
250	31	9,819	-56.5		21	3.4
200	31	11,247	-53.4		23	4.8
175	31	12,107	-53.3		24	6.8
150	31	13,100	-53.2		24	8.4
125	31	14,274	-53.4		24	9.1
100	31	15,708	-53.8		25	11.8
80	31	17,139	-54.4		25	13.8
70	31	17,993	-54.7		25	15.2
60	30	18,989	-55.3		25	17.3
50	30	20,150	-56.3		26	18.7
40	30	21,562	-57.7		26	20.7
30	29	23,378	-59.8		26	22.6
25	26	24,523	-60.8		27	24.7
20	27	25,901	-62.1		27	24.4
15	25	27,683	-63.0		27	26.1
10	19	30,210	-62.7		26	28.4
7	10	32,432	-59.3			

FLINT, MICH. — 988 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	234	-.6	-6.1	25	1.6
1000	31	136				
950	31	547	.6	-6.5	27	6.0
900	31	981	-.6	-8.9	29	7.1
850	31	1,436	-2.4	-11.9	29	7.7
800	31	1,917	-4.2	-14.5	28	8.9
750	31	2,422	-6.3	-16.9	28	9.9
700	31	2,962	-8.5	-18.2	28	12.0
650	31	3,533	-11.3	-21.3	28	13.4
600	31	4,145	-14.6	-24.0	28	14.1
550	31	4,794	-18.6	-28.3	28	15.5
500	31	5,503	-23.2	-32.8	28	16.9
450	31	6,259	-28.6	-38.1	28	18.4
400	31	7,099	-34.8	-43.0	27	20.8
350	31	8,018	-41.5	-45.7	27	22.2
300	31	9,047	-48.9		27	24.6
250	31	10,226	-55.4		27	26.3
200	31	11,644	-55.6		27	27.4
175	31	12,498	-53.8		27	24.7
150	31	13,490	-53.6		27	22.5
125	31	14,659	-54.5		27	20.0
100	31	16,084	-55.9		28	15.6
80	31	17,502	-56.5		28	12.4
70	31	18,346	-56.4		28	10.0
60	31	19,327	-56.1		28	8.1
50	31	20,485	-56.2		29	7.5
40	31	21,902	-55.9		29	7.1
30	31	23,734	-55.3		29	7.9
25	30	24,898	-54.8		28	8.5
20	24	26,315	-55.1		28	7.9
15	16	28,137	-54.8		29	10.7
10	7	30,765	-50.7			
7						

FORT WORTH, TEXAS — 998 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	180	9.0	6.1	20	.6
1000	31	158			36	1.2
950	31	585	9.1	3.1	22	5.5
900	31	1,031	7.9	.9	23	5.7
850	31	1,503	7.0	-2.7	25	5.0
800	31	2,000	4.7	-5.0	26	4.2
750	31	2,524	2.1	-8.8	28	4.9
700	31	3,078	-.8	-12.2	27	6.4
650	31	3,666	-4.2	-16.3	26	8.8
600	31	4,294	-8.3	-19.4	26	11.2
550	31	4,960	-12.5	-23.6	26	13.7
500	31	5,687	-17.4	-27.9	26	16.9
450	31	6,463	-22.7	-32.3	26	18.8
400	31	7,322	-29.2	-38.3	26	22.3
350	31	8,264	-36.1	-44.5	26	26.5
300	31	9,318	-44.1		26	30.3
250	31	10,518	-52.6		26	37.4
200	30	11,940	-57.0		26	40.3
175	31	12,783	-58.2		26	36.0
150	30	13,750	-60.0		26	32.9
125	29	14,882	-62.2		26	27.3
100	28	16,252	-64.8		27	20.8
80	26	17,611	-64.6		27	13.1
70	26	18,427	-63.5		27	8.9
60	25	19,380	-61.7		28	6.8
50	23	20,519	-58.8		29	4.5
40	23	21,926	-57.0		28	4.4
30	23	23,760	-54.0		28	7.7
25	22	24,924	-53.3		28	9.1
20	21	26,375	-50.5		28	10.5
15	16	28,283	-46.6		27	12.8
10	10	30,687	-45.3			
7	5	33,359	-40.8			

See reference note at end of table

RAWINSONDE DATA

Average monthly values

MARCH 1968

GLASGOW, MONT. 933 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	696	-1.0	-6.2	12	.3
1000	31	137				
950	31	551				
900	31	984	1.5	-7.5	27	3.5
850	31	1,444	.5	-10.0	30	6.7
800	31	1,929	-1.8	-12.3	30	8.3
750	31	2,441	-4.5	-15.5	30	8.8
700	31	2,980	-8.0	-18.4	30	9.7
650	31	3,551	-11.6	-21.8	29	10.4
600	31	4,162	-15.8	-24.2	29	11.7
550	31	4,811	-20.0	-28.7	29	12.4
500	31	5,513	-24.8	-34.0	29	14.1
450	31	6,262	-30.6	-39.2	29	16.2
400	31	7,096	-37.0	-43.5	29	17.6
350	31	8,006	-44.1	-48.1	29	18.0
300	31	9,022	-51.8		29	20.0
250	31	10,186	-58.0		29	20.2
200	31	11,591	-56.7		29	17.7
175	31	12,442	-54.3		29	14.6
150	31	13,431	-54.2		29	13.7
125	31	14,600	-54.4		28	12.1
100	31	16,027	-55.2		28	11.2
80	30	17,453	-55.5		28	9.3
70	30	18,303	-55.3		28	8.1
60	30	19,286	-55.1		29	7.0
50	30	20,450	-55.5		29	5.7
40	30	21,870	-56.3		30	6.0
30	29	23,697	-57.5		32	4.9
25	26	24,854	-57.8		32	5.4
20	21	26,236	-58.1		30	8.1
15	16	28,074	-56.4		30	11.7
10	7	30,750	-48.2			
7						

GRAND JUNCTION, COLO. 852 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1,474	1.3	-6.2	13	1.6
1000	31	165				
950	31	585				
900	31	1,029				
850	31	1,495			12	2.1
800	31	1,987	2.9	-8.5	13	1.9
750	31	2,505	-.4	-10.9	23	.9
700	31	3,055	-4.1	-13.8	27	3.3
650	31	3,634	-7.8	-17.4	28	4.9
600	31	4,254	-12.1	-21.8	28	5.9
550	31	4,908	-16.5	-26.8	27	6.9
500	31	5,624	-21.5	-32.1	27	8.8
450	31	6,384	-27.4	-37.7	28	8.4
400	31	7,229	-33.8	-42.6	28	9.6
350	31	8,151	-41.0	-48.1	28	11.5
300	31	9,182	-48.8		28	13.1
250	31	10,359	-56.0		28	15.1
200	31	11,768	-57.9		28	17.4
175	30	12,619	-55.8		28	18.4
150	30	13,600	-56.1		27	17.3
125	30	14,754	-58.1		27	15.3
100	30	16,156	-59.0		27	12.2
80	30	17,551	-59.7		27	9.8
70	30	18,386	-58.9		27	7.0
60	28	19,357	-58.5		27	4.4
50	28	20,503	-58.0		28	3.1
40	26	21,915	-57.2		33	.8
30	25	23,739	-56.0		31	1.9
25	21	24,907	-55.2		30	4.5
20	18	26,334	-53.5		29	7.7
15	13	28,224	-49.0		28	17.9
10						
7						

* GREAT FALLS, MONT. 886 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1,123	1.1	-6.7	23	3.5
1000	31	134				
950	31	556				
900	31	995				
850	31	1,456	2.7	-8.1	24	8.0
800	31	1,944	-.4	-10.2	27	8.1
750	31	2,461	-3.9	-12.7	28	8.8
700	31	2,999	-7.7	-15.5	29	10.1
650	31	3,573	-11.2	-20.1	28	10.6
600	31	4,182	-15.2	-24.5	28	10.6
550	31	4,834	-19.4	-28.7	28	12.1
500	31	5,537	-24.4	-32.6	27	13.7
450	31	6,294	-29.9	-37.9	27	14.8
400	31	7,127	-36.1	-42.5	27	15.2
350	31	8,041	-43.4	-47.8	28	15.9
300	31	9,061	-51.3		28	16.8
250	31	10,227	-57.6		28	17.4
200	31	11,631	-58.0		28	16.1
175	30	12,472	-55.7		28	15.8
150	30	13,457	-54.4		28	13.3
125	30	14,624	-55.0		28	12.8
100	30	16,046	-56.0		28	10.7
80	30	17,466	-55.7		28	9.0
70	29	18,317	-55.3		28	7.8
60	28	19,301	-55.6		28	6.1
50	27	20,462	-55.1		28	5.9
40	27	21,885	-56.0		28	4.7
30	27	23,708	-57.2		31	4.1
25	26	24,866	-57.7		31	3.8
20	23	26,289	-58.0		31	6.7
15	19	28,096	-57.9		30	9.6
10	11	30,665	-53.7		28	24.5
7	7	33,009	-46.1			

GREEN BAY, WIS. 990 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	210	-.9	-5.7	29	2.0
1000	31	129				
950	31	539	.1	-7.0	28	5.2
900	31	972	-1.0	-10.0	29	6.9
850	31	1,427	-2.5	-12.2	29	8.2
800	31	1,907	-4.4	-15.2	29	9.1
750	31	2,409	-6.7	-16.6	29	10.4
700	31	2,950	-9.4	-18.3	28	11.6
650	31	3,514	-12.6	-22.0	29	12.8
600	31	4,127	-16.2	-24.3	29	14.5
550	31	4,773	-20.0	-29.0	28	16.4
500	31	5,479	-24.9	-33.3	28	17.8
450	31	6,233	-30.3	-38.8	28	19.6
400	31	7,067	-36.2	-42.9	28	22.7
350	31	7,982	-42.8	-47.6	28	24.3
300	31	9,007	-50.1		27	26.7
250	31	10,181	-56.3		27	27.6
200	31	11,598	-55.2		28	25.9
175	31	12,454	-53.8		28	21.7
150	31	13,444	-53.7		28	21.4
125	31	14,614	-54.6		28	17.1
100	31	16,040	-55.4		28	13.6
80	31	17,458	-56.5		28	12.0
70	31	18,303	-56.7		29	10.5
60	31	19,283	-56.4		29	8.4
50	31	20,439	-56.7		30	6.6
40	31	21,852	-56.9		30	6.4
30	30	23,671	-56.8		29	7.0
25	30	24,827	-56.4		29	7.3
20	30	26,244	-55.9		29	9.0
15	26	28,099	-53.9		28	11.0
10	16	30,726	-50.7		28	20.5
7						

GREENSBORO, N. C. 986 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	273	6.0	.3	27	1.9
1000	31	156				
950	31	578	7.8	-3.7	28	5.8
900	31	1,022	5.8	-6.3	30	7.9
850	31	1,489	3.6	-8.6	29	9.1
800	31	1,979	1.8	-10.7	30	9.8
750	31	2,498	-.6	-14.0	29	9.6
700	31	3,047	-3.3	-18.2	28	11.1
650	31	3,629	-6.3	-21.9	28	12.4
600	31	4,252	-10.1	-24.4	28	14.2
550	31	4,915	-14.5	-28.3	27	16.3
500	31	5,632	-19.7	-31.7	27	17.6
450	31	6,403	-25.5	-36.7	28	19.8
400	31	7,251	-31.6	-42.5	26	23.0
350	31	8,182	-38.4	-45.7	29	26.2
300	31	9,226	-45.8		29	28.5
250	31	10,421	-52.6		29	33.7
200	31	11,846	-56.1		28	36.0
175	30	12,698	-56.3		28	35.6
150	30	13,675	-57.3		28	31.5
125	30	14,821	-59.9		28	26.2
100	30	16,208	-61.8		28	20.9
80	30	17,588	-61.8		28	14.7
70	30	18,415	-61.1		28	11.7
60	30	19,375	-59.3		29	8.4
50	30	20,519	-57.9		29	6.4
40	28	21,928	-56.4		29	6.5
30	28	23,764	-53.6		28	7.1
25	28	24,940	-52.1		28	9.6
20	28	26,388	-50.6		27	13.0
15	26	28,274	-47.6		27	18.5
10	16	30,916	-44.6			
7	5	33,163	-46.6			

HILO, HAWAII 1016 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	11	20.7	18.2	25	.9
1000	31	152	21.1	17.9	25	.7
950	31	595	18.2	15.6	11	1.9
900	31	1,057	15.2	13.0	10	2.3
850	31	1,541	12.6	10.2	10	2.7
800	31	2,049	10.5	5.1	10	2.6
750	31	2,589	9.2	-1.6	11	1.9
700	31	3,155	6.4	-5.9	16	1.9
650	31	3,758	3.1	-10.0	20	2.6
600	31	4,404	-.9	-13.1	22	2.9
550	31	5,091	-5.0	-18.1	23	4.8
500	31	5,837	-9.8	-21.8	24	6.5
450	31	6,640	-14.6	-25.6	24	9.0
400	31	7,527	-20.4	-30.4	25	11.8
350	31	8,502	-27.5	-36.3	25	16.3
300	31	9,594	-35.9	-44.9	26	18.8
250	31	10,834	-46.0		26	21.8
200	31	12,283	-56.9		27	25.8
175	31	13,118	-62.3		27	24.9
150	31	14,058	-67.4		27	21.3
125	31	15,144	-71.7		27	16.7
100	30	16,446	-76.0		26	11.5
80	27	17,739	-74.9		27	4.6
70	27	18,519	-71.8		30	1.1
60	27	19,436	-67.5		09	2.6
50	27	20,548	-62.3		10	4.8
40	27	21,943	-57.4		10	4.1
30	24	23,778	-53.9		09	7.9
25	24	24,954	-51.7		09	9.9
20	23	26,412	-48.4		09	10.4
15	20	28,315	-45.5		10	11.8
10	8	31,036	-40.9			
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5						

HUNTINGTON W. VA. 990 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	246	2.8	-1.1	20	1.2
1000	31	160				
950	31	582	4.9	-3.3	25	4.7
900	31	1,018	3.2	-4.3	27	8.1
850	31	1,480	1.3	-6.9	28	9.5
800	31	1,967	-.8	-10.0	28	10.1
750	31	2,481	-3.0	-12.7	28	10.9
700	31	3,024	-5.6	-16.5	28	12.0
650	31	3,603	-8.5	-19.4	28	14.5
600	31	4,220	-12.3	-24.3	28	15.6
550	31	4,877	-16.5	-28.3	28	17.1
500	31	5,590	-21.4	-33.0	28	18.6
450	31	6,359	-26.8	-38.4	27	20.1
400	31	7,200	-32.7	-43.7	27	21.6
350	31	8,129	-39.0	-46.7	27	24.8
300	31	9,171	-46.4		27	27.6
250	31	10,361	-53.7		27	30.5
200	31	11,784	-56.2		27	32.6
175	31	12,635	-55.2		27	32.4
150	31	13,617	-55.9		27	29.3
125	31	14,773	-57.6		27	24.0
100	31	16,175	-59.4		27	18.8
80	31	17,572	-59.5		28	14.0
70	31	18,409	-58.7		28	11.1
60	31	19,379	-58.1		28	8.0
50	31	20,530	-57.0		28	6.1
40	31	21,948	-55.5		29	5.5
30	31	23,786	-54.4		28	6.3
25	31	24,958	-53.1		28	8.1
20	30	26,395	-51.6		27	12.2
15	28	28,279	-48.5		27	18.1
10	14	30,924	-46.7			
7						
5						

* INTERNATIONAL FALLS, MINN. 972 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	360	-6.3	-10.4	30	.4
1000	31	132				
950	31	534	-4.7	-9.8	30	1.4
900	31	961	-3.9	-10.3	30	4.2
850	31	1,412	-4.9	-12.3	31	5.2
800	31	1,888	-6.1	-15.0	30	6.0
750	31	2,387	-8.4	-17.4	30	6.9
700	31	2,925	-11.2	-20.3	30	8.3
650	31	3,488	-14.5	-22.5	30	9.4
600	31	4,092	-18.4	-26.7	30	10.8
550	31	4,735	-22.2	-30.6	30	12.6
500	31	5,432	-27.0	-35.8	30	13.4
450	31	6,178	-32.6	-40.4	30	14.7
400	31	7,004	-38.5	-44.5	29	15.4
350	31	7,909	-45.2		29	16.3
300	31	8,923	-51.9		29	17.5
250	31	10,091	-55.9		29	17.9
200	31	11,512	-54.4		29	17.7
175	31	12,371	-52.4		28	16.1
150	31	13,367	-52.4		28	15.5
125	31	14,542	-53.4		28	13.4
100	31	15,976	-54.3		29	12.8
80	31	17,404	-54.9		29	11.5
70	31	18,256	-55.3		29	10.4
60	31	19,239	-55.9		29	10.0
50	31	20,399	-56.0		30	8.9
40	31	21,817	-56.3		30	8.7
30	31	23,641	-57.0		30	8.0
25	31	24,793	-57.3		30	9.5
20	31	26,203	-57.4		30	11.1
15	29	28,019	-56.5		29	13.0
10	28	30,605	-53.5		28	18.6
7	24	32,906	-49.5		28	23.8
5	15	35,135	-43.7			

JACKSON, MISS. 1009 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	94	7.7	5.2	25	.4
1000	31	168	8.7	3.8	19	.9
950	31	593	8.9	1.1	24	3.5
900	31	1,041	7.2	-1.3	25	4.3
850	31	1,511	5.8	-5.3	25	5.0
800	31	2,006	3.9	-7.2	25	5.6
750	31	2,527	2.1	-11.0	26	7.8
700	31	3,083	-.6	-14.0	26	8.8
650	31	3,667	-3.6	-17.8	26	11.3
600	31	4,301	-7.5	-20.7	26	14.2
550	31	4,965	-12.0	-23.5	26	17.4
500	31	5,697	-17.0	-27.6	26	20.7
450	31	6,476	-22.1	-32.5	26	23.4
400	31	7,338	-28.0	-38.5	26	27.9
350	30	8,285	-35.0	-44.7	26	31.5
300	30	9,342	-42.8		26	36.3
250	30	10,549	-51.3		26	44.2
200	30	11,975	-57.2		27	47.3
175	30	12,816	-59.0		26	42.9
150	30	13,779	-60.4		26	36.8
125	30	14,906	-63.5		26	30.1
100	30	16,265	-66.0		27	23.4
80	30	17,618	-65.8		27	15.2
70	30	18,433	-63.7		28	11.1
60	30	19,383	-60.9		28	9.1
50	30	20,522	-58.7		28	6.1
40	29	21,931	-56.2		28	6.4
30	28	23,772	-52.9		29	8.8
25	27	24,956	-50.8		28	9.5
20	26	26,422	-48.2		27	12.4
15	24	28,334	-45.1		27	14.3
10	10	31,151	-38.3			
7						
5						

JACKSONVILLE, FLA. 1021 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	5	9.0	6.1	28	2.2
1000	31	177	12.0	5.2	27	2.5
950	31	603	11.0	1.6	26	3.3
900	31	1,056	8.7	-2.6	26	3.7
850	31	1,527	6.9	-5.6	27	5.0
800	31	2,024	4.9	-8.1	27	6.2
750	31	2,545	2.8	-12.5	27	7.5
700	31	3,106	1.2	-16.0	27	9.9
650	31	3,692	-1.7	-18.1	27	12.7
600	31	4,332	-5.6	-21.3	27	16.3
550	31	4,995	-10.0	-24.2	27	18.1
500	31	5,738	-14.7	-29.4	27	22.3
450	31	6,515	-19.8	-33.5	28	25.3
400	31	7,392	-26.1	-38.1	27	28.2
350	31	8,345	-33.0	-44.6	27	32.1
300	31	9,412	-40.7	-49.9	28	39.1
250	31	10,631	-49.3		28	46.3
200	31	12,067	-56.7		28	45.6
175	31	12,909	-59.2		28	41.6
150	31	13,869	-62.0		28	39.1
125	31	14,987	-65.3		27	31.4
100	30	16,339	-68.1		27	23.6
80	30	17,677	-67.4		28	14.6
70	30	18,484	-65.6		27	11.6
60	30	19,428	-62.3		27	7.5
50	30	20,561	-59.5		29	5.0
40	30	21,967	-56.2		29	5.0
30	30	23,608	-52.6		28	5.4
25	30	24,990	-51.0		28	5.6
20	30	26,448	-48.7		27	8.0
15	28	28,345	-45.3		27	13.5
10	15	31,048	-40.7			
7	5	33,563	-36.8			
5						

JOHN F. KENNEDY INT. AP NY 1015 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	5	2.8	-3.1	32	2.7
1000	31	129			30	2.3
950	31	545	3.0	-3.8	30	4.7
900	31	982	1.5	-5.3	29	6.1
850	31	1,442	.1	-8.0	29	8.2
800	31	1,926	-1.5	-10.8	29	9.1
750	31	2,441	-3.7	-13.9	28	9.9
700	31	2,981	-6.6	-16.2	28	10.8
650	31	3,557	-9.8	-19.1	28	12.8
600	31	4,170	-13.4	-22.3	28	14.2
550	31	4,825	-17.8	-26.9	28	15.6
500	31	5,534	-22.5	-31.9	28	17.5
450	30	6,308	-27.5	-37.2	29	19.5
400	30	7,150	-33.4	-42.8	29	20.4
350	30	8,075	-40.2	-45.3	29	21.1
300	30	9,112	-47.0		29	23.6
250	30	10,303	-52.9		28	27.0
200	30	11,729	-55.8		28	27.8
175	30	12,583	-53.8		28	26.2
150	29	13,570	-54.5		28	23.8
125	29	14,734	-56.0		28	20.4
100	29	16,148	-57.3		28	16.5
80	29	17,557	-57.6		28	13.6
70	28	18,400	-57.3		28	10.9
60	28	19,377	-56.6		28	7.6
50	28	20,536	-55.9		28	6.5
40	28	21,955	-55.8		28	6.4
30	27	23,790	-54.6		28	7.4
25	27	24,961	-53.5		28	8.4
20	24	26,389	-52.5		27	12.7
15	19	28,255	-50.8		28	15.9
10	11	30,932	-45.8			

JOHNSTON IS., PACIFIC AREA 1014 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	3	24.1	21.3	07	7.8
1000	31	128	23.2	20.7	07	8.9
950	31	573	19.8	17.9	08	10.2
900	31	1,040	16.9	14.8	09	10.1
850	31	1,527	14.3	12.3	09	8.3
800	31	2,038	12.0	6.4	10	5.8
750	31	2,578	9.8	1.3	10	3.8
700	31	3,148	6.8	-2.5	12	2.6
650	31	3,750	3.2	-6.5	17	2.0
600	31	4,400	-.4	-11.2	19	2.8
550	31	5,085	-4.7	-16.5	21	4.2
500	31	5,835	-9.2	-21.3	23	6.6
450	31	6,641	-14.5	-23.9	24	9.4
400	31	7,527	-20.3	-28.2	24	13.0
350	31	8,505	-26.7	-35.8	24	17.4
300	31	9,601	-34.6	-44.6	25	21.5
250	31	10,850	-44.2		25	25.4
200	30	12,308	-55.7		26	27.0
175	30	13,147	-61.8		26	26.3
150	29	14,090	-67.8		27	23.1
125	26	15,171	-73.5		27	17.9
100	20	16,461	-77.7		27	11.3
80	18	17,740	-75.7		26	4.7
70	16	18,514	-72.4		24	3.2
60	16	19,429	-68.2		27	1.1
50	16	20,539	-62.3		08	2.4
40	16	21,934	-58.0		09	4.5
30	16	23,763	-54.4		09	9.2
25	15	24,942	-51.0		08	12.8
20	15	26,403	-48.1		09	16.1
15	14	28,319	-44.3		09	16.7
10	8	31,060	-40.6			

KING SALMON, ALASKA 1004 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	15	-4.5	-9.5	04	1.3
1000	31	42			34	1.8
950	31	445	-4.6	-10.8	04	3.3
900	31	872	-6.3	-12.3	06	2.7
850	31	1,318	-7.8	-15.2	06	1.7
800	31	1,788	-9.8	-18.6	05	.7
750	31	2,282	-12.7	-22.7	05	.6
700	31	2,808	-15.8	-24.9	36	.9
650	31	3,362	-19.2	-28.4	33	1.9
600	31	3,955	-22.9	-31.8	32	2.8
550	31	4,583	-27.2	-35.7	31	2.9
500	31	5,267	-32.0	-39.9	29	2.3
450	31	6,001	-37.3	-43.3	28	2.9
400	31	6,809	-43.3	-47.5	27	3.2
350	31	7,697	-49.3		28	5.0
300	31	8,695	-54.5		27	5.7
250	31	9,857	-55.8		26	6.6
200	31	11,286	-52.9		26	6.9
175	31	12,150	-51.8		25	6.5
150	31	13,150	-51.2		25	8.0
125	31	14,333	-51.5		25	8.1
100	31	15,781	-51.4		25	9.7
80	29	17,227	-51.9		25	10.5
70	29	18,091	-52.3		25	11.9
60	28	19,096	-52.5		25	12.3
50	26	20,272	-53.3		25	13.6
40	28	21,704	-54.5		26	14.9
30	28	23,536	-56.6		27	16.9
25	28	24,688	-57.9		27	18.1
20	26	26,094	-59.5		27	19.6
15	19	27,861	-61.0		28	23.4
10	7	30,409	-58.6			

KOROR, CAROLINE IS. + 1007 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	30	27.5	24.2	06	4.4
1000	31	94	26.9	23.5	07	5.3
950	31	543	23.0	19.4	07	8.0
900	31	1,017	20.2	15.0	08	9.3
850	31	1,509	17.5	10.4	08	9.4
800	31	2,026	15.2	6.3	09	8.4
750	31	2,569	12.8	1.0	09	8.7
700	31	3,149	9.9	-2.3	09	8.5
650	31	3,761	6.5	-6.0	09	8.6
600	31	4,414	2.8	-10.2	09	9.1
550	31	5,112	-1.1	-14.7	09	9.0
500	31	5,869	-5.5	-19.6	09	9.0
450	31	6,686	-10.4	-25.3	09	8.8
400	31	7,588	-15.7	-30.7	08	8.0
350	31	8,582	-22.5	-37.0	09	6.7
300	31	9,695	-31.0	-44.9	10	5.3
250	31	10,960	-41.5		11	5.1
200	31	12,433	-54.0		12	6.3
175	31	13,276	-61.1		12	5.8
150	31	14,216	-68.4		11	5.5
125	31	15,291	-74.9		07	2.2
100	31	16,563	-81.3		05	2.9
80	30	17,820	-77.7		07	1.3
70	30	18,595	-71.9		29	3.4
60	30	19,510	-68.6		29	4.4
50	28	20,616	-64.1		27	3.1
40	24	21,998	-59.7		09	8.4
30	21	23,818	-54.7		09	24.4
25	20	24,995	-51.3		09	28.5
20	16	26,450	-47.1		09	30.2
15	7	28,363	-43.5			
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KOTZEBUE, ALASKA 1012 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	28	5	-17.9	-21.9	10	2.3
1000	28	97			09	2.3
950	28	491	-9.8	-13.4	11	3.7
900	28	908	-10.3	-14.0	13	3.0
850	28	1,348	-11.4	-16.6	16	2.8
800	28	1,811	-13.4	-18.8	17	3.0
750	28	2,297	-15.6	-20.7	17	3.6
700	28	2,818	-18.3	-23.6	17	3.9
650	28	3,365	-22.0	-27.6	18	4.5
600	28	3,951	-26.0	-31.9	18	4.7
550	28	4,574	-30.1	-36.8	19	4.6
500	28	5,248	-34.8	-40.7	19	4.7
450	28	5,974	-40.0	-42.9	20	4.8
400	28	6,772	-45.6		20	7.4
350	28	7,650	-51.3		20	7.9
300	28	8,640	-56.3		20	9.2
250	28	9,792	-57.5		20	6.7
200	27	11,206	-56.0		22	6.7
175	27	12,058	-55.3		22	7.9
150	27	13,041	-55.2		23	9.8
125	27	14,204	-55.5		23	11.0
100	27	15,624	-56.2		24	10.3
80	27	17,041	-56.4		25	12.9
70	27	17,887	-56.7		25	13.6
60	26	18,868	-57.2		25	17.2
50	26	20,019	-58.0		25	20.4
40	25	21,420	-58.9		26	21.5
30	21	23,249	-60.6		26	24.2
25	20	24,399	-61.8		25	26.2
20	16	25,793	-62.5		25	23.2
15	8	27,589	-64.5			
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See reference note at end of table

NOTE: Data for Guam at end of table

RAWINSONDE DATA

Average monthly values

MARCH 1968

KWAJALEIN, MARSHALL IS. 1010 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	4	26.6	23.9	06	6.9
1000	31	95	26.0	22.7	06	8.2
950	31	546	22.8	20.1	07	11.1
900	31	1,017	20.1	17.0	08	10.9
850	31	1,510	17.7	12.7	09	10.1
800	31	2,027	15.0	9.3	09	9.0
750	31	2,572	12.9	2.1	09	8.0
700	31	3,149	9.6	-2.1	09	6.6
650	31	3,761	6.2	-7.6	08	5.9
600	31	4,413	2.6	-13.2	08	5.6
550	31	5,112	-1.2	-18.7	07	6.1
500	31	5,866	-5.7	-22.6	05	6.1
450	31	6,684	-10.6	-27.7	05	5.4
400	31	7,581	-16.1	-32.4	02	3.7
350	31	8,573	-23.3	-38.8	33	2.7
300	31	9,681	-32.2	-46.8	29	3.5
250	31	10,941	-42.2	-52.4	26	5.3
200	30	12,409	-54.6	-61.9	27	6.2
175	28	13,251	-61.3		28	5.9
150	28	14,190	-68.7		28	5.8
125	28	15,261	-76.3		29	6.0
100	28	16,528	-81.4		33	3.7
80	28	17,788	-78.2		29	1.7
70	28	18,557	-74.5		27	4.5
60	27	19,464	-70.0		27	5.9
50	26	20,561	-65.3		28	2.8
40	26	21,935	-60.9		09	6.4
30	26	23,735	-57.5		09	19.8
25	24	24,900	-54.0		09	25.5
20	25	26,345	-49.8		09	27.8
15	24	28,251	-45.2		09	29.9
10	23	30,994	-39.7		09	28.9
7	20	33,456	-35.5		10	11.3
5	10	35,819	-31.3			
4						

LAKE CHARLES, LA. 1019 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	5	10.8	9.2	09	1.0
1000	31	163	11.3	7.0	13	2.2
950	31	590	9.2	3.2	19	2.8
900	31	1,038	7.6	.9	21	3.6
850	31	1,509	6.8	-3.3	23	4.3
800	31	2,006	5.6	-7.0	24	5.8
750	31	2,533	4.2	-10.7	25	7.5
700	31	3,092	1.8	-12.4	26	10.0
650	31	3,685	-1.2	-15.8	26	12.8
600	31	4,321	-5.0	-19.0	26	14.0
550	31	4,991	-9.8	-22.6	26	15.9
500	31	5,727	-14.9	-27.0	26	19.4
450	31	6,511	-20.4	-33.2	26	23.0
400	31	7,378	-26.8	-38.2	26	25.4
350	31	8,327	-33.9	-43.7	26	30.0
300	31	9,391	-41.2	-50.5	26	36.0
250	31	10,606	-49.8		26	41.7
200	31	12,039	-57.0		26	43.4
175	31	12,879	-59.6		26	40.8
150	31	13,837	-62.2		26	36.4
125	31	14,957	-64.5		26	28.4
100	30	16,314	-67.3		26	21.2
80	30	17,660	-66.6		27	13.0
70	30	18,469	-65.3		26	8.7
60	29	19,414	-62.5		27	6.1
50	29	20,549	-58.5		28	5.2
40	29	21,961	-55.6		29	3.8
30	28	23,806	-52.0		29	4.8
25	28	24,991	-50.5		28	5.9
20	27	26,455	-48.6		27	7.2
15	24	28,369	-43.6		26	10.0
10	11	31,177	-38.0			
7	5	33,678	-35.1			
5						
4						

LANDER, WYO. 828 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1,696	-1.6	-7.2	26	1.3
1000	31	160				
950	31	577				
900	31	1,017				
850	31	1,481				
800	31	1,967	.7	-8.9	28	1.2
750	31	2,477	-1.9	-12.2	30	2.5
700	31	3,029	-5.1	-16.0	29	5.0
650	31	3,598	-8.9	-19.8	29	8.1
600	31	4,224	-12.6	-24.0	29	9.2
550	31	4,873	-17.0	-28.9	28	9.6
500	31	5,592	-22.3	-33.1	29	9.3
450	31	6,350	-28.3	-37.9	28	9.0
400	31	7,192	-35.1	-43.3	29	10.2
350	31	8,109	-42.5	-48.2	28	11.7
300	31	9,133	-50.5		28	13.1
250	31	10,302	-57.5		28	15.0
200	31	11,703	-59.0		28	16.4
175	31	12,545	-56.9		28	15.8
150	31	13,525	-55.7		28	15.2
125	31	14,686	-56.2		28	13.1
100	31	16,098	-57.5		27	10.8
80	31	17,507	-57.4		27	8.3
70	31	18,349	-57.7		27	7.0
60	31	19,323	-57.7		27	5.7
50	31	20,475	-57.0		28	3.5
40	31	21,888	-56.9		29	3.1
30	30	23,711	-57.0		33	2.9
25	29	24,868	-57.3		32	2.9
20	25	26,282	-56.5		29	6.8
15	19	28,104	-54.7		29	11.1
10	7	30,709	-54.3			
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* LIHUE KAUAI, HAWAII 1015 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	36	20.3	17.9	04	3.9
1000	31	163	20.3	17.3	04	5.4
950	31	602	17.3	15.2	05	7.0
900	31	1,065	14.2	12.6	05	5.9
850	31	1,547	11.2	8.9	06	4.4
800	31	2,053	10.8	-2.3	08	3.2
750	31	2,589	9.1	-9.0	10	1.9
700	31	3,159	6.3	-12.4	19	.6
650	31	3,754	2.7	-16.9	22	1.9
600	31	4,405	-1.5	-18.9	25	2.7
550	31	5,084	-6.0	-22.2	26	4.8
500	31	5,833	-10.7	-26.0	25	7.4
450	31	6,632	-15.7	-28.1	25	10.5
400	31	7,516	-21.5	-33.6	25	14.3
350	31	8,486	-28.5	-39.6	25	19.1
300	31	9,572	-36.9	-45.7	25	22.4
250	31	10,807	-46.9		25	27.6
200	31	12,254	-56.3		26	30.9
175	31	13,092	-61.6		26	28.3
150	31	14,035	-66.7		26	24.9
125	31	15,126	-71.0		26	20.6
100	30	16,435	-74.1		26	15.9
80	30	17,733	-73.8		26	11.6
70	29	18,516	-71.2		26	7.7
60	29	19,435	-67.2		27	3.5
50	26	20,544	-63.3		10	2.7
40	25	21,927	-58.4		11	3.4
30	24	23,760	-54.1		10	4.7
25	24	24,934	-52.4		08	5.8
20	24	26,385	-49.5		08	8.0
15	24	28,282	-46.2		09	8.2
10	24	30,997	-42.8		13	5.8
7	22	33,420	-39.0		15	6.2
5	17	35,780	-35.4		19	9.3
4	8	37,263	-36.4			

LITTLE ROCK, ARK. 1010 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	79	6.2	.9	29	.7
1000	31	160	7.4	.5	23	1.3
950	31	581	6.9	-.9	26	3.2
900	31	1,027	5.5	-3.2	27	4.5
850	31	1,493	3.9	-5.8	27	5.4
800	31	1,985	2.4	-8.4	27	6.7
750	31	2,506	.0	-11.3	27	7.0
700	31	3,055	-2.7	-15.3	26	8.2
650	31	3,638	-6.1	-17.6	26	10.2
600	31	4,263	-9.8	-21.8	26	12.9
550	31	4,924	-14.1	-25.3	26	15.0
500	31	5,646	-18.9	-29.9	26	17.9
450	31	6,418	-24.1	-35.0	26	19.9
400	31	7,273	-29.9	-40.2	26	22.8
350	31	8,212	-36.8	-45.0	26	25.4
300	31	9,261	-44.7		26	30.1
250	31	10,459	-53.1		26	36.3
200	31	11,881	-57.1		26	40.0
175	31	12,726	-57.1		26	38.2
150	31	13,699	-58.4		26	32.6
125	31	14,838	-61.1		27	25.9
100	31	16,215	-63.2		27	19.3
80	28	17,586	-63.4		27	12.7
70	27	18,410	-62.0		27	10.3
60	27	19,367	-60.3		27	8.0
50	27	20,506	-58.8		27	6.8
40	25	21,914	-56.8		28	7.0
30	21	23,747	-54.2		27	7.4
25	20	24,923	-52.0		27	8.7
20	18	26,385	-48.9		27	11.9
15	17	28,291	-44.2		27	15.3
10	11	30,983	-42.4			
7						
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MCGRATH, ALASKA 996 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	103	-13.8	-16.9	32	.9
1000	31	73			32	1.1
950	31	472	-7.9	-12.7	05	2.6
900	31	888	-8.1	-12.9	07	2.7
850	31	1,332	-8.5	-15.4	08	2.0
800	31	1,801	-10.7	-18.0	11	1.9
750	31	2,287	-13.5	-21.2	14	2.1
700	31	2,815	-16.4	-24.6	14	1.9
650	31	3,363	-20.0	-27.5	14	1.5
600	31	3,957	-24.2	-31.4	15	1.6
550	31	4,579	-28.2	-35.4	14	1.4
500	31	5,264	-32.8	-39.8	19	1.8
450	31	5,991	-38.1	-43.3	23	1.6
400	31	6,798	-44.0		28	2.3
350	31	7,683	-50.4		28	2.3
300	31	8,675	-55.7		28	3.7
250	31	9,832	-56.2		26	4.5
200	30	11,260	-53.1		25	5.4
175	30	12,121	-52.6		25	6.8
150	30	13,117	-52.4		24	6.7
125	30	14,294	-52.6		24	9.9
100	30	15,733	-52.9		24	11.3
80	30	17,170	-53.2		24	13.6
70	30	18,029	-53.5		25	15.5
60	30	19,020	-53.8		25	15.5
50	30	20,190	-54.6		25	17.9
40	30	21,614	-56.2		25	20.4
30	29	23,440	-58.3		26	21.9
25	27	24,576	-59.8		26	23.4
20	20	25,971	-60.5		27	25.2
15	16	27,781	-61.3			
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◆ MAJURO, MARSHALL IS. 1011 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	3	28.2	24.6	07	5.7
1000	31	98	26.9	22.0	07	7.0
950	31	544	23.0	18.5	08	10.5
900	31	1,021	20.4	15.4	09	10.9
850	31	1,513	17.5	11.8	09	10.6
800	31	2,031	15.2	7.9	09	9.9
750	31	2,578	12.8	2.9	09	9.1
700	31	3,154	9.7	-1.3	09	8.5
650	31	3,765	6.4	-5.8	09	6.9
600	31	4,419	2.6	-11.0	08	5.8
550	31	5,110	-1.3	-15.1	08	5.2
500	31	5,875	-5.3	-20.2	06	4.7
450	31	6,691	-10.0	-25.7	03	4.6
400	31	7,597	-15.4	-31.4	01	4.6
350	31	8,593	-22.2	-37.1	33	3.7
300	31	9,708	-30.5	-45.2	27	3.5
250	31	10,979	-40.5	-52.9	25	5.0
200	31	12,462	-52.8		25	7.7
175	31	13,311	-59.6		26	8.6
150	30	14,259	-66.9		27	8.8
125	30	15,340	-74.4		29	7.5
100	30	16,618	-79.9		31	4.5
80	30	17,886	-77.1		28	4.8
70	29	18,659	-72.6		27	6.9
60	26	19,576	-67.4		26	8.2
50	25	20,687	-63.1		27	3.5
40	22	22,073	-59.1		10	7.0
30	17	23,893	-55.0		09	22.3
25	11	25,035	-51.9		09	27.4
20	7	26,504	-46.6			
15						
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◆ MARCUS IS., N. PACIFIC 1018 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	9	23.4	17.6	11	3.7
1000	30	160	20.5	13.6	10	5.3
950	30	601	16.6	9.2	11	5.6
900	30	1,059	13.6	6.5	13	4.5
850	30	1,540	11.7	1.3	16	4.0
800	30	2,046	11.5	-5.4	21	3.2
750	30	2,587	9.3	-9.0	22	3.8
700	30	3,153	6.4	-13.1	24	5.2
650	30	3,753	3.1	-15.8	26	6.9
600	30	4,402	-.8	-18.7	26	10.0
550	30	5,089	-5.1	-22.8	26	11.4
500	30	5,835	-9.8	-26.1	27	14.5
450	30	6,638	-15.4	-31.0	27	18.5
400	30	7,521	-21.3	-36.4	27	21.7
350	30	8,492	-28.4	-43.2	27	24.2
300	30	9,578	-36.9	-50.0	28	27.1
250	30	10,815	-45.7		28	35.0
200	30	12,269	-55.4		27	39.2
175	30	13,112	-59.8		27	37.5
150	30	14,064	-64.8		27	33.5
125	30	15,161	-70.4		27	28.9
100	30	16,472	-74.1		27	20.0
80	30	17,517	-72.4		27	9.5
70	30	18,564	-69.8		28	4.3
60	30	19,491	-65.0		12	2.7
50	30	20,614	-60.9		10	6.5
40	27	22,019	-56.0		09	8.1
30	24	23,872	-50.9		09	12.4
25	22	25,068	-48.5		10	15.9
20	14	26,543	-45.0		09	20.0
15	5	28,500	-40.4			
10						
7						
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* MEDFORD, OREG. 971 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	401	4.3	1.5	19	.3
1000	31	160				
950	31	584	6.2	.9	19	1.0
900	31	1,023	5.2	-2.3	18	3.2
850	31	1,489	2.7	-5.3	19	3.9
800	31	1,977	.0	-9.2	22	5.2
750	31	2,491	-3.0	-12.8	23	7.3
700	31	3,036	-6.2	-16.4	24	9.4
650	31	3,610	-9.8	-19.3	25	10.7
600	31	4,227	-13.6	-23.3	25	11.3
550	31	4,881	-17.9	-28.3	25	12.0
500	31	5,590	-23.0	-32.8	25	12.8
450	31	6,350	-28.5	-38.0	26	12.8
400	31	7,190	-34.8	-42.1	26	13.9
350	31	8,109	-41.9	-47.5	26	15.4
300	31	9,137	-49.6		27	17.8
250	31	10,311	-56.6		27	19.8
200	31	11,718	-58.5		27	22.4
175	31	12,562	-56.3		27	20.2
150	31	13,542	-56.1		27	17.1
125	31	14,699	-57.1		27	14.5
100	31	16,108	-57.5		26	12.7
80	31	17,517	-57.8		27	9.8
70	31	18,358	-57.8		27	7.6
60	31	19,331	-57.1		26	5.0
50	31	20,485	-57.2		26	4.2
40	31	21,897	-57.0		25	3.1
30	28	23,723	-56.8		26	3.8
25	28	24,878	-56.7		25	4.7
20	28	26,295	-56.2		27	7.7
15	26	28,141	-54.2		27	12.1
10	21	30,780	-49.7		27	26.2
7	18	33,140	-45.4		27	37.6
5	10	35,478	-41.7			

MERIDA, MEXICO 1018 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	11	17.9	15.9	08	2.5
1000	31	167	19.7	16.1	09	4.5
950	31	608	17.7	12.2	12	5.7
900	31	1,070	15.4	9.2	13	4.1
850	31	1,553	12.5	6.7	15	1.6
800	31	2,062	11.8	.2	25	1.8
750	31	2,598	9.5	-4.1	25	2.5
700	31	3,170	7.6	-10.1	24	2.1
650	31	3,775	5.0	-14.3	26	2.8
600	31	4,427	1.7	-18.4	26	4.6
550	31	5,114	-2.8	-22.2	26	5.9
500	31	5,871	-7.9	-26.3	25	7.3
450	31	6,677	-14.1	-30.7	25	9.4
400	31	7,566	-20.8	-35.3	26	12.0
350	31	8,539	-28.0	-41.7	26	13.7
300	31	9,627	-36.4	-48.9	25	15.5
250	31	10,865	-46.0		26	16.7
200	31	12,315	-56.5		26	19.6
175	30	13,151	-61.5		26	18.1
150	29	14,093	-66.1		26	17.3
125	28	15,189	-70.4		26	15.3
100	27	16,501	-74.3		26	12.5
80	26	17,795	-75.0		26	8.6
70	26	18,575	-71.4		26	4.4
60	26	19,499	-64.9		09	.9
50	26	20,625	-60.0		07	5.0
40	26	22,037	-54.6		07	7.0
30	26	23,895	-51.1		08	8.9
25	25	25,084	-49.0		08	9.8
20	23	26,556	-45.4		09	12.0
15	20	28,492	-40.8		10	13.5
10	8	31,269	-37.4			
7						
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MIAMI, FLA. 1020 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	4	16.6	12.8	03	1.2
1000	31	169	16.9	11.4	07	2.3
950	31	605	14.4	8.1	09	2.7
900	31	1,061	12.2	4.3	08	1.7
850	31	1,539	10.7	1.5	29	1.5
800	31	2,043	9.2	-2.8	28	3.8
750	31	2,578	7.4	-7.5	28	4.8
700	31	3,144	5.1	-12.2	27	6.0
650	31	3,743	2.3	-15.3	27	7.6
600	31	4,389	-1.3	-18.7	28	10.9
550	31	5,070	-5.2	-22.9	28	14.5
500	31	5,821	-10.2	-27.2	28	16.8
450	31	6,618	-15.8	-31.9	28	20.4
400	31	7,504	-22.2	-37.2	28	21.9
350	31	8,472	-27.5	-41.0	28	24.6
300	31	9,554	-37.9	-49.2	28	27.9
250	31	10,787	-47.1		28	30.7
200	31	12,234	-56.4		28	32.6
175	31	13,074	-60.5		28	32.2
150	30	14,025	-64.6		27	28.9
125	30	15,127	-66.7		27	27.0
100	29	16,452	-72.2		28	21.4
80	28	17,765	-71.8		28	11.8
70	28	18,555	-69.3		28	7.9
60	28	19,486	-64.6		28	4.6
50	27	20,612	-59.5		33	1.9
40	27	22,020	-56.0		04	2.4
30	26	23,864	-52.1		07	3.4
25	25	25,049	-50.0		08	3.0
20	23	26,518	-46.7		08	4.2
15	20	28,440	-42.6		16	2.3
10	9	31,145	-39.4			
7	5	33,601	-37.0			
5						

MIDLAND, TEXAS 917 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	874	6.6	4.0	19	1.7
1000	31	150				
950	31	576				
900	31	1,024	8.0	1.8	20	3.0
850	31	1,496	8.4	-3.0	25	3.7
800	31	1,996	6.6	-7.2	27	4.6
750	31	2,523	3.5	-10.1	28	5.2
700	31	3,080	.0	-13.3	27	6.5
650	31	3,667	-3.9	-16.1	27	8.1
600	31	4,297	-8.2	-20.3	26	10.3
550	31	4,963	-12.9	-25.4	26	13.0
500	31	5,686	-17.8	-29.3	26	15.7
450	31	6,460	-23.3	-34.2	26	18.2
400	31	7,318	-29.4	-39.3	26	22.8
350	31	8,258	-36.3	-44.4	26	27.5
300	31	9,310	-44.0		25	33.2
250	31	10,511	-51.9		26	37.7
200	31	11,938	-56.7		26	39.9
175	31	12,783	-57.9		26	35.3
150	31	13,751	-59.6		26	30.1
125	31	14,884	-62.3		26	25.4
100	31	16,255	-65.0		26	18.9
80	30	17,613	-65.2		27	10.2
70	29	18,426	-63.8		26	7.9
60	28	19,372	-62.1		26	5.5
50	27	20,510	-58.8		26	3.7
40	25	21,921	-56.7		27	4.1
30	24	23,752	-54.3		27	6.8
25	22	24,926	-52.8		27	6.9
20	22	26,374	-50.2		27	8.3
15	18	28,267	-45.5		28	12.2
10	13	31,005	-41.1			
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MONTERREY, MEXICO 970 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	21	423	9.9	6.7	34	1.3
1000	21	169				
950	21	594	10.7	8.7	01	1.3
900	21	1,047	9.5	6.3	11	.3
850	21	1,522	9.6	.8	18	1.8
800	21	2,026	9.3	-3.6	21	4.2
750	21	2,560	7.2	-7.4	22	5.9
700	21	3,124	4.2	-11.0	24	7.9
650	21	3,725	.8	-13.4	25	11.0
600	21	4,362	-3.4	-16.9	24	12.0
550	21	5,041	-7.8	-22.8	24	14.2
500	21	5,781	-12.7	-28.5	24	16.3
450	21	6,575	-17.9	-33.6	25	20.1
400	21	7,450	-24.1	-39.8	25	22.7
350	21	8,411	-31.1	-45.7	25	25.9
300	21	9,487	-39.4	-50.8	25	27.7
250	21	10,711	-48.0		25	30.0
200	21	12,153	-57.2		25	34.0
175	21	12,990	-61.0		25	33.6
150	21	13,941	-63.6		26	30.3
125	21	15,049	-67.9		26	24.1
100	21	16,381	-71.0		26	18.3
80	21	17,701	-70.2		26	12.0
70	21	18,498	-67.9		25	7.6
60	21	19,434	-63.6		25	2.8
50	21	20,567	-59.2		18	1.6
40	21	21,976	-55.7		14	.9
30	21	23,823	-52.3		07	2.5
25	21	25,007	-50.3		07	3.3
20	18	26,463	-47.9		10	1.9
15	16	28,369	-43.4		12	.5
10	10	31,149	-38.8			
7						
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MONTGOMERY, ALA. 1014 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	61	7.7	4.0	24	.3
1000	31	175	9.1	3.2	30	.7
950	31	603	9.7	1.2	26	2.4
900	31	1,049	7.7	-2.1	26	3.9
850	31	1,519	5.6	-5.2	26	4.8
800	31	2,013	3.9	-9.2	26	6.9
750	31	2,536	2.1	-12.3	26	8.3
700	31	3,092	.2	-16.2	27	10.1
650	31	3,681	-3.0	-18.4	27	12.3
600	31	4,313	-6.9	-21.3	27	14.5
550	31	4,981	-11.6	-25.4	27	16.7
500	31	5,711	-16.5	-29.3	27	19.8
450	31	6,490	-21.7	-34.2	26	23.1
400	31	7,354	-27.8	-38.8	26	27.0
350	30	8,301	-34.5	-45.1	26	32.1
300	30	9,362	-42.3		26	36.7
250	30	10,572	-50.3		26	44.3
200	30	12,004	-57.1		27	46.8
175	30	12,846	-58.6		27	42.5
150	30	13,810	-60.6		26	36.8
125	30	14,937	-63.5		27	30.6
100	30	16,299	-65.7		27	23.3
80	30	17,653	-65.3		27	16.0
70	30	18,467	-63.8		27	11.4
60	30	19,419	-60.9		27	8.5
50	30	20,558	-59.2		28	6.1
40	30	21,968	-55.9		28	6.2
30	30	23,611	-52.8		28	7.6
25	30	24,992	-51.1		27	8.6
20	30	26,452	-48.7		27	11.2
15	29	28,364	-44.7		27	14.4
10	20	31,101	-39.7		27	18.7
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* NANTUCKET, MASS. 1014 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	14	2.0	-1.0	30	1.9
1000	31	124			29	1.9
950	31	537	2.9	-5.0	28	5.1
900	31	977	.9	-8.2	28	7.1
850	31	1,435	-1.0	-10.6	27	8.0
800	31	1,917	-3.1	-13.1	27	9.0
750	31	2,424	-5.3	-15.2	27	10.6
700	31	2,965	-7.7	-17.9	27	11.2
650	31	3,533	-10.7	-20.9	27	12.6
600	31	4,150	-14.5	-24.7	27	13.4
550	31	4,800	-18.6	-28.3	27	14.7
500	31	5,509	-23.0	-33.2	27	16.3
450	31	6,268	-28.0	-37.9	27	17.0
400	31	7,110	-33.9	-43.7	27	18.1
350	31	8,032	-40.3	-47.0	27	18.9
300	31	9,068	-47.2		27	20.9
250	31	10,257	-53.2		27	23.8
200	31	11,682	-55.4		28	24.9
175	31	12,536	-54.2		28	23.0
150	31	13,524	-54.4		27	23.7
125	31	14,691	-55.3		27	21.2
100	31	16,110	-56.3		27	16.7
80	31	17,521	-57.4		27	12.7
70	31	18,364	-57.4		27	10.8
60	31	19,340	-56.8		28	9.6
50	31	20,497	-56.1		28	9.2
40	31	21,917	-55.7		28	8.2
30	31	23,750	-55.3		28	8.7
25	31	24,914	-54.9		28	9.2
20	26	26,343	-53.5		27	12.4
15	28	28,202	-51.5		28	17.0
10	22	30,864	-46.4		27	26.2
7	20	33,253	-41.2		27	35.1
5	6	35,563	-37.0			

See reference note at end of table

RAWINSONDE DATA

Average monthly values

MARCH 1968

NASHVILLE, TENN. — 999 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	180	4.9	.9	21	1.0
1000	31	167			19	1.4
950	31	586	6.2	-1.3	25	5.0
900	31	1.030	4.7	-3.8	26	7.1
850	31	1.495	2.9	-6.6	26	7.6
800	31	1.984	1.1	-10.4	27	8.3
750	31	2.502	-1.1	-12.9	27	9.7
700	31	3.050	-3.7	-16.1	27	10.9
650	31	3.628	-6.8	-19.4	27	12.3
600	31	4.253	-10.3	-22.5	27	14.4
550	31	4.913	-15.0	-26.4	27	15.3
500	31	5.632	-19.9	-29.4	27	18.6
450	31	6.400	-25.2	-34.7	27	20.3
400	31	7.251	-31.2	-40.1	27	23.1
350	31	8.185	-37.9	-44.3	27	26.0
300	31	9.230	-45.4		27	29.2
250	31	10.425	-53.0		27	35.2
200	31	11.845	-57.0		27	39.3
175	31	12.692	-56.4		27	39.5
150	31	13.669	-57.2		27	34.2
125	31	14.814	-59.9		27	28.3
100	31	16.202	-61.5		27	21.5
80	31	17.582	-61.6		28	16.4
70	31	18.411	-60.4		28	11.6
60	31	19.372	-59.3		28	7.8
50	31	20.516	-58.3		28	6.1
40	31	21.924	-56.7		28	6.0
30	31	23.757	-54.4		28	7.4
25	31	24.927	-53.4		28	8.8
20	30	26.370	-51.5		28	11.3
15	25	28.223	-49.7		27	17.1
10	23	30.889	-46.5		27	25.7
7	16	33.195	-45.1		27	34.4
5	13	35.452	-41.5			

* NOME, ALASKA — 1009 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	5	-14.0	-17.8	07	1.7
1000	31	74			10	2.0
950	31	470	-9.3	-13.4	12	2.3
900	31	888	-9.8	-15.6	12	2.2
850	31	1.328	-11.1	-18.0	10	1.8
800	31	1.792	-12.8	-21.3	16	1.2
750	31	2.278	-15.4	-23.7	18	2.0
700	31	2.801	-18.2	-26.8	19	2.5
650	31	3.347	-21.2	-29.9	21	2.7
600	31	3.938	-25.1	-33.5	22	2.9
550	31	4.563	-29.4	-36.7	22	3.5
500	31	5.239	-34.2	-40.6	22	4.9
450	31	5.965	-39.4	-44.3	22	6.0
400	31	6.767	-45.0		23	7.4
350	31	7.649	-50.6		23	8.6
300	31	8.642	-55.5		23	7.4
250	31	9.800	-56.7		23	5.0
200	31	11.220	-54.8		23	6.6
175	31	12.076	-53.8		23	7.0
150	30	13.063	-54.3		23	8.6
125	30	14.232	-54.1		24	8.9
100	30	15.663	-54.3		25	12.2
80	30	17.093	-54.7		25	14.3
70	30	17.946	-55.0		25	15.8
60	30	18.931	-55.4		25	17.4
50	30	20.092	-56.1		25	19.5
40	30	21.506	-57.4		25	21.8
30	30	23.315	-54.4		25	25.6
25	29	24.460	-60.4		26	27.5
20	27	25.865	-61.6		26	28.5
15	25	27.641	-61.8		26	32.2
10	13	30.145	-61.1			
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NORTH PLATTE, NEBR. — 918 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	848	-2.6	-8.2	34	1.1
1000	31	158				
950	31	570				
900	31	1.003	1.8	-6.8	31	2.4
850	31	1.465	2.7	-8.2	30	5.4
800	31	1.955	1.2	-11.6	31	6.0
750	31	2.472	-1.7	-14.4	30	7.8
700	31	3.018	-5.2	-17.4	30	9.4
650	31	3.593	-9.0	-21.3	30	10.2
600	31	4.212	-13.0	-25.2	29	10.3
550	31	4.864	-17.5	-29.1	29	10.7
500	31	5.577	-22.7	-34.1	29	11.1
450	31	6.338	-28.5	-40.0	28	11.7
400	31	7.176	-34.8	-45.2	28	13.7
350	31	8.095	-41.8	-48.7	28	15.3
300	31	9.123	-49.1		27	16.7
250	31	10.300	-56.2		27	18.4
200	31	11.708	-57.6		27	19.8
175	31	12.557	-55.3		27	19.4
150	31	13.540	-55.4		27	18.1
125	31	14.702	-56.2		27	15.2
100	31	16.114	-57.9		27	12.4
80	31	17.518	-58.2		28	9.1
70	31	18.358	-58.2		28	7.8
60	31	19.331	-57.9		29	5.8
50	30	20.484	-57.7		29	4.9
40	27	21.901	-56.8		32	3.4
30	24	23.729	-56.2		31	4.4
25	21	24.900	-55.0		32	5.2
20	13	26.315	-54.8		30	4.8
15	10	28.123	-54.1			
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OAKLAND, CALIF. — 1018 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	6	9.9	7.1	16	.1
1000	30	154	10.4	5.4	25	.4
950	30	582	9.9	1.1	29	.9
900	30	1.030	8.2	-3.9	30	1.7
850	30	1.500	5.7	-8.3	26	2.0
800	30	1.993	3.1	-11.6	25	2.1
750	30	2.510	-.1	-15.5	25	3.0
700	30	3.062	-3.5	-19.6	27	4.1
650	30	3.640	-7.2	-22.9	27	4.5
600	30	4.263	-11.1	-26.9	27	6.1
550	30	4.923	-15.4	-29.6	28	8.2
500	30	5.640	-20.4	-33.9	28	8.4
450	30	6.407	-26.2	-38.5	28	10.7
400	30	7.252	-32.9	-43.7	28	12.8
350	30	8.176	-40.3	-49.1	29	15.0
300	30	9.210	-47.9		28	18.5
250	30	10.393	-55.1		28	22.4
200	30	11.804	-58.2		28	25.6
175	30	12.646	-57.0		29	23.0
150	30	13.622	-57.6		29	21.7
125	29	14.773	-59.7		28	18.2
100	29	16.163	-60.7		28	13.2
80	29	17.551	-60.8		28	9.8
70	29	18.382	-59.8		28	6.6
60	29	19.344	-59.5		27	4.5
50	29	20.487	-58.7		27	4.0
40	27	21.895	-57.2		27	1.9
30	24	23.715	-56.0		27	3.6
25	23	24.879	-54.6		28	5.8
20	22	26.317	-52.5		28	7.5
15	18	28.171	-50.5		27	13.9
10	14	30.878	-45.1			
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OMAHA, NEBR. — 969 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	403	.8	-5.2	30	.7
1000	31	145				
950	31	558	2.3	-5.6	30	1.8
900	31	997	2.4	-7.5	29	4.9
850	31	1.458	1.3	-9.8	29	7.2
800	31	1.945	-.4	-13.3	30	7.9
750	31	2.456	-2.5	-16.8	29	9.0
700	31	3.004	-5.9	-18.9	29	10.5
650	31	3.575	-9.6	-21.4	29	11.0
600	31	4.195	-13.6	-25.4	29	12.3
550	31	4.845	-17.9	-29.8	28	13.6
500	31	5.557	-22.8	-33.8	28	14.0
450	31	6.315	-28.4	-38.9	28	16.1
400	31	7.157	-34.8	-44.1	28	18.1
350	31	8.074	-42.0	-49.5	28	18.4
300	31	9.102	-49.0		27	21.1
250	31	10.278	-55.8		28	23.9
200	31	11.688	-57.2		27	23.8
175	31	12.536	-55.1		28	23.6
150	31	13.521	-54.9		28	20.5
125	31	14.682	-56.4		27	18.1
100	31	16.094	-57.2		27	13.8
80	31	17.501	-58.3		28	10.4
70	31	18.340	-58.0		28	8.3
60	31	19.311	-57.9		29	6.3
50	31	20.461	-57.7		29	5.9
40	31	21.871	-57.0		31	4.9
30	30	23.692	-56.2		30	6.4
25	27	24.856	-55.3		30	7.3
20	25	26.278	-54.4		29	10.9
15	18	28.163	-50.8		28	21.4
10	9	30.873	-43.3			
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+ PAGO PAGO, AMERICAN SAMOA — 1010 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	5	28.7	24.4	09	1.5
1000	31	95	27.1	21.8	08	1.6
950	31	541	23.3	17.6	07	2.2
900	31	1.017	20.2	13.8	04	2.0
850	31	1.509	17.3	10.3	06	1.4
800	31	2.025	14.8	7.0	07	1.3
750	31	2.564	12.2	3.0	07	1.0
700	31	3.145	9.3	-.5	09	.8
650	31	3.750	6.2	-4.5	15	.8
600	31	4.409	2.5	-8.6	15	.9
550	31	5.102	-1.3	-13.4	19	1.2
500	31	5.862	-5.4	-18.4	19	1.7
450	31	6.677	-10.3	-24.1	20	2.3
400	31	7.579	-16.0	-30.1	19	2.5
350	31	8.572	-22.8	-37.2	18	3.2
300	31	9.684	-31.4	-45.2	18	4.1
250	31	10.948	-41.8		18	5.9
200	31	12.422	-54.1		19	8.8
175	31	13.264	-61.3		19	9.6
150	31	14.205	-68.2		19	8.7
125	31	15.282	-74.8		19	6.8
100	30	16.564	-77.9		18	4.5
80	30	17.852	-73.5		11	5.5
70	26	18.639	-70.7		10	6.9
60	22	19.563	-66.0		10	10.1
50	19	20.684	-61.9		09	13.3
40	17	22.076	-57.4		09	17.4
30	11	23.926	-51.7			
25	8	25.124	-49.4			
20	6	26.608	-45.1			
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* PEORIA, ILL. — 994 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	200	1.6	-3.0	23	1.1
1000	31	148				
950	31	565	3.4	-5.3	27	4.5
900	31	1.001	2.3	-7.8	29	5.5
850	31	1.461	.8	-10.5	29	6.4
800	31	1.947	-1.3	-12.0	29	7.6
750	31	2.460	-3.8	-15.0	28	9.0
700	31	3.001	-6.6	-17.0	28	10.2
650	31	3.576	-9.8	-20.8	28	11.3
600	31	4.190	-13.2	-23.9	28	12.7
550	31	4.844	-17.2	-27.6	28	13.8
500	31	5.556	-22.1	-32.3	28	15.7
450	31	6.315	-27.8	-37.6	27	15.8
400	31	7.158	-33.9	-43.1	27	18.7
350	31	8.080	-41.1	-45.7	27	19.7
300	31	9.110	-48.7		27	23.7
250	31	10.288	-55.9		27	27.9
200	31	11.697	-58.0		27	29.3
175	31	12.544	-55.0		27	26.3
150	31	13.528	-55.4		27	22.9
125	31	14.687	-57.0		27	20.1
100	31	16.096	-58.2		27	17.2
80	31	17.499	-58.3		28	11.3
70	31	18.338	-58.2		28	9.2
60	31	19.308	-58.2		28	7.7
50	31	20.457	-57.7		29	6.3
40	31	21.866	-57.0		29	6.3
30	31	23.691	-56.0		29	7.0
25	30	24.852	-55.1		29	7.3
20	30	26.280	-54.2		28	8.9
15	29	28.135	-51.5		28	12.7
10	25	30.819	-46.4		28	22.9
7	16	33.226	-41.0		27	32.9
5	8	35.536	-35.0			

* PITTSBURGH, PA. — 974 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	359	1.5	-3.9	25	2.2
1000	31	145				
950	31	564	2.6	-4.3	26	4.7
900	31	996	1.2	-6.1	28	8.0
850	31	1.455	-.6	-8.8	29	9.3
800	31	1.938	-2.4	-11.8	29	10.4
750	31	2.451	-4.6	-14.1	29	10.8
700	31	2.989	-7.1	-18.7	28	10.8
650	31	3.562	-9.9	-21.6	28	13.0
600	31	4.177	-13.3	-23.9	28	15.9
550	31	4.833	-17.3	-27.0	29	17.6
500	31	5.542	-22.2	-31.1	29	18.5
450	31	6.303	-27.6	-36.8	28	18.8
400	31	7.145	-33.6	-42.2	28	20.6
350	31	8.068	-40.6	-44.1	27	23.5
300	31	9.101	-47.8		27	24.7
250	31	10.285	-54.4		28	27.7
200	31	11.703	-56.5		28	31.2
175	31	12.553	-55.1		28	29.6
150	31	13.538	-54.9		28	26.9
125	31	14.699	-56.5		28	22.9
100	31	16.110	-57.3		28	16.4
80	31	17.518	-58.0		28	12.6
70	31	18.357	-58.4		28	9.9
60	31	19.327	-57.3		28	8.0
50	31	20.481	-56.8		28	6.9
40	31	21.896	-56.4		29	7.3
30	31	23.726	-55.6		29	7.7
25	31	24.888	-55.2		29	8.6
20	30	26.317	-54.0		28	9.1
15	28	28.175	-51.9		28	11.7
10	28	30.827	-47.1		27	19.3
7	24	33.155	-43.6		27	31.7
5	12	35.402	-39.2			

+ PONAPE, CAROLINE IS. — 1005 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	39	27.8	23.8	07	4.5
1000	31	83	27.3	22.6	07	5.6
950	31	531	23.5	17.7	08	9.4
900	31	1.007	20.3	14.6	08	11.1
850	31	1.499	17.8	10.3	09	11.7
800	31	2.017	15.9	5.7	09	10.6
750	31	2.564	13.6	1.0	09	8.8
700	31	3.142	10.4	-2.1	10	8.6
650	31	3.754	6.8	-6.9	09	8.5
600	31	4.409	3.1	-11.4	09	10.2
550	31	5.106	-.6	-16.1	09	9.4
500	31	5.866	-4.8	-20.7	08	9.6
450	31	6.688	-9.3	-25.1	08	8.5
400	31	7.592	-14.9	-30.6	08	6.4
350	31	8.589	-21.7	-37.1	08	5.6
300	31	9.707	-30.1	-44.5	07	3.8
250	31	10.977	-40.6	-51.5	06	2.0
200	31	12.458	-52.8		17	.9
175	31	13.306	-59.8		26	1.2
150	31	14.253	-67.0		30	1.9
125	31	15.333	-74.4		33	2.6
100	31	16.612	-79.7		35	2.8
80	31	17.882	-76.3		27	3.5
70	29	18.663	-71.5		27	6.6
60	27	19.583	-67.2		27	7.8
50	24	20.694	-63.0		28	5.3
40	19	22.083	-58.8		08	7.5
30	16	23.904	-55.2		09	22.5
25	14	25.074	-52.3		09	28.9
20	12	26.530	-48.1			
15	6	28.434	-43.1			
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PORTLAND, MAINE — 1012 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	20	-2.2	-7.1	33	1.2
1000	31	116			32	.9
950	31	525	-1.4	-8.2	32	2.2
900	31	956	-2.1	-9.5	29	3.4
850	31	1.409	-3.5	-11.2	29	6.1
800	31	1.888	-5.3	-14.4	29	8.2
750	31	2.390	-7.2	-16.7	29	9.3
700	31	2.930	-9.5	-18.7	28	10.7
650	31	3.493	-12.2	-20.8	28	12.7
600	31	4.108	-15.5	-25.1	28	14.0
550	31	4.753	-19.4	-28.5	28	14.9
500	31	5.464	-23.8	-33.3	27	16.3
450	31	6.217	-29.0	-38.0	27	17.3
400	31	7.058	-35.2	-43.6	27	17.8
350	31	7.975	-41.8	-45.3	27	20.3
300	31	9.003	-48.5		27	22.0
250	31	10.186	-54.0		27	22.0
200	31	11.608	-55.6		28	22.9
175	31	12.462	-54.0		27	20.0
150	31	13.451	-53.9		27	19.2
125	31	14.620	-54.6		27	18.6
100	31	16.044	-55.6		27	16.8
80	31	17.464	-56.3		27	12.9
70	31	18.310	-56.6		27	10.9
60	31	19.288	-56.6		27	9.6
50	30	20.444	-56.0		28	8.8
40	28	21.862	-56.1		28	8.4
30	28	23.690	-55.9		28	9.0
25	28	24.850	-55.6		28	9.8
20	25	26.281	-54.7		28	11.3
15	23	28.126	-53.8		28	15.1
10	11	30.695	-50.0		27	21.1
7	10	33.051	-43.7		27	30.5
5	5	35.378	-38.7			

* QUILLAYUTE, WASH. — 1009 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	58	5.8	4.4	12	1.2
1000	31	126			14	1.6
950	31	544	4.2	.9	17	5.7
900	31	984	1.7	-1.4	19	7.3
850	31	1.443	-.8	-5.5	20	8.1
800	31	1.925	-3.5	-9.3	21	9.2
750	31	2.430	-6.8	-13.5	22	10.8
700	31	2.969	-9.8	-16.4	22	11.0
650	31	3.534	-12.7	-19.3	23	12.8
600	31	4.145	-16.3	-22.6	23	13.4
550	31	4.792	-20.4	-26.6	23	14.3
500	31	5.494	-25.2	-31.8	23	16.1
450	31	6.244	-30.7	-37.4	24	17.6
400	31	7.077	-36.7	-41.0	24	18.0
350	31	7.988	-43.9	-44.5	24	18.7
300	31	9.006	-51.3		25	19.3
250	31	10.173	-57.0		25	21.1
200	31	11.585	-56.0		25	18.4
175	31	12.438	-54.5		26	15.9
150	31	13.426	-54.2		25	13.1
125	30	14.593	-54.3		26	12.7
100	30	16.019	-55.6		26	9.8
80	29	17.436	-55.2		26	8.5
70	28	18.290	-55.5		26	6.6
60	28	19.271	-55.6		26	5.5
50	28	20.431	-56.0		25	6.0
40	28	21.849	-56.3		25	5.5
30	25	23.671	-57.3		23	5.7
25	24	24.827	-58.0		24	6.0
20	23	26.229	-58.8		25	6.7
15	20	28.12[illegible]	-59.0		26	10.0
10	16	30.598	-56.8		27	15.4
7	7	32.936	-52.4			
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RAPID CITY, S. DAK. — 903 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	966	-.4	-6.5	32	2.4
1000	31	145				
950	31	565				
900	31	997			33	2.9
850	31	1.458	2.4	-8.8	31	6.0
800	31	1.946	.1	-11.2	31	7.5
750	31	2.455	-3.2	-14.5	31	7.8
700	31	3.003	-6.4	-17.9	31	7.7
650	31	3.572	-10.2	-22.0	30	8.9
600	31	4.191	-14.3	-25.2	30	11.4
550	31	4.838	-18.7	-29.3	30	12.0
500	31	5.549	-23.6	-34.6	30	13.1
450	31	6.305	-29.3	-39.6	29	13.6
400	31	7.141	-35.8	-44.4	29	15.2
350	31	8.056	-43.2	-48.1	29	15.3
300	31	9.076	-50.8		28	16.5
250	31	10.245	-57.1		28	17.5
200	31	11.650	-57.5		28	17.0
175	31	12.498	-55.3		28	16.4
150	31	13.481	-55.4		28	15.7
125	31	14.644	-55.4		28	13.2
100	31	16.063	-56.5		27	10.8
80	31	17.473	-57.5		28	9.1
70	31	18.316	-57.1		28	7.3
60	31	19.293	-56.8		28	5.4
50	31	20.447	-56.9		29	4.7
40	31	21.859	-57.5		31	4.1
30	30	23.671	-57.8		32	4.9
25	26	24.827	-57.5		32	5.2
20	25	26.237	-56.8		30	8.2
15	23	28.067	-54.7		29	12.1
10	7	30.681	-50.6			
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ST CLOUD, MINN. — 977 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	316	-1.9	-6.2	29	1.1
1000	31	129				
950	31	541	-.7	-6.8	28	2.7
900	31	971	-.7	-8.5	29	5.3
850	31	1.426	-2.1	-10.5	29	6.4
800	31	1.907	-3.8	-13.5	29	6.6
750	31	2.411	-6.2	-17.3	30	7.5
700	31	2.953	-9.0	-19.7	30	8.9
650	31	3.519	-12.2	-22.8	29	10.6
600	31	4.132	-16.0	-27.2	30	12.3
550	31	4.779	-20.3	-31.8	29	13.9
500	31	5.482	-25.1	-35.5	29	15.1
450	31	6.234	-30.6	-40.4	29	15.7
400	31	7.068	-36.8	-44.6	28	17.3
350	31	7.979	-43.6		29	18.6
300	31	9.001	-50.5		29	20.7
250	31	10.175	-56.1		28	20.1
200	31	11.590	-55.5		28	20.8
175	31	12.446	-53.4		28	18.7
150	31	13.438	-53.7		28	17.3
125	31	14.609	-54.3		28	15.4
100	31	16.035	-55.6		29	13.1
80	31	17.455	-56.4		29	10.1
70	31	18.301	-56.7		29	9.4
60	30	19.279	-56.4		29	7.9
50	30	20.438	-56.3		30	7.1
40	30	21.852	-57.1		31	6.6
30	28	23.670	-57.3		31	6.6
25	26	24.824	-56.7		30	8.0
20	26	26.239	-56.0		30	9.4
15	23	28.069	-54.4		30	11.5
10	8	30.617	-54.4			
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* ST PAUL IS., ALASKA — 1008 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	10	-4.8	-6.1	02	2.4
1000	31	70			32	.8
950	31	474	-5.9	-8.3	01	1.5
900	31	897	-6.9	-11.5	02	.6
850	31	1.342	-8.6	-13.9	27	.4
800	31	1.810	-11.1	-17.8	27	1.2
750	31	2.302	-13.7	-21.3	25	1.9
700	31	2.825	-16.5	-24.5	24	2.7
650	31	3.375	-19.9	-27.9	23	3.9
600	31	3.969	-23.7	-31.9	23	4.4
550	31	4.595	-27.6	-35.3	23	5.0
500	31	5.279	-32.2	-39.1	23	6.5
450	31	6.011	-37.2	-43.0	24	7.1
400	31	6.821	-42.9	-44.9	23	7.3
350	31	7.710	-48.8		24	8.1
300	31	8.710	-54.1		25	8.6
250	31	9.873	-55.6		25	9.0
200	31	11.305	-52.4		26	8.5
175	31	12.170	-51.6		26	9.9
150	31	13.170	-51.6		26	10.0
125	31	14.355	-51.1		26	10.2
100	31	15.804	-51.3		26	11.9
80	31	17.256	-51.1		25	13.9
70	31	18.123	-51.2		25	14.0
60	31	19.123	-51.3		25	14.4
50	31	20.306	-51.8		25	15.4
40	31	21.748	-53.2		26	16.7
30	31	23.596	-54.7		26	19.8
25	31	24.759	-55.5		26	21.8
20	31	26.176	-56.9		27	23.4
15	27	28.009	-57.7		27	24.3
10	22	30.575	-58.5		27	27.9
7	16	32.849	-56.3		28	30.2
5	5	34.944	-52.2			

SALEM, OREG. — 1010 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	61	5.5	3.6	20	1.9
1000	31	143	6.8	3.7	20	2.2
950	31	562	6.2	1.4	20	5.3
900	31	1.006	3.7	-1.2	21	6.9
850	31	1.468	1.0	-4.7	22	8.0
800	31	1.954	-1.8	-9.0	22	9.0
750	31	2.462	-4.1	-12.9	23	9.8
700	31	3.006	-7.3	-15.4	23	11.0
650	31	3.575	-10.8	-19.5	24	11.9
600	31	4.191	-14.5	-24.0	24	12.8
550	31	4.840	-16.7	-27.1	24	13.4
500	31	5.549	-23.5	-31.1	24	15.2
450	31	6.306	-28.9	-37.1	24	15.4
400	31	7.144	-35.2	-41.3	24	16.9
350	30	8.057	-42.5	-44.9	25	18.2
300	30	9.080	-50.3		25	18.9
250	30	10.250	-57.0		26	20.9
200	30	11.656	-57.6		26	20.2
175	30	12.504	-55.6		26	17.7
150	30	13.487	-55.5		26	15.2
125	30	14.648	-56.0		26	14.4
100	30	16.066	-56.5		26	10.7
80	30	17.481	-56.7		26	8.5
70	30	18.327	-56.7		26	7.4
60	30	19.303	-56.4		26	5.4
50	30	20.460	-56.3		25	4.1
40	28	21.878	-57.0		23	2.6
30	26	23.696	-56.8		24	3.7
25	25	24.853	-57.3		26	4.5
20	23	26.259	-57.2		26	5.4
15	18	28.084	-56.7		27	10.1
10	8	30.725	-53.3			
7						
5						

See reference note at end of table

RAWINSONDE DATA

Average monthly values

MARCH 1968

SALT LAKE CITY, UTAH — 872 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1,288	2.5	-3.0	18	2.1
1000	31	164				
950	31	585				
900	31	1,030				
850	31	1,494	4.7	-4.7	18	2.9
800	31	1,986	2.3	-7.9	19	2.7
750	31	2,507	-1.3	-10.5	23	2.8
700	31	3,051	-5.2	-13.6	28	4.0
650	31	3,630	-9.1	-17.0	28	5.6
600	31	4,245	-13.1	-21.8	28	6.2
550	31	4,900	-17.6	-27.4	28	7.4
500	31	5,610	-22.5	-32.4	27	8.7
450	31	6,377	-28.2	-38.0	27	8.6
400	30	7,217	-34.2	-42.8	29	8.1
350	30	8,137	-41.6	-49.2	30	8.5
300	30	9,164	-49.8		29	10.8
250	29	10,335	-57.0		28	13.1
200	28	11,729	-58.6		28	15.4
175	28	12,573	-56.1		28	16.7
150	27	13,548	-55.9		27	15.7
125	27	14,704	-57.3		27	14.8
100	26	16,108	-58.3		27	11.3
80	26	17,509	-59.0		27	8.2
70	26	18,345	-58.9		27	6.5
60	26	19,313	-58.9		27	4.3
50	26	20,459	-58.0		28	2.7
40	26	21,865	-57.8		26	1.3
30	23	23,687	-57.0		34	1.5
25	22	24,845	-56.5		02	.6
20	20	26,256	-56.1		30	2.5
15	16	28,108	-54.9		29	7.0
10	8	30,803	-47.7			
7						
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4						
3						

SAN DIEGO, CALIF. — 1002 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	124	10.5	7.4	10	.6
1000	31	137			05	.6
950	31	565	12.9	1.4	30	1.0
900	31	1,021	11.1	-3.0	31	1.7
850	31	1,496	8.3	-7.2	31	1.9
800	31	1,994	5.4	-11.0	29	2.0
750	31	2,516	2.2	-13.7	28	3.1
700	31	3,073	-.8	-16.8	28	4.6
650	31	3,657	-4.2	-20.2	28	5.7
600	31	4,289	-8.2	-24.0	28	7.2
550	31	4,953	-12.7	-28.9	29	8.7
500	31	5,680	-18.2	-33.8	28	10.3
450	31	6,450	-23.9	-37.5	28	11.8
400	31	7,310	-30.2	-42.0	29	13.4
350	31	8,247	-37.2	-46.7	29	16.3
300	31	9,295	-44.8		28	20.8
250	31	10,494	-52.1		28	26.5
200	31	11,923	-56.3		28	30.2
175	31	12,769	-57.1		28	28.8
150	31	13,741	-58.9		28	25.9
125	31	14,878	-61.5		28	21.1
100	31	16,254	-63.4		27	17.0
80	31	17,622	-63.6		27	11.7
70	31	18,443	-62.3		27	8.1
60	31	19,396	-60.9		27	5.0
50	31	20,534	-59.1		26	3.2
40	31	21,939	-57.4		26	2.3
30	30	23,768	-54.5		26	4.7
25	29	24,942	-52.6		27	5.4
20	29	26,392	-49.9		28	6.7
15	25	28,296	-45.9		28	11.1
10	15	31,070	-40.6			
7	5	33,477	-40.6			

SAN JUAN, P. R. — 1017 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	[illegible]	22.6	18.6	08	1.4
1000	31	155	21.8	17.0	08	3.5
950	31	595	18.3	14.1	06	5.2
900	31	1,060	14.8	10.4	06	4.9
850	31	1,542	11.7	6.1	06	4.1
800	31	2,047	10.0	-.8	05	2.6
750	31	2,582	8.8	-7.5	01	2.1
700	31	3,153	7.4	-13.0	36	2.6
650	31	3,752	5.2	-16.6	33	2.5
600	31	4,410	1.6	-19.9	32	3.4
550	31	5,094	-2.6	-23.2	31	4.3
500	31	5,853	-7.6	-27.5	31	5.7
450	31	6,658	-13.4	-32.2	30	7.3
400	31	7,551	-19.5	-37.2	29	9.3
350	31	8,529	-26.9	-43.3	29	12.0
300	31	9,622	-35.4	-50.1	29	15.7
250	31	10,867	-44.7		28	19.3
200	31	12,324	-55.6		27	19.9
175	31	13,163	-61.5		27	19.3
150	31	14,105	-67.2		27	16.3
125	31	15,190	-72.2		28	13.1
100	31	16,497	-76.7		28	9.0
80	29	17,767	-76.2		29	5.8
70	29	18,542	-72.9		29	3.7
60	29	19,460	-65.9		34	1.8
50	28	20,578	-60.4		07	4.0
40	26	21,986	-55.4		08	7.8
30	26	23,834	-52.0		09	11.6
25	23	25,019	-49.8		09	12.2
20	18	26,486	-46.9		09	12.5
15	14	28,413	-42.1		09	12.7
10	8	31,192	-35.7			

SAN NICOLAS, CALIF. — 996 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	174	11.9	8.2	30	3.8
1000	29	143				
950	29	575	13.1	-1.6	32	4.9
900	29	1,028	11.0	-7.3	31	3.9
850	29	1,502	8.1	-9.7	30	3.2
800	29	1,999	4.9	-13.6	29	2.9
750	29	2,522	1.6	-16.2	29	3.9
700	29	3,074	-1.5	-21.5	28	4.9
650	29	3,661	-4.6	-24.8	29	6.1
600	29	4,286	-8.7	-27.0	29	7.8
550	29	4,954	-13.8	-29.1	29	9.2
500	29	5,671	-18.9	-33.0	29	11.4
450	29	6,447	-24.5	-38.3	29	14.4
400	29	7,293	-31.1	-43.7	29	15.6
350	29	8,226	-38.4	-50.0	29	18.4
300	29	9,269	-45.8	-55.7	29	23.3
250	29	10,464	-52.7	-62.4	29	29.4
200	29	11,887	-56.7	-66.0	29	33.4
175	29	12,731	-57.7	-66.8	29	30.2
150	29	13,700	-59.6		28	26.2
125	29	14,833	-62.3		28	22.9
100	29	16,205	-63.9		27	17.2
80	29	17,572	-64.0		28	10.2
70	29	18,393	-62.6		28	8.5
60	29	19,345	-61.6		26	6.0
50	29	20,482	-59.2		27	3.0
40	29	21,886	-57.5		26	3.3
30	29	23,716	-54.4		27	4.6
25	29	24,889	-52.5		27	7.3
20	29	26,339	-49.7		28	9.7
15	28	28,236	-46.5		28	13.2
10	25	30,955	-41.6		27	23.9
7	22	33,402	-39.2		27	31.5
5	12	35,632	-38.9			
4	8	37,115	-38.9			
3	[illegible]	39,156	-37.0			

• SAULT STE. MARIE, MICH. — 989 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	221	-5.6	-8.2	04	.8
1000	31	[illegible]				
950	31	536	-3.2	-8.2	26	2.9
900	31	[illegible]	[illegible]	[illegible]	28	5.7
850	31	1,409	-4.9	-11.9	28	7.1
800	31	1,885	-6.1	-13.4	29	8.5
750	31	2,387	-8.0	-16.6	29	10.0
700	31	2,922	-10.5	-19.1	29	11.1
650	31	3,485	-13.7	-23.7	28	11.5
600	31	4,092	-17.2	-27.2	29	12.9
550	31	4,735	-21.3	-30.4	28	14.8
500	31	5,435	-25.9	-35.3	28	16.4
450	31	6,182	-31.2	-40.4	28	17.2
400	31	7,013	-37.1	-44.0	28	19.7
350	31	7,923	-43.5		27	23.4
300	31	8,944	-50.2		27	26.1
250	31	10,118	-55.5		27	26.8
200	31	11,541	-54.1		27	22.1
175	31	12,401	-52.3		28	19.7
150	31	13,399	-52.2		28	18.6
125	31	14,576	-52.9		28	16.4
100	31	16,013	-53.9		28	14.0
80	31	17,444	-54.7		28	12.3
70	31	18,296	-55.1		[illegible]	11.6
60	31	19,280	-55.3		29	9.4
50	31	20,442	-55.7		29	9.4
40	31	21,863	-55.7		29	8.4
30	31	23,693	-56.1		28	9.9
25	31	24,849	-56.1		29	9.4
20	30	26,268	-55.6		[illegible]	10.4
15	28	28,093	-55.3		[illegible]	12.9
10	24	30,667	-53.2		27	17.5
7	15	32,983	-48.5			

*** SHREVEPORT, LA. — 1010 MB**

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	79	8.0	6.0	17	1.1
1000	31	163	8.7	4.2	18	2.5
950	31	590	8.2	1.4	21	4.7
900	31	1,033	6.8	-1.4	22	4.7
850	31	1,503	5.6	-4.9	25	4.8
800	31	1,997	3.4	-7.4	27	5.7
750	31	2,515	1.3	-10.4	27	6.7
700	31	3,072	-1.4	-13.1	26	8.2
650	31	3,658	-4.0	-17.7	26	10.4
600	31	4,288	-7.8	-21.0	26	13.0
550	31	4,957	-12.3	-24.0	26	15.4
500	31	5,682	-17.2	-28.9	26	19.1
450	31	6,460	-22.5	-32.6	26	22.9
400	31	7,320	-28.6	-37.8	26	25.2
350	31	8,263	-35.9	-44.5	26	28.8
300	31	9,317	-43.9		26	33.2
250	31	10,521	-51.8		26	40.4
200	30	11,942	-57.1		26	44.4
175	30	12,784	-59.0		26	41.9
150	30	13,747	-61.0		26	36.3
125	29	14,877	-63.0		26	30.1
100	29	16,240	-66.0		27	20.4
80	29	17,593	-65.8		27	15.2
70	29	18,406	-64.2		27	9.1
60	28	19,355	-61.9		27	7.6
50	28	20,492	-59.0		28	6.9
40	26	21,897	-57.2		27	7.1
30	25	23,731	-54.5		28	8.6
25	24	24,902	-53.0		27	9.0
20	24	26,350	-50.2		27	10.0
15	19	28,258	-46.0		27	10.9
10	17	30,994	-41.0		27	15.6
7	10	33,574	-35.8			
5						

SPOKANE, WASH. — 932 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	717	2.1	-1.6	16	2.0
1000	31	140				
950	31	559				
900	31	998	4.5	-3.4	20	3.8
850	31	1,462	2.4	-6.7	22	6.2
800	31	1,949	-1.1	-9.7	24	6.6
750	31	2,455	-4.8	-12.8	24	7.2
700	31	3,000	-8.4	-17.0	24	9.2
650	31	3,564	-12.1	-22.2	25	10.6
600	31	4,179	-15.9	-26.9	25	11.2
550	31	4,825	-19.8	-30.4	26	12.5
500	31	5,530	-24.5	-33.6	26	13.9
450	31	6,279	-30.0	-37.7	26	15.1
400	31	7,118	-36.2	-42.7	26	16.0
350	31	8,030	-43.6	-47.2	27	17.2
300	31	9,049	-51.5		27	18.8
250	31	10,215	-57.4		27	19.2
200	31	11,622	-57.5		27	15.6
175	31	12,470	-54.9		27	14.8
150	31	13,457	-54.5		27	14.1
125	31	14,623	-54.8		27	12.5
100	31	16,048	-55.6		26	9.4
80	30	17,467	-56.0		27	8.8
70	30	18,317	-55.2		27	7.6
60	30	19,301	-55.0		26	5.9
50	30	20,465	-55.2		26	4.3
40	30	21,889	-55.6		26	4.3
30	30	23,715	-57.4		28	3.7
25	29	24,868	-57.8		26	3.3
20	28	26,280	-58.0		26	4.3
15	26	28,090	-59.1		26	4.3
10	10	30,736	-57.3			

*** SWAN ISLAND, W. I. — 1015 MB**

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	10	23.9	19.6	06	3.7
1000	30	141	23.1	18.7	05	5.1
950	30	586	19.4	16.4	06	5.9
900	30	1,051	16.3	11.8	07	4.3
850	30	1,536	13.7	7.6	07	3.7
800	30	2,045	11.2	1.5	08	3.6
750	30	2,582	9.0	-3.3	08	2.7
700	30	3,153	7.9	-11.7	08	2.3
650	30	3,761	6.3	-16.7	06	2.2
600	30	4,414	2.7	-19.9	08	1.6
550	30	5,102	-1.6	-23.5	05	1.0
500	30	5,862	-7.1	-27.6	04	1.6
450	30	6,670	-13.0	-32.2	32	1.0
400	30	7,562	-19.4	-37.3	28	3.4
350	30	8,540	-26.5	-42.9	27	6.4
300	29	9,634	-35.4	-50.0	26	8.9
250	29	10,876	-45.3		26	13.7
200	29	12,329	-56.4		26	15.9
175	29	13,165	-62.2		26	15.3
150	29	14,105	-67.5		26	13.6
125	29	15,190	-72.2		26	9.9
100	29	16,491	-75.8		28	6.6
80	29	17,777	-76.2		30	3.9
70	29	18,550	-73.7		31	1.8
60	29	19,463	-68.1		04	1.0
50	29	20,574	-62.8		10	2.9
40	27	21,966	-56.7		08	6.2
30	27	23,805	-53.1		08	10.1
25	27	24,986	-50.6		09	12.7
20	26	26,449	-47.7		09	15.0
15	25	28,361	-43.8		10	18.2
10	24	31,110	-39.6		09	18.0
7	21	33,574	-34.8		10	18.8
5	10	35,914	-32.6			

TAMPA, FLA. — 1020 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	8	12.1	9.3	04	1.1
1000	31	177	14.0	8.4	07	1.9
950	31	614	12.7	4.0	14	.8
900	31	1,062	10.5	-.3	23	1.2
850	31	1,537	9.0	-3.3	26	3.2
800	31	2,038	7.2	-5.6	26	5.0
750	31	2,567	6.2	-9.5	26	6.5
700	31	3,133	4.0	-12.3	27	8.6
650	31	3,730	.8	-15.5	27	10.3
600	31	4,371	-2.7	-19.9	27	12.4
550	31	5,053	-6.8	-22.7	27	16.2
500	31	5,795	-11.5	-26.9	27	20.2
450	31	6,593	-17.2	-31.3	27	24.3
400	31	7,469	-23.3	-36.5	27	26.9
350	31	8,434	-30.3	-42.2	27	29.4
300	31	9,513	-38.7	-49.1	27	33.0
250	31	10,742	-47.5		27	39.7
200	31	12,188	-56.3		27	40.8
175	31	13,029	-60.4		27	38.1
150	31	13,982	-63.5		27	34.1
125	31	15,093	-67.0		27	30.1
100	31	16,430	-70.0		27	24.0
80	31	17,757	-69.5		28	14.7
70	31	18,557	-66.7		28	4.2
60	31	19,498	-62.9		28	4.5
50	31	20,631	-59.3		29	2.6
40	31	22,041	-55.2		01	[illegible]
30	29	23,891	-51.1		33	2.1
25	29	25,080	-49.5		30	1.1
20	26	26,554	-47.0		28	2.7
15	17	28,496	-42.7		26	4.0
10	6	31,226	-38.3			

TOPEKA, KANS. — 984 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	[illegible]	2.9	-2.2	[illegible]	.1
1000	31	153				
950	31	571	4.8	-4.1	25	2.4
900	31	1,011	4.2	-5.9	27	4.4
850	31	1,475	2.5	-8.2	28	5.4
800	31	1,964	.9	-12.3	29	6.3
750	31	2,476	-1.8	-15.1	29	7.2
700	31	3,027	-5.0	-18.2	29	7.6
650	31	3,599	-8.5	-21.2	29	8.6
600	31	4,223	-12.3	-25.1	29	10.0
550	31	4,890	-16.7	-29.0	28	10.8
500	31	5,592	-21.8	-33.4	28	11.6
450	31	6,355	-27.4	-38.2	28	12.4
400	31	7,197	-33.6	-43.9	27	14.6
350	31	8,121	-40.6	-48.7	27	17.2
300	31	9,155	-47.9		27	20.1
250	31	10,339	-55.1		26	24.7
200	31	11,752	-57.0		27	26.6
175	31	12,600	-55.9		27	25.0
150	31	13,581	-56.4		27	23.8
125	31	14,735	-57.8		27	19.7
100	31	16,137	-59.1		27	16.3
80	31	17,533	-59.8		27	11.3
70	30	18,366	-59.4		28	8.4
60	30	19,334	-58.5		29	6.1
50	30	20,482	-58.0		29	4.8
40	[illegible]	[illegible]	-56.8		30	4.4
30	27	23,726	-55.4		29	5.2
25	24	24,896	-54.1		29	6.3
20	21	26,326	-52.7		29	9.2
15	20	28,187	-49.6		27	15.9
10	7	30,731	[illegible]			

+ TRUK, CAROLINE IS. — 1010 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	2	27.4	23.6	05	4.7
1000	31	93	26.4	21.8	06	5.9
950	31	542	22.8	17.5	07	9.8
900	31	1,015	20.1	13.0	08	10.8
850	31	1,508	17.4	9.3	09	9.7
800	31	2,024	15.2	5.0	09	9.5
750	31	2,571	13.0	.3	09	8.8
700	31	3,148	9.9	-3.1	09	8.7
650	31	3,761	6.2	-7.7	09	8.5
600	31	4,413	2.5	-11.7	09	9.5
550	31	5,109	-1.1	-15.9	09	9.5
500	31	5,868	-5.4	-21.2	09	9.4
450	31	6,690	-10.2	-26.3	08	9.1
400	31	7,590	-15.5	-31.3	09	8.0
350	31	8,585	-22.1	-38.3	09	6.2
300	31	9,701	-30.6	-45.8	08	5.0
250	31	10,970	-40.8	-53.6	11	3.3
200	31	12,449	-53.3		10	2.9
175	31	13,295	-60.4		10	1.8
150	31	14,239	-67.9		08	1.4
125	30	15,315	-75.4		36	.4
100	28	16,585	-80.4		03	1.5
80	28	17,849	-77.4		31	.7
70	28	18,621	-73.6		27	3.5
60	24	19,535	-68.7		28	5.7
50	23	20,638	-64.4		27	4.6
40	22	22,019	-59.7		08	7.0
30	21	23,833	-55.4		09	22.9
25	21	25,004	-52.2		09	28.1
20	13	26,468	-47.8		09	30.6
15	9	28,372	-44.4			
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*** TUCSON, ARIZ. — 925 MB**

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	789	9.8	3.5	14	3.3
1000	31	133				
950	31	564				
900	31	1,017	12.2	.7	16	3.6
850	31	1,494	9.5	-2.7	19	2.1
800	31	1,994	6.0	-5.7	22	2.4
750	31	2,518	2.6	-9.9	24	3.4
700	31	3,075	-.8	-14.0	25	3.8
650	31	3,656	-4.4	-18.2	26	5.2
600	31	4,289	-8.6	-22.7	27	7.1
550	31	4,949	-13.3	-27.4	27	7.9
500	31	5,677	-18.6	-30.7	26	9.8
450	31	6,446	-24.5	-35.9	27	11.8
400	31	7,302	-30.6	-41.2	26	14.3
350	31	8,238	-37.2	-45.8	26	18.5
300	31	9,287	-44.4		26	22.8
250	31	10,488	-51.7		27	27.3
200	30	11,921	-55.6		27	32.9
175	30	12,767	-57.8		27	31.4
150	30	13,737	-59.0		27	26.7
125	30	14,875	-61.3		26	22.5
100	30	16,250	-64.0		26	18.7
80	30	17,615	-64.0		27	13.3
70	30	18,434	-63.0		27	8.8
60	30	19,386	-60.9		26	3.7
50	30	20,524	-59.2		26	3.6
40	29	21,930	-57.3		27	3.8
30	29	23,759	-54.9		26	4.9
25	27	24,924	-53.6		28	5.1
20	26	26,367	-50.9		28	7.5
15	26	28,258	-46.7		29	9.6
10	24	30,982	-41.9		28	15.6
7	19	33,345	-41.2		28	22.7
5	13	35,706	-37.0		28	27.3
4	8	37,341	-34.3			

VICTORIA, TEXAS — 1015 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	33	11.7	9.7	11	.5
1000	31	157	12.6	8.6	13	2.2
950	31	586	10.8	6.1	17	5.2
900	31	1,038	9.5	2.0	20	5.4
850	31	1,511	8.1	-1.4	22	5.3
800	31	2,011	6.8	-4.4	24	5.2
750	31	2,537	5.4	-8.2	25	6.5
700	31	3,102	2.8	-10.9	26	9.1
650	31	3,693	-.8	-13.8	25	10.9
600	31	4,333	-4.9	-16.9	26	13.6
550	31	5,006	-9.5	-22.6	26	14.4
500	31	5,742	-14.5	-27.6	26	17.1
450	31	6,525	-20.2	-32.2	26	21.1
400	31	7,395	-26.3	-37.3	26	25.0
350	31	8,347	-33.3	-43.6	26	29.0
300	31	9,412	-41.1	-48.9	26	35.1
250	31	10,628	-49.8		26	39.6
200	31	12,063	-56.7		26	44.0
175	31	12,903	-60.0		26	40.1
150	31	13,858	-63.0		26	35.8
125	31	14,975	-65.8		26	28.6
100	31	16,317	-69.0		26	19.7
80	30	17,650	-68.8		27	11.9
70	30	18,452	-66.9		27	7.7
60	30	19,391	-63.1		27	4.5
50	28	20,520	-60.0		27	2.6
40	26	21,928	-56.6		28	2.0
30	25	23,771	-52.7		29	3.0
25	25	24,952	-51.2		28	3.0
20	25	26,410	-48.9		28	3.6
15	22	28,313	-44.5		27	5.4
10	18	31,084	-38.7		27	6.4
7	5	33,594	-34.6			

*** WALLOPS IS., VA. NASA — 1017 MB**

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	3	4.5	-.2	29	2.6
1000	31	142	7.0	-2.0	28	4.2
950	31	567	6.3	-4.4	29	6.9
900	31	1,006	4.2	-6.2	30	7.5
850	31	1,470	2.3	-7.4	29	7.9
800	31	1,958	.0	-10.0	28	8.9
750	31	2,475	-2.5	-13.1	26	9.9
700	31	3,018	-5.5	-15.7	26	11.3
650	31	3,594	-8.7	-19.7	28	12.9
600	31	4,213	-12.7	-23.5	26	15.3
550	31	4,867	-16.7	-28.4	28	16.8
500	31	5,583	-21.4	-33.5	28	19.3
450	31	6,348	-26.9	-38.3	28	19.9
400	31	7,193	-32.8	-43.6	29	23.0
350	31	[illegible]	-39.4	-47.3	29	24.7
300	31	9,159	-46.4		29	27.5
250	31	[illegible]	-52.7		28	29.6
200	31	[illegible]	-55.2		28	30.1
175	31	12,634	-54.9		26	29.1
150	31	13,616	-56.1		26	27.1
125	31	14,770	-57.9		28	23.2
100	30	16,172	-60.4		28	19.4
80	29	17,562	-59.7		28	14.7
70	28	18,397	-59.4		28	11.2
60	28	19,362	-58.5		29	9.4
50	28	20,511	-57.6		28	8.1
40	28	21,926	-55.8		27	7.9
30	27	23,768	-54.3		28	7.6
25	25	24,933	-53.3		29	7.4
20	24	26,376	-51.6		27	9.6
15	20	28,234	-49.8		27	13.7
10	18	30,899	-45.1		27	23.4
7	13	33,328	-39.6			

WASHINGTON DULLES INT. AP — 1007 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	95	2.3	-2.0	30	1.6
1000	31	140			27	1.9
950	31	565	5.1	-3.5	29	6.4
900	31	[illegible]	3.0	-5.0	29	8.3
850	31	1,460	.9	-8.2	29	10.6
800	31	1,946	-.5	-10.4	29	11.2
750	31	2,462	-2.8	-12.6	29	11.5
700	31	3,005	-5.7	-14.7	28	11.0
650	31	3,583	-8.6	-18.7	28	12.6
600	31	4,199	-12.3	-22.8	28	15.8
550	31	4,859	-16.7	-27.8	28	16.3
500	31	[illegible]	-21.7	-32.6	28	17.6
450	31	6,333	-27.2	-37.7	28	19.2
400	31	7,174	-33.4	-43.4	28	21.9
350	31	8,093	-40.1	-47.3	28	24.8
300	31	9,134	-47.6		28	26.4
250	31	10,320	-53.9		28	29.6
200	31	11,743	[illegible]		28	32.1
175	31	12,596	-54.2		28	30.5
150	31	13,582	-55.3		28	26.6
125	31	14,741	-57.0		27	23.1
100	31	16,146	-58.9		27	19.0
80	[illegible]	17,542	-59.1		27	13.7
70	[illegible]	18,379	-58.8		28	10.7
60	30	19,349	-57.8		28	[illegible]
50	[illegible]	20,502	-56.3		28	7.1
40	[illegible]	21,922	-55.6		28	[illegible]
30	[illegible]	23,757	-54.5		28	6.9
25	30	24,927	-53.3		27	[illegible]
20	[illegible]	26,370	-51.5		27	12.5
15	[illegible]	28,226	-49.6		27	18.0
10	11	30,929	-44.0			

See reference note at end of table

NOTE: Data for Shemya at end of table

RAWINSONDE DATA

Average monthly values

MARCH 1968

WINNEMUCCA, NEV. 870 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1,312	-.7	-6.3	17	1.2
1000	31	175				
950	31	594				
900	31	1,038				
850	31	1,496	4.1	-6.5	19	.8
800	31	1,988	2.2	-9.1	24	1.7
750	31	2,502	-1.4	-11.8	25	3.4
700	31	3,052	-5.2	-15.1	25	4.2
650	31	3,624	-9.0	-19.3	26	5.5
600	31	4,245	-12.9	-24.1	26	7.0
550	31	4,900	-17.1	-27.9	27	7.7
500	31	5,612	-22.1	-32.9	27	8.0
450	31	6,368	-27.9	-38.3	27	8.4
400	31	7,213	-34.4	-43.7	27	8.8
350	31	8,133	-41.7	-49.0	27	10.0
300	31	9,160	-49.3		28	11.4
250	31	10,336	-56.0		28	15.1
200	31	11,742	-58.2		28	16.8
175	31	12,585	-57.0		28	17.2
150	31	13,562	-56.6		28	16.0
125	31	14,715	-57.7		27	14.3
100	31	16,122	-57.9		27	11.2
80	30	17,525	-58.6		27	8.0
70	28	18,356	-58.3		26	5.9
60	27	19,323	-57.9		26	4.9
50	27	20,474	-57.3		26	2.6
40	25	21,888	-57.0		26	1.3
30	21	23,717	-55.9		28	3.2
25	20	24,876	-55.1		28	5.3
20	17	26,316	-54.1		27	10.9
15	11	28,203	-49.8			
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WINSLOW, ARIZ. 850 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1,492	2.3	-4.8	26	.8
1000	31	161				
950	31	582				
900	31	1,027				
850	31	1,497			26	.7
800	31	1,991	4.7	-7.6	29	2.5
750	31	2,515	1.5	-10.6	29	3.4
700	31	3,067	-2.4	-14.0	27	4.0
650	31	3,649	-6.1	-18.0	27	5.0
600	31	4,274	-10.3	-23.5	27	6.5
550	31	4,933	-14.7	-29.3	27	7.4
500	31	5,654	-19.9	-33.5	27	7.7
450	31	6,423	-25.7	-38.6	28	9.3
400	31	7,272	-32.1	-43.2	27	10.8
350	31	8,201	-39.2	-47.0	27	13.5
300	31	9,241	-46.7		27	16.8
250	31	10,431	-53.8		27	20.3
200	30	11,849	-56.2		28	25.1
175	30	12,698	-56.3		27	23.6
150	30	13,675	-57.7		27	21.2
125	30	14,819	-60.0		27	18.7
100	30	16,205	-62.0		27	15.1
80	30	17,583	-62.2		27	11.1
70	30	18,408	-61.6		27	7.8
60	29	19,366	-60.7		27	4.8
50	29	20,503	-59.8		26	3.7
40	29	21,904	-57.6		28	3.8
30	27	23,729	-55.5		27	4.3
25	25	24,897	-53.9		28	6.8
20	22	26,343	-51.2		28	9.1
15	17	28,243	-46.6		28	14.7
10	7	30,950	-42.7			

YAKUTAT, ALASKA 1005 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	12	-1.7	-3.7	10	2.0
1000	31	52			10	2.6
950	31	463	.0	-6.1	11	6.3
900	31	695	-2.8	-8.2	12	7.5
850	31	1,346	-5.8	-10.6	14	8.3
800	31	1,819	-8.9	-12.8	15	7.8
750	31	2,314	-12.1	-17.1	15	7.4
700	31	2,841	-15.7	-21.0	15	6.7
650	31	3,393	-19.4	-25.6	17	6.3
600	31	3,987	-23.4	-30.3	18	6.6
550	31	4,614	-28.0	-35.1	19	6.4
500	31	5,296	-33.0	-38.9	19	6.5
450	31	6,025	-38.3	-42.8	20	6.6
400	31	6,830	-43.8	-43.4	20	6.3
350	31	7,716	-49.4		20	5.9
300	31	8,715	-53.8		21	6.2
250	31	9,884	-53.7		23	6.8
200	31	11,326	-51.3		23	7.7
175	31	12,194	-50.9		24	8.2
150	31	13,197	-51.1		24	9.0
125	29	14,377	-51.5		24	9.5
100	29	15,822	-52.2		25	10.1
80	29	17,264	-52.6		25	10.5
70	26	18,118	-53.0		26	10.7
60	28	19,110	-53.8		26	11.6
50	28	20,279	-54.7		27	11.9
40	26	21,701	-56.4		27	12.5
30	25	23,524	-58.2		28	13.4
25	24	24,663	-59.4		26	15.5
20	24	26,056	-60.7		28	16.8
15	19	27,862	-61.6		28	17.5
10	10	30,351	-60.6			

\+ YAP, CAROLINE IS. 1009 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	17	27.9	23.7	08	4.7
1000	31	93	26.8	21.9	08	6.5
950	31	539	22.5	17.2	08	10.6
900	31	1,014	19.6	13.1	08	10.8
850	31	1,506	17.2	8.6	09	9.7
800	31	2,022	15.3	3.1	09	8.8
750	31	2,563	12.9	-1.9	09	8.8
700	31	3,145	10.1	-6.3	09	8.4
650	31	3,752	6.8	-9.2	09	8.6
600	31	4,411	2.9	-13.0	09	8.2
550	31	5,107	-1.3	-17.9	09	8.4
500	31	5,866	-5.6	-22.3	09	9.5
450	31	6,683	-10.3	-27.1	09	8.4
400	31	7,585	-15.7	-32.0	08	7.3
350	31	8,579	-22.4	-38.2	08	4.2
300	31	9,693	-31.0	-45.4	10	2.2
250	31	10,959	-41.3	-51.7	15	2.8
200	31	12,434	-53.8		16	2.7
175	31	13,278	-60.9		17	2.4
150	31	14,220	-68.3		14	1.8
125	31	15,295	-75.1		03	1.8
100	31	16,570	-80.3		05	1.8
80	31	17,834	-78.1		06	.9
70	31	18,604	-72.8		32	1.7
60	30	19,519	-67.7		30	2.6
50	29	20,626	-63.6		34	1.3
40	26	22,013	-58.3		09	8.6
30	24	23,839	-54.6		09	20.9
25	21	25,012	-50.9		09	24.5
20	16	26,473	-47.2		09	26.0
15	12	28,398	-43.4		09	28.8
10						

YUCCA FLAT, NEV. 882 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1,196	2.2	-5.9	27	.8
1000	31	159				
950	31	579				
900	31	1,026				
850	31	1,494	7.2	-7.7	32	1.7
800	31	1,991	4.2	-10.3	26	.8
750	31	2,507	.5	-12.8	25	.8
700	31	3,063	-3.3	-16.0	26	1.2
650	31	3,641	-6.9	-20.6	26	2.8
600	31	4,265	-11.2	-24.2	27	4.4
550	31	4,924	-15.5	-28.0	28	6.7
500	31	5,641	-20.7	-33.0	28	8.0
450	31	6,407	-26.4	-38.1	28	9.2
400	31	7,252	-33.1	-43.0	26	10.0
350	31	8,177	-40.3	-47.6	26	11.8
300	31	9,210	-47.9		28	14.4
250	31	10,394	-54.5		28	17.7
200	30	11,606	-57.4		28	21.0
175	30	12,650	-57.3		28	22.7
150	30	13,624	-57.3		28	19.9
125	30	14,773	-58.9		28	17.5
100	30	16,168	-59.8		28	15.5
80	30	17,560	-60.5		27	12.8
70	29	18,387	-60.3		27	9.6
60	29	19,349	-59.4		26	6.8
50	26	20,496	-58.3		26	5.6
40	25	21,903	-57.1		25	3.5
30	24	23,732	-55.2		28	3.0
25	22	24,905	-53.7		27	4.2
20	17	26,359	-51.7		29	7.4
15	11	28,247	-48.6			
10	5	31,033	-42.6			

YUMA, ARIZ. 999 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	20	131	11.9	-.1	35	.8
1000	20	125			34	1.3
950	20	558	16.2	-.5	33	2.3
900	20	1,018	13.1	-3.2	35	2.4
850	20	1,495	9.5	-5.7	36	1.6
800	20	1,994	5.8	-8.8	30	1.1
750	20	2,513	2.3	-13.2	28	2.1
700	20	3,074	-.9	-16.8	30	3.1
650	20	3,655	-4.6	-21.7	29	5.1
600	20	4,286	-9.1	-24.4	28	6.3
550	20	4,942	-14.2	-28.9	29	7.1
500	20	5,669	-19.3	-32.9	29	8.6
450	20	6,432	-25.0	-38.0	29	10.6
400	20	7,290	-31.5	-43.0	29	11.6
350	20	8,221	-38.8	-46.9	29	14.1
300	20	9,265	-45.3		29	18.7
250	20	10,462	-52.5		28	23.8
200	18	11,898	-56.7		78	28.8
175	18	12,741	-58.1		28	28.2
150	13	13,708	-58.4		27	22.8
125	10	14,849	-61.0			
100						
80						
70						
60						
50						
40						
30						
25						
20						
15						
10						
7						
5						
4						

* GUAM, MARIANA IS. 1000 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	111	24.2	22.1	06	4.3
1000	31	108			09	4.5
950	31	558	21.7	16.9	09	11.2
900	31	1,025	19.0	15.3	09	11.2
850	31	1,515	16.8	9.6	09	9.9
800	31	2,031	14.9	2.0	09	8.5
750	31	2,575	12.9	-4.4	09	7.6
700	31	3,152	10.1	-8.5	09	6.9
650	31	3,765	6.7	-12.2	09	6.1
600	31	4,417	3.0	-16.3	09	5.5
550	31	5,112	-1.2	-20.5	09	5.3
500	31	5,870	-6.0	-24.3	10	5.6
450	31	6,643	-11.3	-28.4	09	4.5
400	31	7,591	-17.1	-33.6	03	2.0
350	31	8,569	-23.9	-39.5	32	2.7
300	31	9,676	-32.0	-46.3	29	5.7
250	31	10,936	-42.2		28	8.9
200	31	12,404	-54.4		27	9.7
175	31	13,246	-61.3		26	9.2
150	31	14,185	-68.6		26	8.8
125	31	15,256	-75.9		28	6.6
100	31	16,524	-81.0		29	2.5
80	28	17,780	-79.3		33	.7
70	28	18,545	-74.6		02	.8
60	28	19,456	-69.5		11	1.9
50	28	20,556	-64.2		12	2.5
40	28	21,943	-58.5		09	8.2
30	27	23,771	-55.2		09	16.6
25	27	24,942	-52.3		09	19.4
20	26	26,399	-48.6		09	21.2
15	24	28,311	-43.6		09	22.1
10	22	31,041	-40.4		08	24.4
7	16	33,465	-36.8		09	23.0
5	15	35,627	-31.8		10	12.1
4	7	37,399	-31.8			

* SHEMYA, ALASKA 1004 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	38	-.2	-2.6	25	1.9
1000	31	72			23	2.6
950	31	478	-3.6	-6.1	26	4.1
900	31	[illegible]	-6.7	-9.1	29	4.7
850	31	1,349	-9.5	-12.3	29	5.3
800	31	1,816	-11.6	-18.5	29	5.6
750	31	2,308	-14.4	-22.1	29	6.1
700	31	2,828	-17.3	-25.6	28	7.2
650	31	3,377	-20.3	-28.1	28	8.6
600	31	3,969	-23.6	-31.8	28	9.5
550	31	4,596	-27.6	-35.7	27	10.6
500	31	5,280	-32.0	-40.8	27	11.0
450	31	6,011	-37.1	-43.4	27	12.3
400	31	6,622	-42.5	-43.2	27	13.9
350	31	7,713	-47.9		27	16.8
300	31	[illegible]	-52.3		27	19.1
250	31	9,692	-54.1		27	19.0
200	31	11,326	-52.9		27	18.2
175	31	12,130	-52.4		27	18.8
150	31	13,188	-51.8		26	17.9
125	31	14,366	-52.4		26	16.8
100	31	15,012	-51.9		26	15.9
80	30	17,262	-51.4		25	17.1
70	30	18,129	-51.2		25	16.7
60	29	19,128	-51.1		25	18.3
50	29	20,314	-51.0		25	18.4
40	29	[illegible]	-51.2		25	20.6
30	29	23,635	-51.5		26	25.2
25	29	24,817	-52.0		26	28.3
20	29	26,259	-53.2		27	30.0
15	27	28,101	-54.7		27	34.7
10	23	31,674	-55.3		28	38.8
7	20	32,969	-54.9		28	44.0
5	6	35,504	-51.2			
4						

Note: All observations scheduled at 1200, G.C.T. Pressures shown under station names are the average monthly station pressures for the month of record, corrected to the height of the floors of the instrument shelters used for rawinsonde purposes. "Number of observations" refers to those of dynamic height only. Although the number of temperature observations at any given pressure surface is usually the same as for height, it is possible for temperature to be missing for one or more pressure surfaces of some observations. Dew Point averages are limited to those observations with temperatures warmer than -40°C. Observations of wind speed and direction are sometimes lost due to limiting angles, i.e., elevation angles less than 6° above the horizon, or any obstruction above the horizon.

The temperature and wind values are based on 15 or more observations at the surface or 5 observations at a standard pressure level for temperature and 10 for wind. Dew Point data are not published for standard pressure surfaces for which less than 5 observations are available. Dew Point data are computed and expressed on the basis of vapor pressure over water. Unless otherwise indicated, they are obtained from carbon hygristors.

These average values for standard pressure surfaces were obtained by rawinsondes; dynamic height (geopotential) in units of .98 dynamic meter, temperature and dew point in degrees Celsius, and resultant winds in tens of degrees and meters per second.

* Rawinsondes at this station were equipped with hypsometers to permit more accurate evaluations of pressure, and consequently height, at pressures lower than 50 mb. These rawinsondes were carried aloft by special high altitude balloons, in an effort to consistently reach higher altitudes.

\+ Observations for these stations are scheduled at 0000 G.C.T.

† Dew Point temperatures are based on a minimum of 5 observations. Therefor, due to the lesser number of Dew Point observations at the higher levels comparison with dry-bulb temperatures should be made with care. Dew Point temperatures replaced Relative Humidity January 1967.

SOLAR RADIATION DATA

Solar radiation intensities, tabulated in langleys per minute on a surface normal to the direction of the sun. MARCH 1968

ALBUQUERQUE, N. MEX.

Date	A.M. 78.7°	A.M. 75.7°	A.M. 70.7°	A.M. 60.0°	*	P.M. 60.0°	P.M. 70.7°	P.M. 75.7°	P.M. 78.7°
Air mass	4.19	3.35	2.51	1.67	*	1.67	2.51	3.35	4.19
Mar.									
1-----	----	----	----	1.27	----	----	----	----	----
2-----	----	----	----	----	(1.03)	(1.27)	----	1.09	----
3-----	0.85	0.97	1.10	1.27	----	1.20	1.03	.92	0.81
5-----	----	----	----	----	----	----	1.21	1.09	1.00
6-----	----	1.04	1.17	1.33	1.46	----	----	----	----
7-----	----	----	----	----	----	----	(1.17)	----	----
9-----	----	----	----	----	1.47	----	----	----	----
12----	----	----	----	1.35	1.49	1.38	1.25	1.14	1.04
14----	----	----	----	----	----	----	1.15	1.02	.90
15----	.94	1.03	1.15	1.30	----	----	----	----	----
18----	.97	1.06	1.19	1.36	1.50	----	----	----	----
19----	.95	1.06	----	----	----	----	----	----	----
21----	----	----	----	----	----	1.27	1.12	.96	.83
22----	1.00	1.11	1.22	1.37	1.53	1.33	1.19	1.07	.97
23----	1.01	1.10	1.22	1.36	1.49	----	----	----	----
24----	.92	1.01	1.17	1.34	1.51	1.31	1.02	.83	.68
26----	.87	.99	1.13	1.28	1.43	----	----	----	----
28----	.85	.95	1.09	1.26	1.46	1.25	1.10	.93	.83
29----	.89	1.00	1.13	1.28	1.46	----	----	----	----
31----	.85	.94	1.03	1.17	----	----	----	----	----
Averages	0.92	1.02	1.15	1.30	1.48	1.29	1.13	1.01	0.88

BLUE HILL OBS., MASS.

Date	A.M. 78.7°	A.M. 75.7°	A.M. 70.7°	A.M. 60.0°	*	P.M. 60.0°	P.M. 70.7°	P.M. 75.7°	P.M. 78.7°
Air mass	4.89	3.92	2.94	1.96	*	1.96	2.94	3.92	4.89
Mar.									
7-----	----	----	----	----	1.45	1.35	1.21	1.08	0.98
11----	----	----	----	----	----	1.22	1.08	.96	.84
25----	0.87	0.99	1.11	1.28	1.41	1.23	1.05	.91	.82
26----	.54	.67	.78	----	----	----	----	----	----
27----	----	----	----	----	----	1.01	.70	.53	.43
28----	.67	.74	.79	.90	----	----	----	----	----
30----	.79	.87	.99	1.16	1.35	1.21	1.05	.91	.81
31----	.79	.95	1.05	1.20	1.33	----	----	----	----
Averages	0.73	0.84	0.94	1.14	1.39	1.20	1.02	0.88	0.78

MAUNA LOA OBS., HAWAII

Date	A.M. 78.7°	A.M. 75.7°	A.M. 70.7°	A.M. 60.0°	*	P.M. 60.0°	P.M. 70.7°	P.M. 75.7°	P.M. 78.7°
Air mass	3.36	2.69	2.01	1.34	*	1.34	2.01	2.69	3.36
Mar.									
1-----	1.20	1.29	1.38	1.48	----	----	----	----	----
4-----	1.18	1.27	1.37	1.47	----	----	----	----	----
5-----	1.16	1.24	1.34	1.46	----	----	1.26	1.13	1.05
6-----	1.17	1.26	1.36	1.47	----	----	1.30	1.13	1.09
7-----	1.18	1.27	1.38	1.48	----	----	----	1.18	1.10
8-----	1.16	1.24	1.34	1.46	----	----	----	1.34	1.15
9-----	1.22	1.30	1.39	1.51	----	----	----	----	----
10----	1.22	1.28	1.38	1.49	----	----	----	----	----
12----	1.18	1.24	1.36	1.47	----	----	----	----	----
Averages	1.19	1.27	1.37	1.48	----	----	1.28	1.20	1.10

‡ Wind mast
† Off target
HS Slight haze
HM Moderate haze
HI Intense haze
( ) Clouds present
S Slight haze - indeterminable
M Moderate haze - indeterminable
* Values corresponding to true solar noon

MADISON, WIS.

Date	A.M. 78.7°	A.M. 75.7°	A.M. 70.7°	A.M. 60.0°	*	P.M. 60.0°	P.M. 70.7°	P.M. 75.7°	P.M. 78.7°
Air mass	4.69	3.75	2.81	1.88	*	1.88	2.81	3.75	4.69
Mar.									
6-----	----	----	----	----	----	S 1.31	S 1.16	S 1.01	S 0.90
13----	S 0.91	S 1.02	S 1.15	S 1.31	----	----	----	----	----
24----	M .83	M .94	S 1.07	S 1.22	S 1.37	----	----	----	----
26----	----	----	----	S 1.14	S 1.36	----	----	----	----
30----	----	----	M 1.01	M 1.18	M 1.20	----	----	----	----
Averages	0.87	0.98	1.08	1.21	1.31	1.31	1.16	1.01	0.90

TUCSON, ARIZ.

Date	A.M. 78.7°	A.M. 75.7°	A.M. 70.7°	A.M. 60.0°	*	P.M. 60.0°	P.M. 70.7°	P.M. 75.7°	P.M. 78.7°
Air mass	4.56	3.65	2.74	1.83	*	1.83	2.74	3.65	4.56
Mar.									
3-----	----	----	----	----	1.39	----	----	0.97	0.87
4-----	0.89	1.00	1.13	1.29	1.38	1.19	1.07	.96	.84
5-----	.91	1.00	1.13	1.28	1.14	.92	----	.80	.70
11----	----	----	----	1.21	1.40	1.25	1.07	----	----
12----	.97	1.06	1.19	1.32	----	1.27	1.01	----	----
15----	.89	.98	1.10	1.25	1.44	----	----	----	----
18----	.86	.94	1.05	1.22	1.19	----	1.08	.91	.81
19----	.76	.87	----	1.14	----	----	1.09	.92	.82
20----	.86	.96	1.09	1.24	1.39	1.17	----	----	----
21----	.91	1.01	1.13	1.28	1.42	1.22	----	----	----
22----	.93	1.03	1.15	1.27	1.28	----	----	----	----
23----	----	----	----	----	1.40	1.19	1.03	.91	.81
24----	.91	1.02	1.13	1.30	----	----	----	----	----
26----	.83	.94	1.05	1.21	1.37	1.09	.90	.74	.70
28----	.77	.88	1.00	1.16	1.37	1.13	.92	.77	.66
30----	----	----	----	----	1.41	1.23	1.08	.94	.84
Averages	0.87	0.97	1.10	1.24	1.35	1.17	1.03	0.88	0.78

OMAHA, NEBR.

Date	A.M. 78.7°	A.M. 75.7°	A.M. 70.7°	A.M. 60.0°	*	P.M. 60.0°	P.M. 70.7°	P.M. 75.7°	P.M. 78.7°
Air mass	4.78	3.82	2.87	1.91	*	1.91	2.87	3.82	4.78
Mar.									
1-----	HS0.94	HS1.02	HS1.14	HS1.29	HS1.38	HS1.26	HS1.12	HS0.98	HS0.86
2-----	----	----	----	----	----	----	HS1 16	‡	HS .91
3-----	HS .98	HS1.09	HS1.17	HS1.34	HS1.45	HS1.33	HS1.19	HS1.06	HS .98
4-----	HS .99	HS1.05	HS1.16	HS1.36	HS1.42	HS1.32	HS1.16	HS1.06	HS .91
5-----	----	----	----	----	HS1.38	†	HS1.17	HS1.10	HS .99
6-----	----	HM .95	HM1.08	HM1.22	HM1.28	----	HM1.03	HM .88	----
12----	HS .84	HS1.02	HS1.14	HS1.35	HS1.42	----	----	----	----
16----	HS .88	HS1.00	HS1.12	HS1.27	HM1.21	----	----	----	----
19----	----	HS .94	HM1.10	HM1.24	----	----	----	----	----
23----	HI .68	HI .88	HM1.00	HM1.12	HM1.34	HS1.20	HS1.04	HS .91	HS .80
24----	HS .82	HS .96	HS1.06	HM1.16	----	----	----	----	----
25----	HS .75	HM .87	HM .98	HM1.12	HM1.29	----	----	----	----
29----	----	----	HM1.04	HS1.21	HS1.37	----	----	----	----
31----	----	----	----	----	----	HS1.21	HS1.09	HS .98	----
Averages	0.86	0.98	1.09	1.24	1.35	1.26	1.12	0.99	0.91

GUAM, M. I.

Date	A.M. 78.7°	A.M. 75.7°	A.M. 70.7°	A.M. 60.0°	*	P.M. 60.0°	P.M. 70.7°	P.M. 75.7°	P.M. 78.7°
Air mass	4.92	3.93	2.95	1.97	*	1.97	2.95	3.93	4.92

No observations due to cloudiness

Langley is the unit used to denote one gram calorie per square centimeter. An explanation of the formula used in computing the air mass values for each station listed above appears in the February 1957 issue, Vol. 8, No. 2, page 63, of this publication.

SOLAR RADIATION DATA

Daily totals and monthly averages of solar radiation (direct and diffuse) received on a horizontal surface, tabulated in langleys.

Station	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
ALBUQUERQUE N.M.	467	397	455	499	529	513	308	394	427	156	434	580	504	485	575	241	330	558	455	205	421	635	571	649	580	628	539	639	596	439	520	475
AMES IOWA	384	337	415	415	154	414	393	42	119	300	369	450	412	351	420	461	174	128	455	242	379	265	492	478	420	411	259	468	500	465	477	356
ANNETTE ALASKA	53	52	51	35	80	133	58	70	125	181	131	163	280	196	205	287	83	---	27	73	43	168	112	275	362	184	240	235	---	---	474	156
APALACHICOLA FLORIDA	581	338	260	576	486	173	570	531	509	253	365	213	489	596	545	342	604	607	609	613	549	321	606	661	644	---	601	591	621	546	577	499
ARGONNE NAT. LAB.	383	224	467	462	280	379	456	131	96	139	411	180	523	337	320	396	448	266	196	269	120	230	430	576	418	560	500	562	533	563	243	358
ASTORIA OREGON	104	231	137	112	151	287	332	385	314	236	55	148	146	316	65	304	301	290	442	420	269	165	119	231	210	183	58	199	440	513	355	243
ATLANTA GEORGIA	---	---	530	521	455	450	---	---	---	---	---	318	524	465	---	120	557	520	531	527	408	175	408	595	466	561	545	385	351	451	408	447
BARROW ALASKA	114	---	68	127	155	---	31	36	24	47	47	46	27	29	34	54	69	180	173	193	145	144	188	180	257	241	245	247	227	206	249	130
BETHEL ALASKA	114	151	233	210	227	209	193	256	282	291	299	286	215	165	217	278	215	352	378	381	369	343	336	369	292	350	293	275	325	329	298	275
BISMARCK N.DAK.	288	426	399	358	393	401	342	77	172	333	483	382	247	305	309	463	431	40	285	503	486	550	548	356	532	355	295	505	512	337	570	377
BLUE HILL MASS.	79	261	398	362	335	309	466	414	227	210	395	99	45	417	369	173	85	46	96	243	60	86	104	295	551	430	379	415	382	559	510	284
BOISE IDAHO	374	373	354	351	112	329	250	329	417	429	265	276	299	---	---	144	216	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
BOSTON MASSACHUSETTS	---	---	---	---	---	---	---	---	---	---	---	---	---	---	414	190	93	38	78	244	74	67	95	312	533	405	398	399	372	546	494	---
BROWNSVILLE TEXAS	406	483	121	64	66	192	601	258	361	496	581	650	645	324	295	228	558	466	514	248	67	689	676	721	619	570	413	549	620	610	312	432
BURLINGTON VERMONT	115	312	306	347	325	422	428	239	330	125	385	182	154	469	215	175	58	157	415	136	223	39	35	151	512	225	307	219	214	431	469	262
CAPE HATTERAS N.C.	386	505	476	538	460	---	520	539	449	235	468	272	239	573	526	284	218	268	292	---	512	540	157	614	615	374	588	556	528	555	545	443
CARIBOU MAINE	96	271	337	305	300	355	473	411	222	315	271	471	197	450	451	192	154	452	395	169	324	136	110	278	588	449	208	334	256	195	403	309
CHARLESTON S.C.	541	488	506	546	525	---	503	498	450	177	222	141	475	592	134	189	508	602	580	548	558	406	592	638	601	592	592	412	428	571	536	472
CLEVELAND OHIO	275	129	377	298	340	443	439	340	75	121	361	60	322	456	177	58	386	439	359	103	41	73	230	481	446	251	472	519	506	570	235	303
COLUMBIA MISSOURI	466	127	491	499	474	451	465	346	339	438	160	162	516	479	118	485	477	219	160	85	290	320	482	558	514	482	361	552	463	434	338	379
DAVIS CALIFORNIA	245	454	388	372	442	387	151	317	472	495	303	184	399	279	351	298	483	546	561	558	415	336	563	487	446	582	559	552	544	549	587	429
DODGE CITY KANSAS	475	236	516	502	323	391	179	450	220	138	228	528	416	457	555	372	490	227	562	182	576	538	592	404	521	545	552	586	569	585	599	436
E. LANSING MICHIGAN	---	218	453	417	369	471	457	346	46	188	454	120	485	365	252	348	512	493	---	348	189	142	251	598	488	498	470	---	548	565	80	363
EL CENTRO CALIF. NPF	480	334	465	488	462	350	350	139	382	505	505	444	521	522	490	478	478	480	555	555	535	462	539	539	479	555	555	559	548	560	376	474
EL PASO TEXAS	---	511	302	372	280	529	384	230	503	437	219	610	554	549	615	330	388	237	467	410	390*	653	640	662	531	663	375	643	594	483	419	466*
ELY NEVADA	497*	476	510	500	472	188	332	306	221	519	564	383	153	436	562	494	306*	413	474	633	586	545	503	460	544	630	634	615	630	422	525	469*
EPPLEY NEWPORT R.I.	95	361	427	387	291	387	429	361	99	147	374	90	54	486	419	193	180	75	250	293	85	123	160	315	521	457	359	392	398	536	478	297
FAIRBANKS ALASKA	91	148	141	131	196	210	222	184	216	254	241	244	259	271	256	285	301	262	310	186	160	215	320	283	321	320	348	350	376	345	339	251
FLAMING GORGE UTAH	487	488	506	501	522	469	151	346	133	224*	423	507	294	468	577	283	418*	304	285	435	463	590	506*	487*	482	618	637	506	579	253	651	439*
FORT WORTH TEXAS	517	134	527	521	250*	120	---	310	520	310	63	568	548	560	468	567	371	107	84	91	448	329	645	620	534	474	232	371	415	143	408	375*
FRESNO CALIFORNIA	307	349	421	393	398	377	156	234	464	384	415	49	21	495	377	126	522	532	503	550	441	360	550	426	559	497	562	567	572	577	504	409
GAINESVILLE FLORIDA	525	392	393	426	530	158	503	514	251	---	286	186	---	535	---	---	---	487	499	487	530	532	560	642	618	535	504	479	412	445	460	457
GLASGOW MONTANA	384	341	382	388	357	354	275	226	158	230	382	235	153	397	420	440	429	86	164	326	493	490	428	400	515	126	404	430	392	361	506	344
GRAND JUNCTION COLO.	482	476	500	487	500	477	118	248	310	398	476	522	291	402	522	258	340	437	551	---	579	572	477	573	499	443	608	596	595	545	584	462
GREAT FALLS MONTANA	393	402	396	362	344	428	280	362	268	158	445	333	246	389	333	359	44	283	401	454	517	505	446	393	380	233	341	245	438	376	425	354
GREENSBORO N.C.	459	455	492	450	439	297	480	436	388	111	408	43	473	499	381	173	405	544	497	490	445	479	387	558	504	520	535	386	491	372	404	419
INDIANAPOLIS INDIANA	382	147	466	487	328	376	487	243	336	106	326	71	559	448	72	473	506	452	254	212	66	123	437	583	518	539	530	557	429	540	72	359
ITHACA NEW YORK	102	156	294	275	177	430	478	422	29	63	327	55	241	475	279	395	14	49	100	455	104	46	49	13	414	285	500	334	306	557	496	256
LAKE CHARLES LA.	509	97	379	462	201	210	488	352	309	252	259	49	577	373	169	410	291	335	408	361	68	446	622	593	567	600	442	419	434	519	276	370
LAKELAND FLORIDA	592	490	473	569	531	190	575	555	461	389	518	264	193	573	355	432	614	628	609	634	598	546	559	663	584	515	507	385	574	622	530	507
LANDER WYOMING	461	407	483	472	486	423	315	437	193	354	551	473	390	510	541	360	378	352	436	473	594	578	455	546	546	575	556	495	590	579	624	472
LARAMIE WYOMING	400	247	423	421	423	377	269	285	196	225	370	429	388	378	431	248	460	381	273	329	288	513	488	486	512	486	533	348	517	374	549	389
LAS VEGAS NEVADA	508	500	510	518	517	284	354	307	489	464	550	---	---	571	---	---	401	---	---	606	571	500	568	591	580	530	650	628	647	640	488	519
LITTLE ROCK ARKANSAS	479	253	515	499	399	490	411	456	87	153	32	60	573	407	131	502	403	377	206	28	100	427	579	591	---	---	---	355	457	371	239	342
LOS ANGELES CALIF.	290	444	496	524	509	370	180	436	474	555	468	216	203	551	357	521	558	578	588	604	566	458*	594	561	574	545*	594	585	539	436*	283	473*
LOS ANGELES CALIF. U	347	431	497	485	455	325	149	383	460	577	408	220	176	538	358	484	572	556	572	597	558	451	657	450	542	528	564	569	405	569	218	455
MADISON WISCONSIN	371	332	450	433	146	461	438	118	88	144	428	428	501	402	394	479	372	135	147	274	160	238	482	536	399	531	339	492	526	528	403	361
MANHATTAN KANSAS	415	138	432	434	424	430	278	391	144	283	148	485	435	376	419	455	275	144	460	107	508	405	509	402	494	351	486	503	480	473	489	380
MAUNA LOA OBS.HAWAII	525	691	599	665	682	686	709	679	495	673	605	657	541	336	258	180	304	228	282	310	723	269	95	172	178	266	244	203	289	680	612	446
MEDFORD OREGON	---	---	---	---	---	243	437	456	435	407	380	145	246	329	386	171	355	457	409	456	300	348	293	490	373	506	467	548	551	531	544	395
MIAMI FLORIDA	591	555	543	547	500	548	526	383	524	546	533	469	411	497	357	511	223	578	599	618	611	521	350	594	483	179	491	484	486	560	596	497
MIDLAND TEXAS	268	340	223	405	76	486	314	165	515	380	181	553	514	471	529	406	150	192	471	156	442	583	588	575	493	---	---	---	483	415	438	386
NASHVILLE TENNESSEE	515	451	497	527	532	231	529	369	128	214	104	---	559	450	396	234	543	438	357	178	53	59	376	627	590	569	560	347	426	435	74	379
NEW YORK N.Y. U	212	164	395	356	408	212	496	433	44	66	407	33	65	529	426	72	30	54	393	330	190	80	84	454	565	444	469	416	439	587	470	301
NORTH OMAHA NEBRASKA	457	371	483	480	457	474	438	187	173	381	---	---	451	---	455	532	297	317	445	347	487	301	588	526	523	437	546	540	573	548	614	444

Note.--Langley is the unit used to denote one gram calorie per square centimeter.
Values with an asterisk are interpolated.

U Indicates Urban sites.

SOLAR RADIATION DATA

Daily totals and monthly averages of solar radiation (direct and diffuse) received on a horizontal surface, tabulated in langleys.

MARCH 1968

Station	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
OAK RIDGE TENNESSEE	477	465	485	519	506	170	502	415	166	254	272	247	489	475	319	73	515	473	368	429	98	263	470	587	492	551	551	363	289	497	81	383
OKLAHOMA CITY OKLA.	522	364	536	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	213	391	580	405	148	---
PAGE ARIZONA	485	487	498	497	499	252	395	192	383	421	547	518	486	308	551	463	529	512	417	466	591	535	519	595	450	530	617	630	628	622	489	488
PALMER AAES ALASKA	75	87	78	110	62	200	232	199	203	205	248	252	254	279	273	284	291	277	275	65	114	129	293	311	190	350	337	154	368	339	346	222
PHOENIX ARIZONA	339	331	510	533	522	329	492	193	83	282	555	554	427	516	548	382	330	581	444	517	583	439	605	610	380	607	610	608	581	598	369	466
PORTLAND MAINE	108	368	311	313	386	425	470	242	353	96	404	229	118	485	453	353	81	---	---	141	199	43	64	355	545	369	321	434	196	524	534	307
PROSSER WASHINGTON	201	323	271	237	239	360	250	413	420	416	149	166	385	301	114	227	411	485	467	452	365	316	297	415	249	434	385	371	324	485	355	332
RAPID CITY S.DAK.	416	264	467	398	428	427	382	369	233	248	122	376	201	405	422	431	371	111	---	271	400	519	509	386	525	368	488	430	543	471	572	385
RENO NEVADA	316	425	400	383	373	369	266	240	458	472	310	470	299	391	382	397	432	346	528	535	442	252	507	434	442	539	521	513	518	526	523	420
RICHLAND 25 NW WASH.	240	331	281	217	231	355	212	374	430	403	140	172	364	299	123	148	392	489	480	473	387	359	275	445	256	425	354	397	402	542	325	333
RIVERSIDE CALIFORNIA	387	332	396	486	446	131	211	296	366	503	477	181	209	494	338	429	470	464	555	562	534	464	541	515	492	516	560	561	521	442	206	422
RUSTON LOUISIANA	---	102	390	---	---	424	389	455	197	347	55	56	526	450	136	515	346	366	356	180	22	409	554	551	547	507	375	2•5	284	346	281	338
SAINT CLOUD MINN.	254	411	410	382	135	210	378	31	239	387	448	455	429	233	383	440	144	90	82	152	266	348	493	412	466	482	255	429	515	467	567	335
SALT LAKE CITY	457	458	465	470	478	242	233	175	159	535	536	410	102	406	544	324	129	228	519	575	576	540	510	526	534	448	612	598	595	439	599	433
SAN ANTONIO TEXAS	252	356	469	216	69	458	404	85	426	491	173	564	567	411	278	474	207	140	273	505	320	631	623	620	547	536	236	102	185	356	243	362
SANTA MARIA CALIF.	274	451	476	460	403	470	91	361	499	518	413	343	413	532	332	294	558	381	566	579	434	467	576	457	570	585	---	590	589	336	149	439
SAULT STE MARIE MICH	124	430	379	200	378	447	369	372	191	419	308	448	472	398	329	386	502	421	37	108	111	403	449	541	409	280	338	341	516	348	164	342
SEATTLE TACOMA WASH.	179	187	130	95	162	276	113	369	374	323	76	131	205	193	58	146	286	451	450	427	315	266	188	375	191	242	86	196	363	517	289	247
SEATTLE WASH. UNIV.	153	178	118	61	149	208	37	329	261	323	54	100	220	161	63	158	218	361	424	403	289	259	208	299	216	196	71	101	199	411	250	209
SPOKANE WASHINGTON	350	325	264	231	---	---	---	274	369	396	192	147	342	241	112	101	291	373	459	444	403	311	319	371	102	384	173	263	311	495	280	297
STATE COLLEGE PENN.	262	126	448	417	329	180	480	399	113	56	294	43	403	511	394	80	141	303	447	184	142	188	131	551	531	478	494	390	403	598	455	322
STERLING VIRGINA	---	---	500	486	456	160	517	432	290	187	497	60	323	556	406	283	65	176	476	464	248	---	---	552	---	---	---	---	504	598	452	378
SWAN ISLAND W.I.	460	572	567	584	606	---	622	597	620	629	605	600	406	399	476	607	---	---	---	---	---	---	---	---	522	542	589	464	646	658	624	563
TAMPA FLORIDA	595	479	463	589	550	121	593	564	498	464	567	325	181	591	299	388	582	624	615	618	616	519	568	680	623	620	497	355	457	569	631	511
TUCSON ARIZONA	231	348	396	492	498	357	499	---	---	---	393	544	---	445	543	410	207	424	300	554	493	527	---	---	235	495	442	569	483	---	---	430
WAKE ISLAND PACIFIC	552	298	524	452*	589	596	557	369	507	426	617	574	481	589	552	494	523	584	601	574	520	---	572	568	623	613	514	620	607	515*	543	538*

Note.--Langley is the unit used to denote one gram calorie per square centimeter.

Values with an asterisk are interpolated.

NET RADIATION

Net radiation in langleys per day (8 a.m. to 8 a.m.) at Palmer, Alaska

MARCH 1968

Date.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
Langleys. . .	1	4	-8	13	11	30	17	17	-1	2	-12	0	38	34	15	-18	-9	-3	37	9	-5	-10	-49	-72	-54	-43	-8	-17	-59	-38	-8	-6

The measurement is made with a CSIRO FUNK net exchange radiometer over a plot of sod. The value represents the total incoming minus the total outgoing radiation of all wave lengths.

These data are of an experimental nature and are published as received from the Palmer Exp. Station. The instrument with which they were measured has not been checked by the Weather Bureau.

SOLAR ULTRA-VIOLET RADIATION DATA

Daily totals and monthly average (<3900 Å)

Date.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
Langleys. . .	15.16	13.35	17.23	16.96	-----	16.68	16.25	2.81	6.93	13.32	16.68	17.98	17.87	14.84	18.09	18.52	9.31	6.93	19.71	11.81	17.55	12.13	20.80	20.15	17.44	17.22	10.61	18.20	19.61	17.87	17.22	15.30

These data are from an U - V Eppley total ultra violet sensor and Speedomax H (Leeds Northrup) Recorder. It is at the same location (Agronomy Building, Iowa State University, Ames) as the published total solar radiation instrumentation. This instrument has not been checked by the ESSA, Weather Bureau.

TOTAL OZONE DATA

These provisional ozone data are obtained from measurements made with a Dobson ozone spectrophotometer, and are applicable approximately to local apparent noon. The data are presented in the code λ s Ω Ω Ω defined in the August 1962 WMO circular entitled "PUBLICATION OF DATA FOR METEOROLOGICAL RESEARCH, WORLD OZONE DATA."

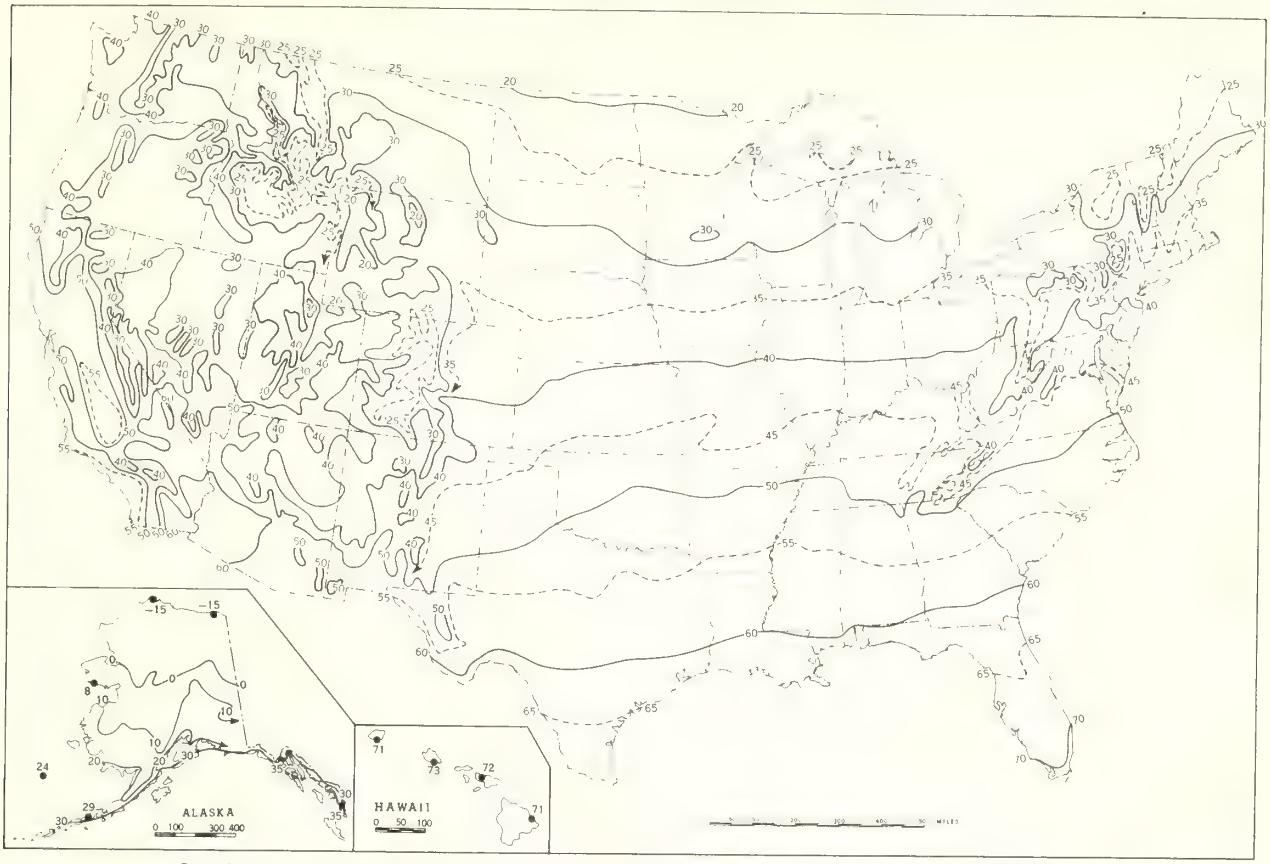
Units: Milli-atmo-cms.

Station	Day of month																															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean O3

Data will be delayed

The spectrophotometer measures the total amount of ozone in the atmosphere, i e , the amount contained in a vertical column of air extending from ground level to the top of the atmosphere in the vicinity of the station The amount of ozone in this column (coded Ω Ω Ω) is expressed in terms of a thickness of a layer it would occupy at standard temperature and pressure, e g , 350 milli-atmo-cm ozone implies an ozone layer 0 350 centimeter thick. The code λ s designates the type of measurement made.

Chart 1. A. Normal Daily Average Temperature (°F. 1931-60), March



B. Temperature Departure from 30 - Year Mean (°F 1931-60), March 1968.

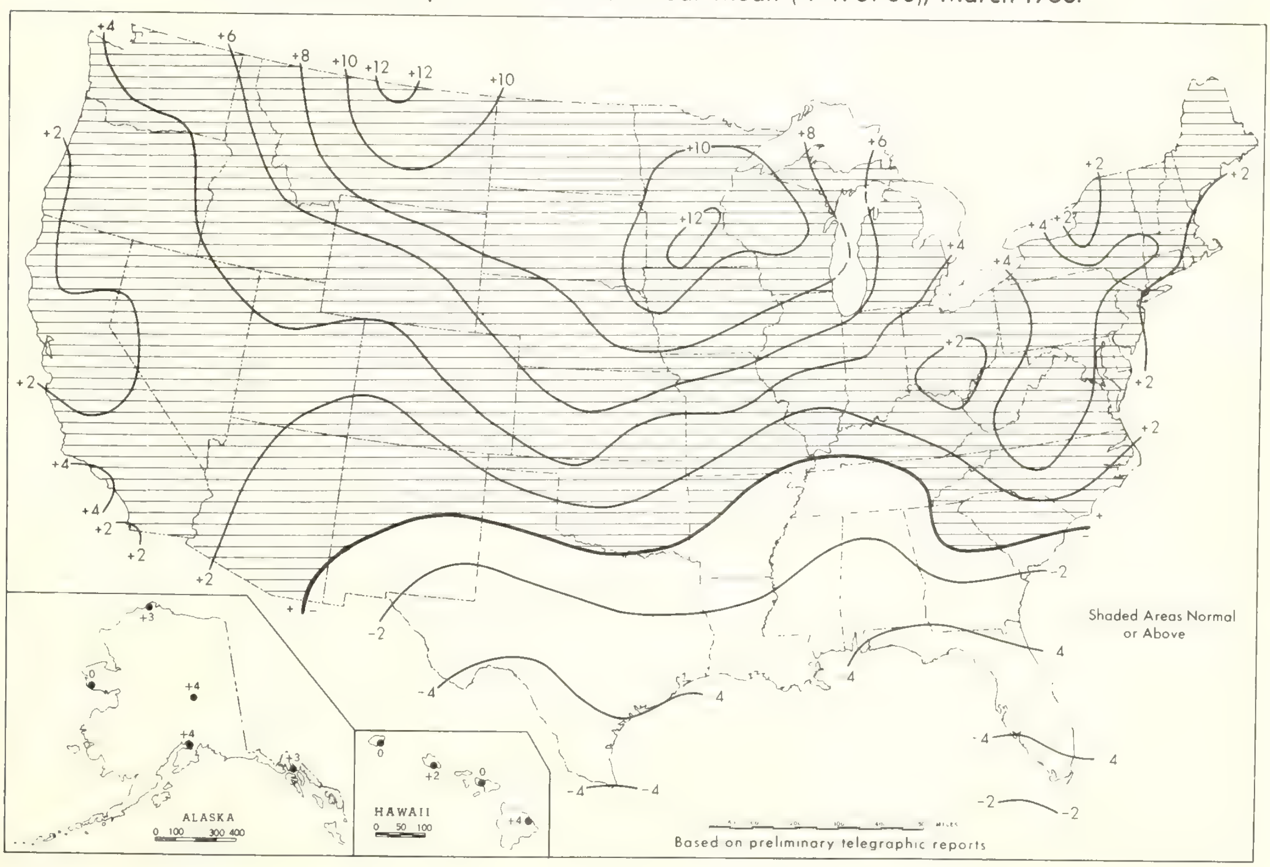


Chart II. Total Precipitation (Inches), March 1968.

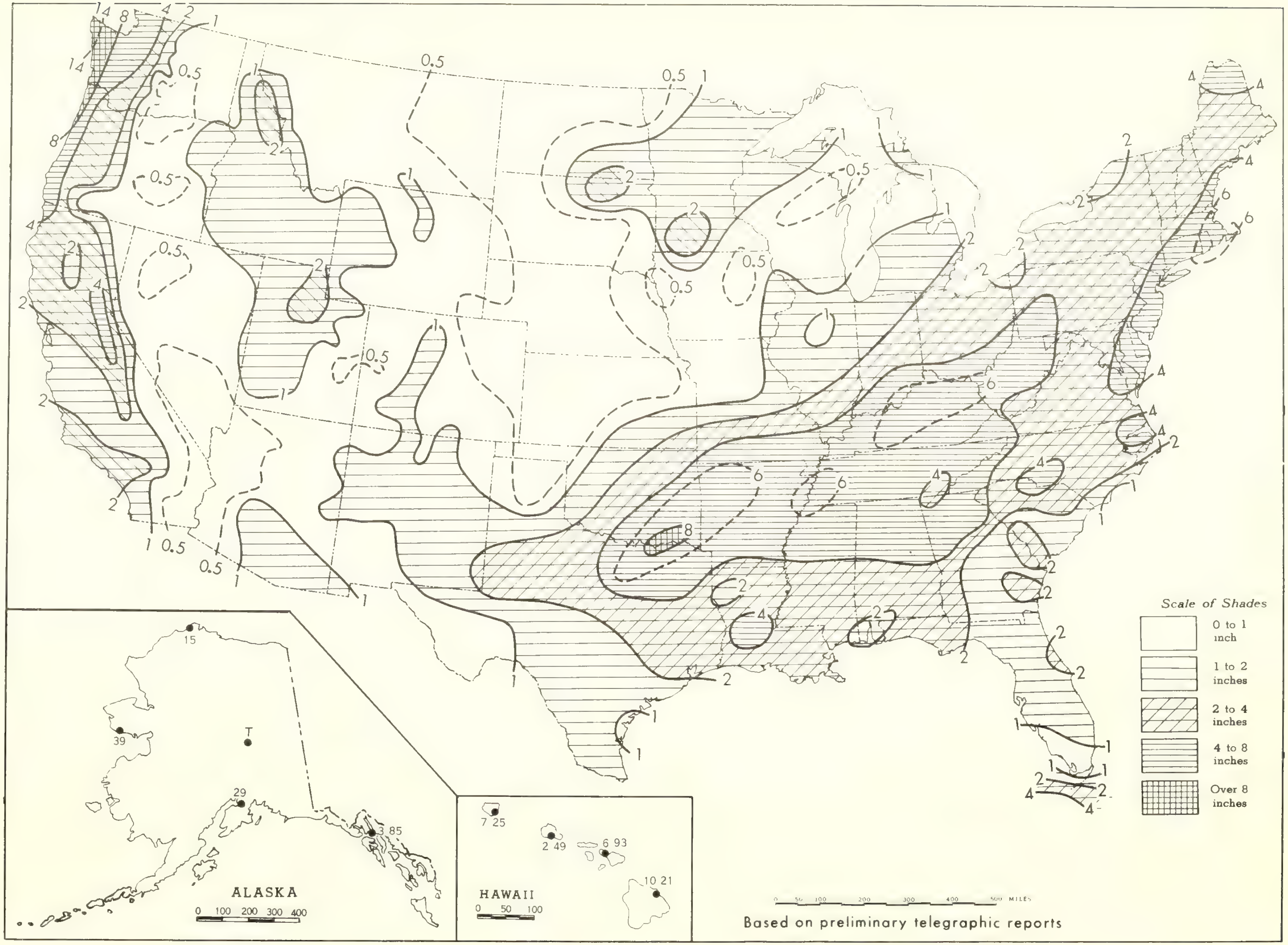


Chart III. Percentage of Normal Precipitation, March 1968.

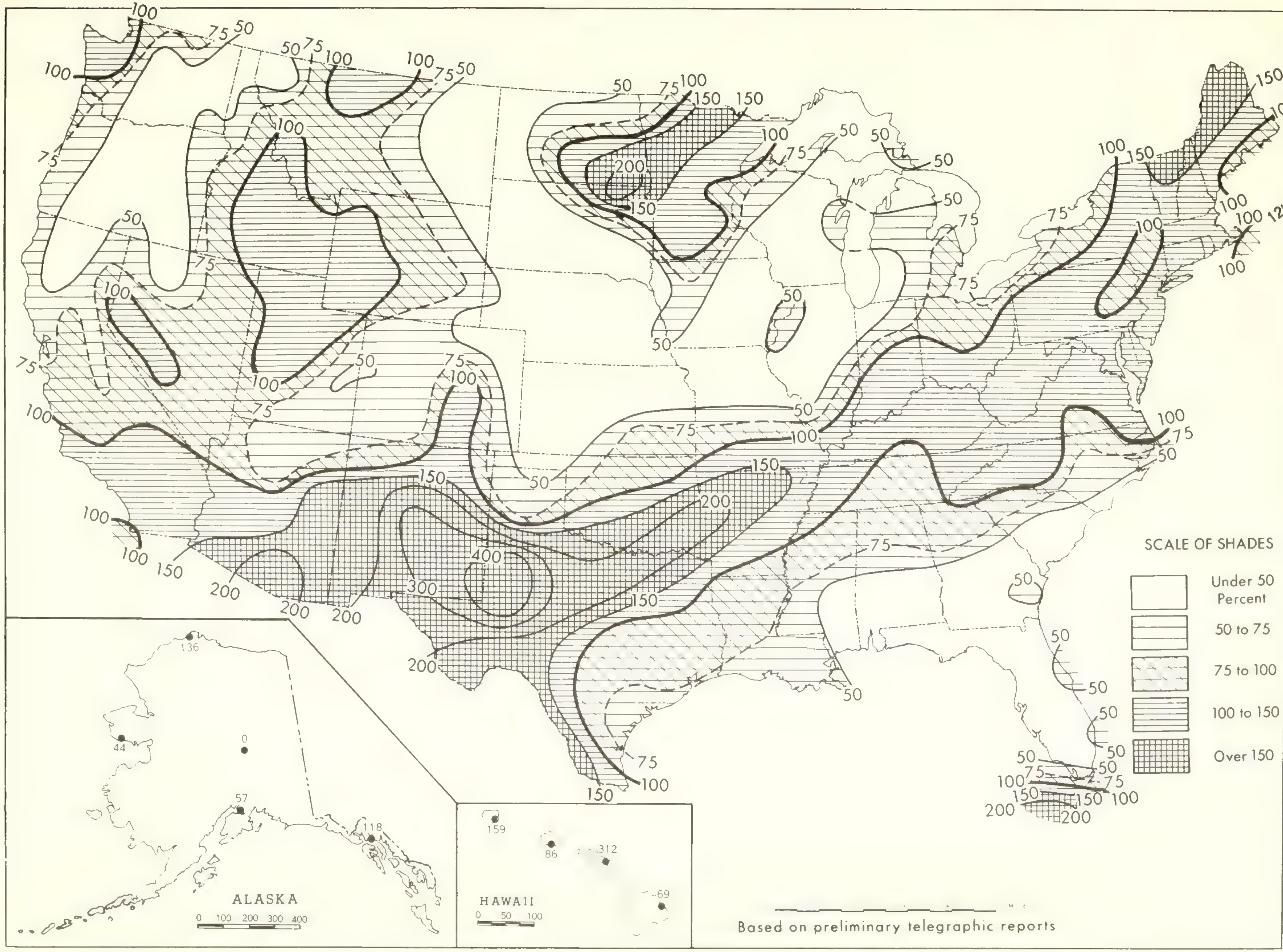
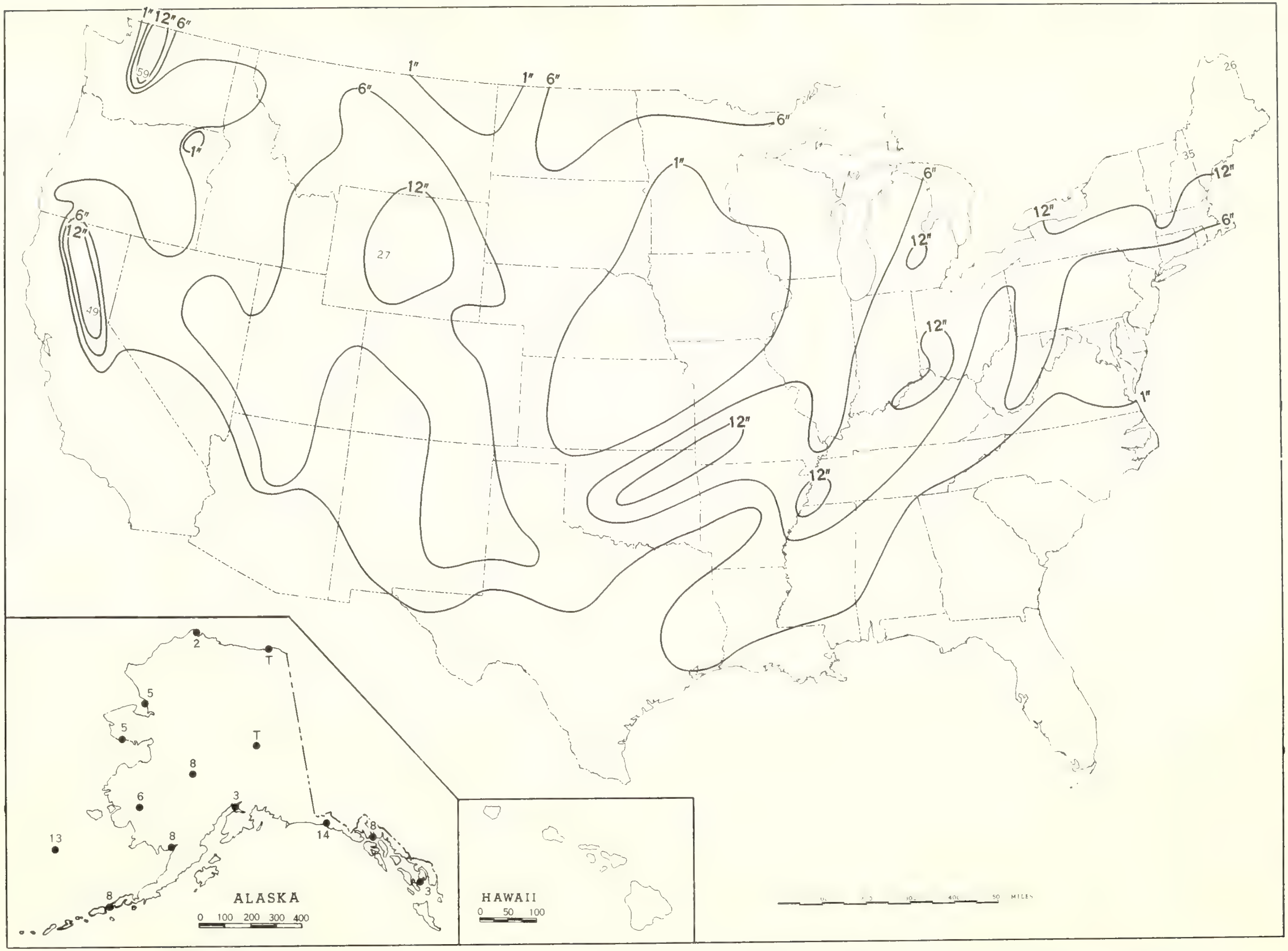
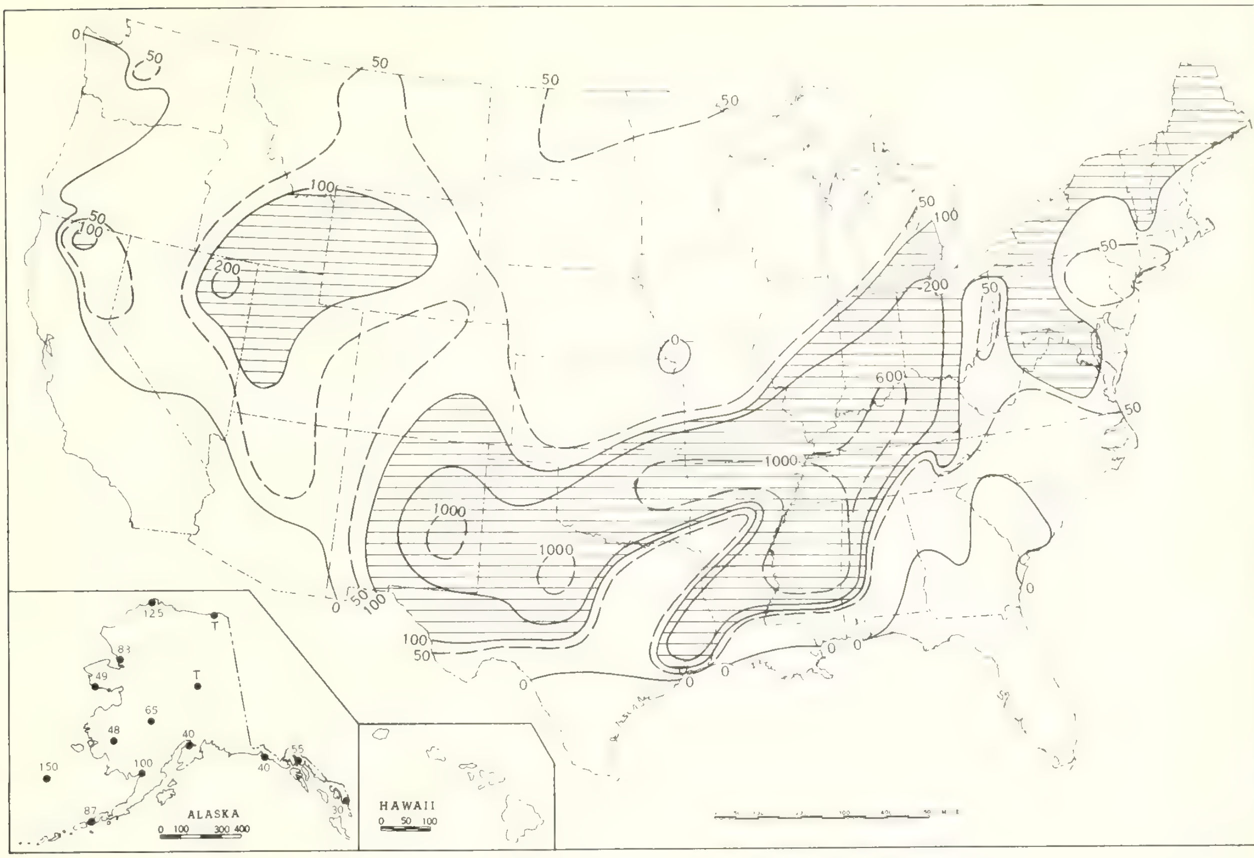


Chart IV. Total Snowfall (Inches), March 1968.

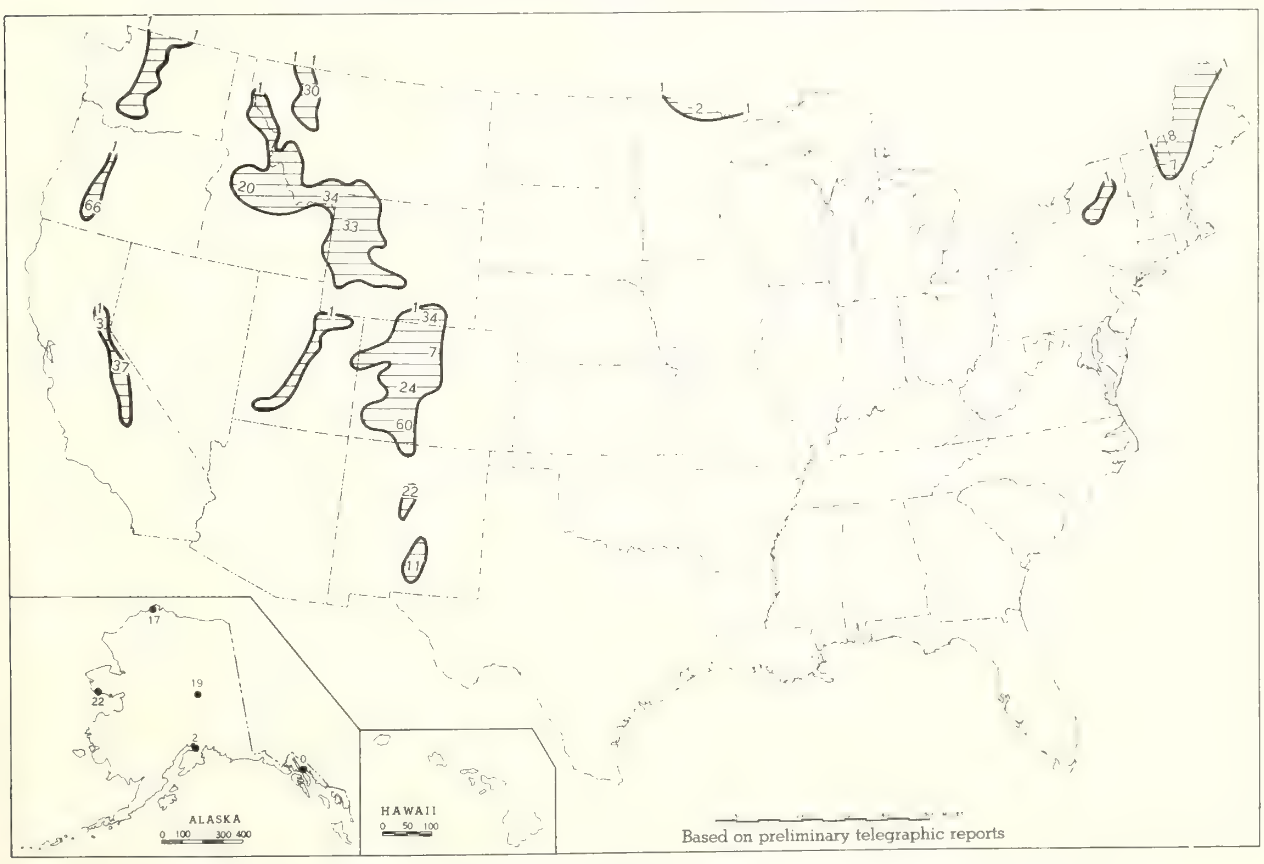


This is the total of unmelted snowfall recorded during the month at Weather Bureau and selected cooperative stations. This Chart and Chart V are published only for the months of November through April, although of course there is some snow at higher elevations, particularly in the far West, earlier and later in the year.

Chart V. A. Percentage of Mean Monthly Snowfall, March 1968.

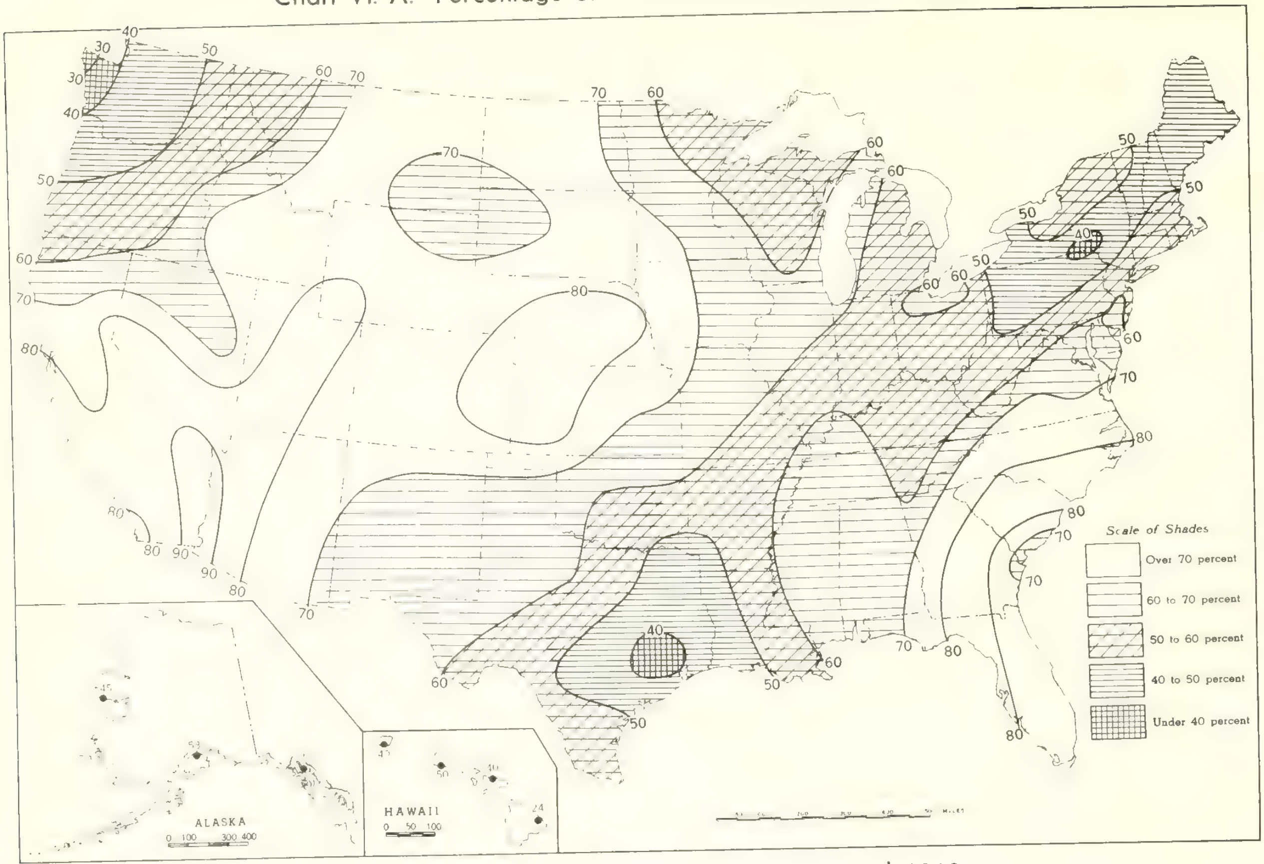


B. Depth of Snow on Ground (Inches), 7:00 a.m. E. S. T., April 1, 1968.

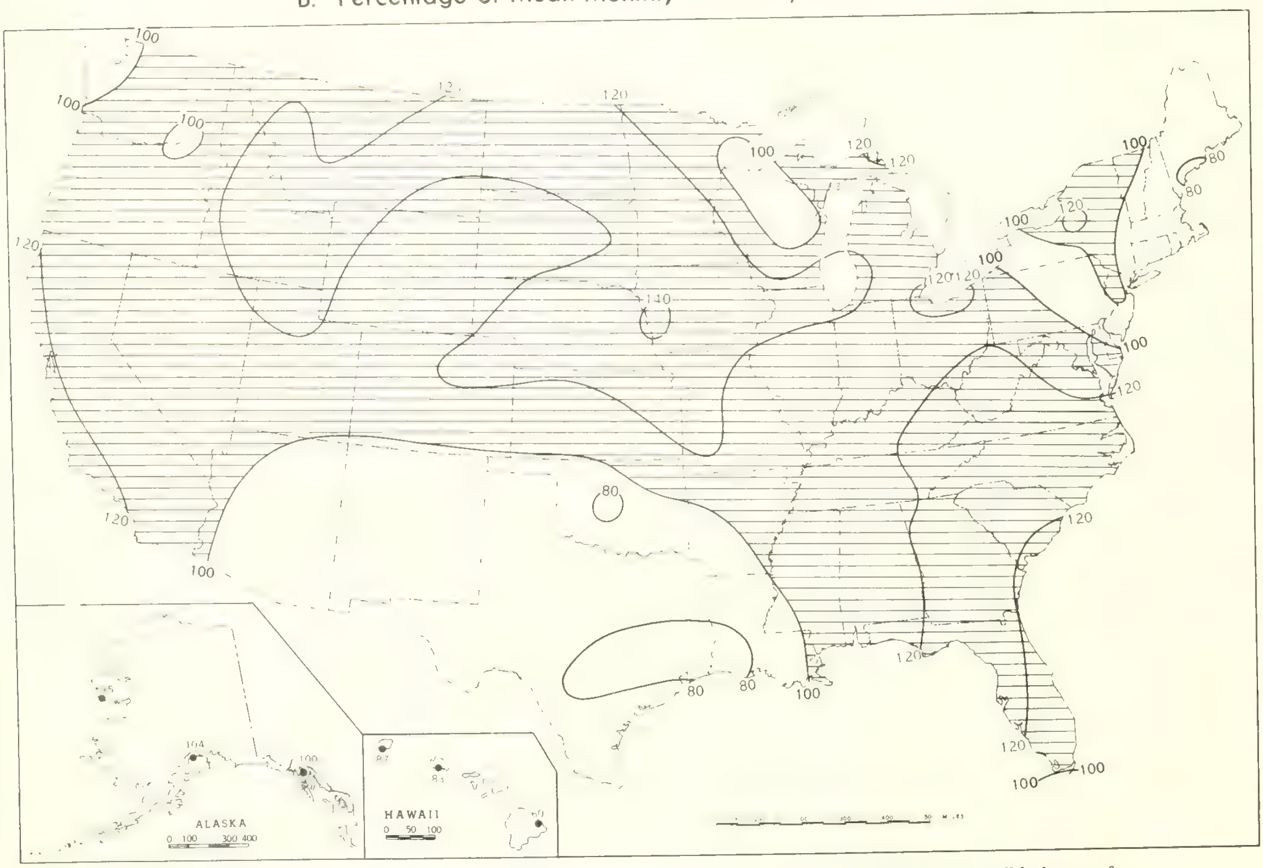


A. Amount of mean monthly snowfall is computed for Weather Bureau stations having at least 10 years of record.
B. Shows depth currently on ground at 7:00 a.m. E.S.T., of the Monday nearest the end of the month.
It is based on reports from Weather Bureau and selected cooperative stations.

Chart VI. A. Percentage of Possible Sunshine, March 1968.

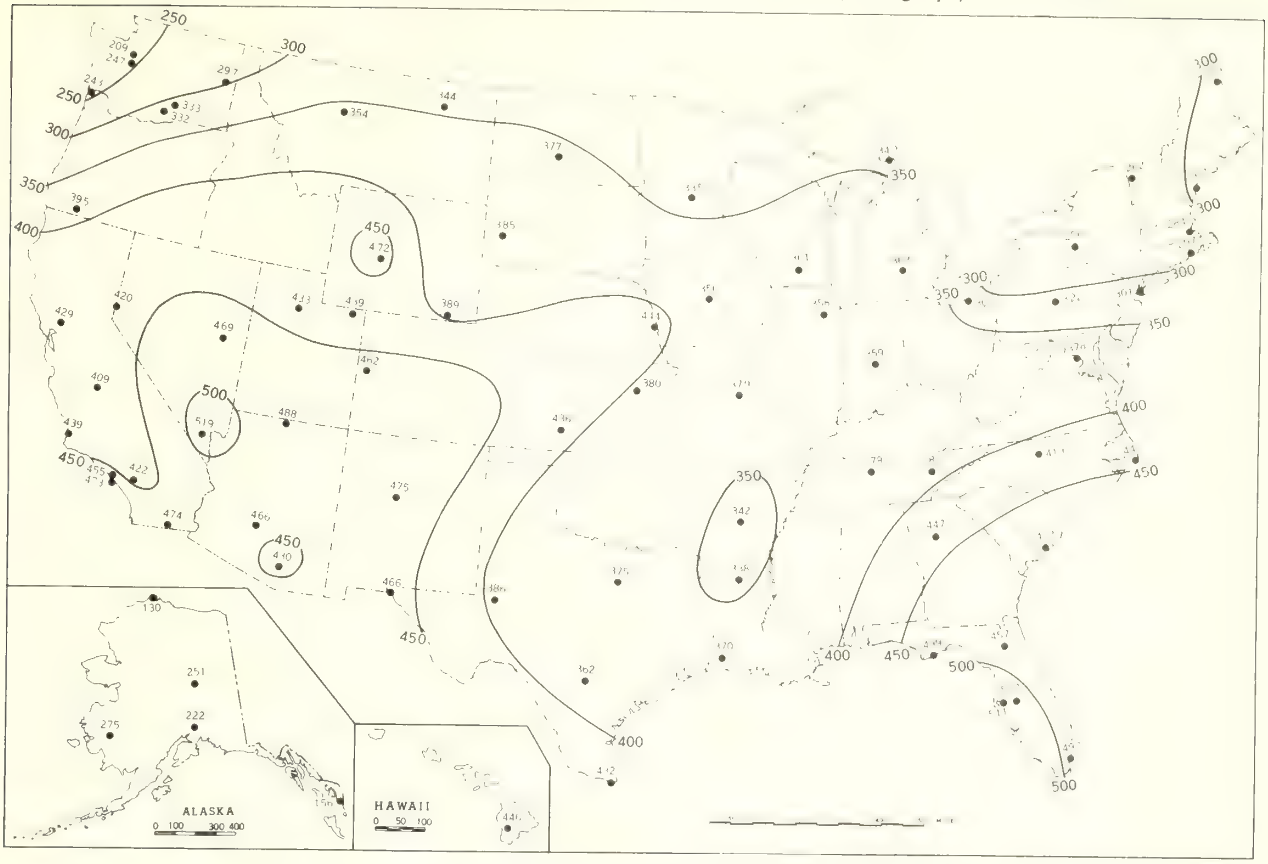


B. Percentage of Mean Monthly Sunshine, March 1968.

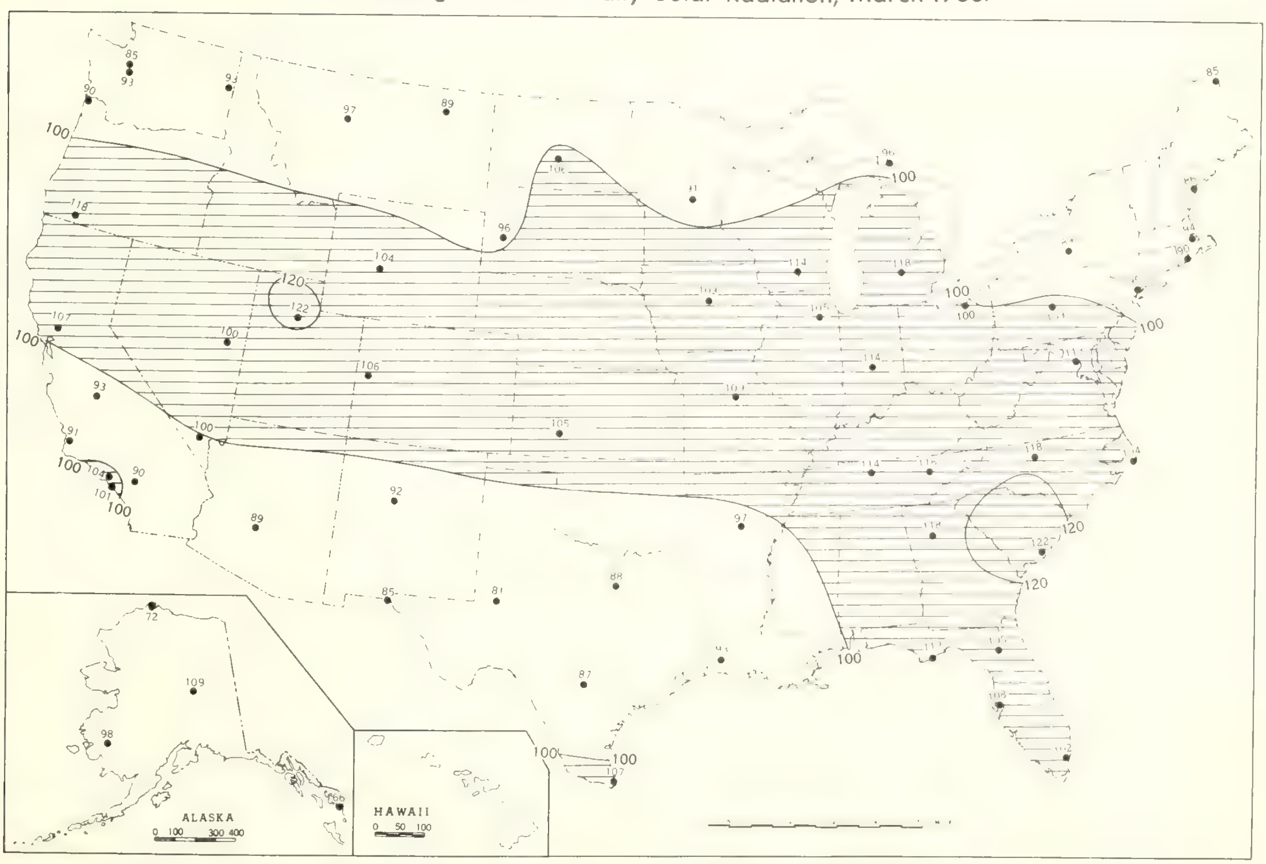


A. Computed from total number of hours of observed sunshine in relation to total number of possible hours of sunshine during month. B. Means are computed for stations having at least 10 years of record.

Chart VII. A. Average Daily Values of Solar Radiation, Langleys, March 1968.

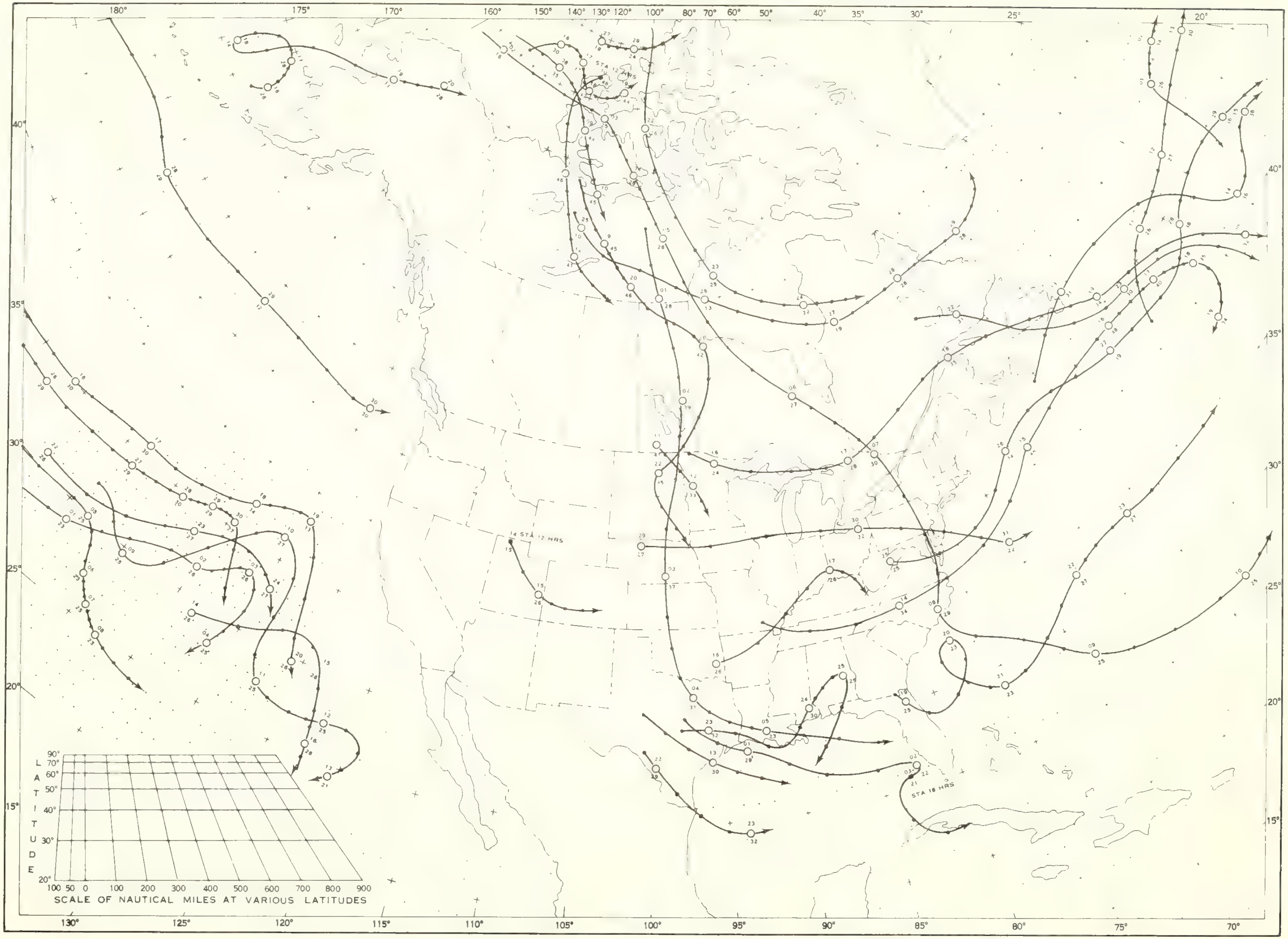


B. Percentage of Mean Daily Solar Radiation, March 1968.



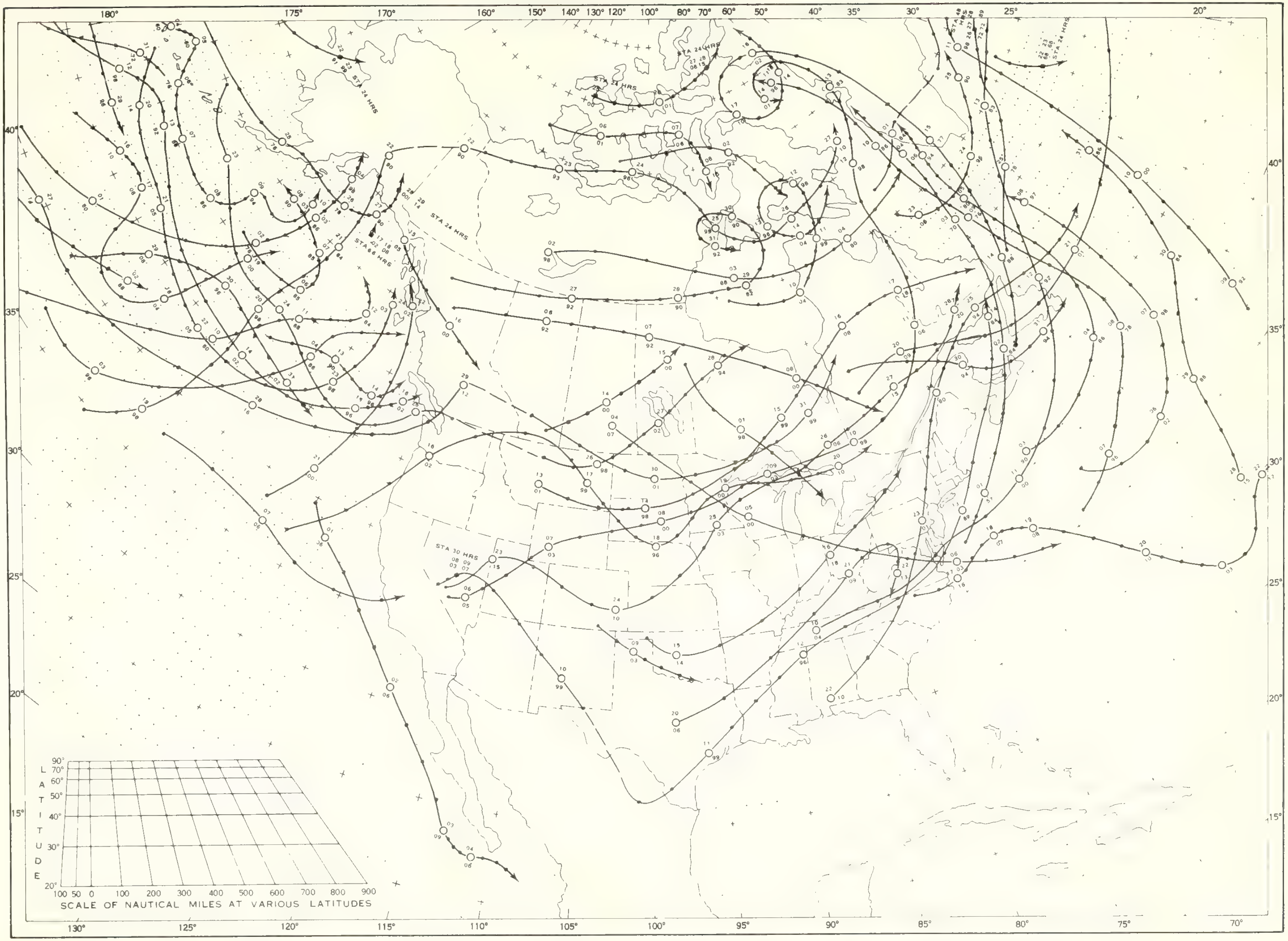
A. Mean daily solar radiation, direct + diffuse, received on a horizontal surface in langleys (1 langley = 1 gm. cal. cm. $^{-2}$) and recorded in International Pyrheliometer Scale of 1956. B. Percentage of the mean based on at least 5 years of record during the period 1950-60, and corrected to the International Pyrheliometer Scale of 1956.

Chart VIII. Tracks of Centers of Anticyclones at Sea Level, March 1968.



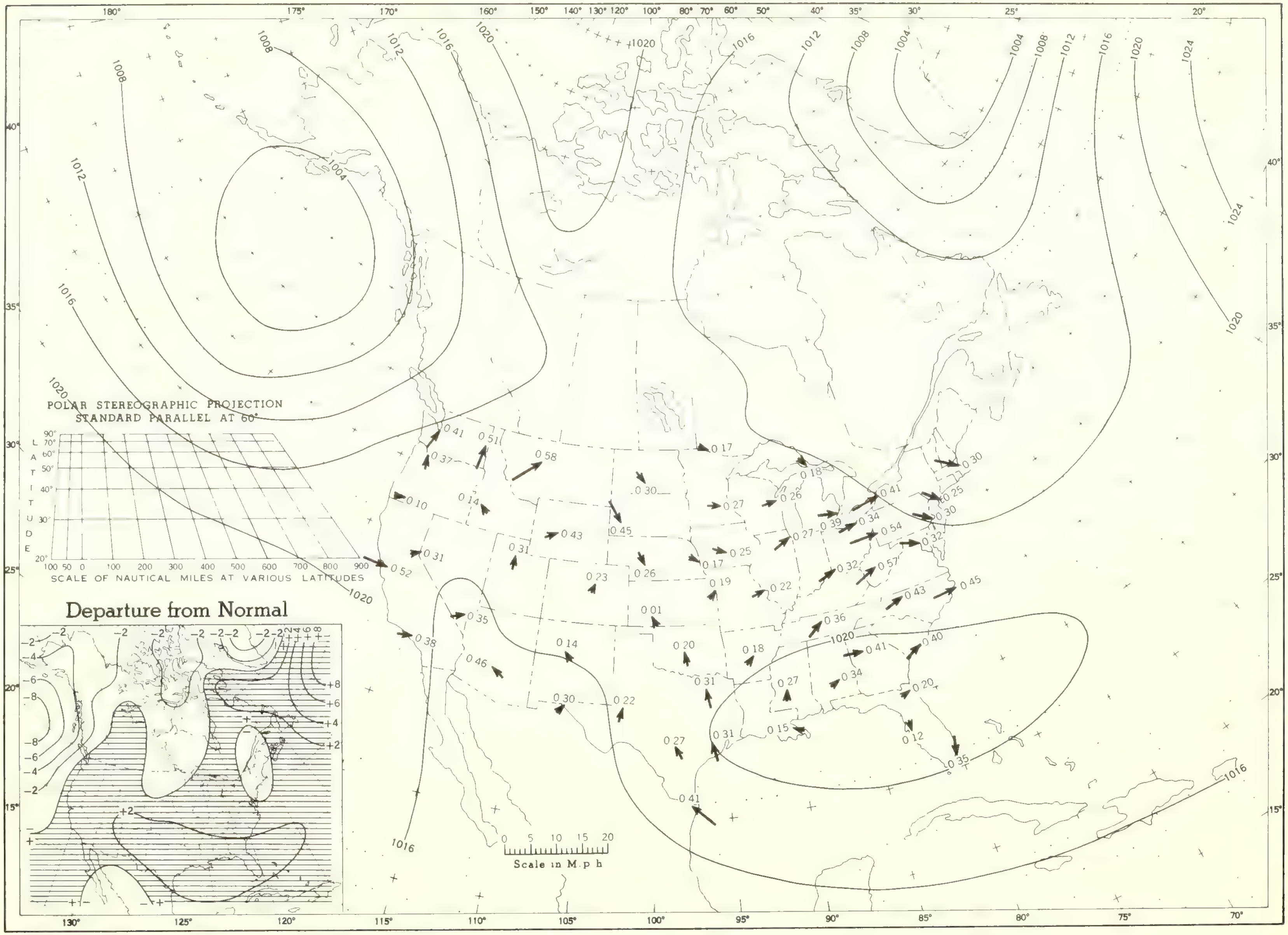
Circle indicates position of center at 7:00 a.m. E.S.T. Figure above circle indicates date, figure below, pressure to nearest millibar. Dots indicate intervening 6-hourly positions. Squares indicate position of stationary center for period shown. Dashed line in track indicates reformation at new position. Only those centers which could be identified for 24 hours or more are included.

Chart IX. Tracks of Centers of Cyclones at Sea Level, March 1968.



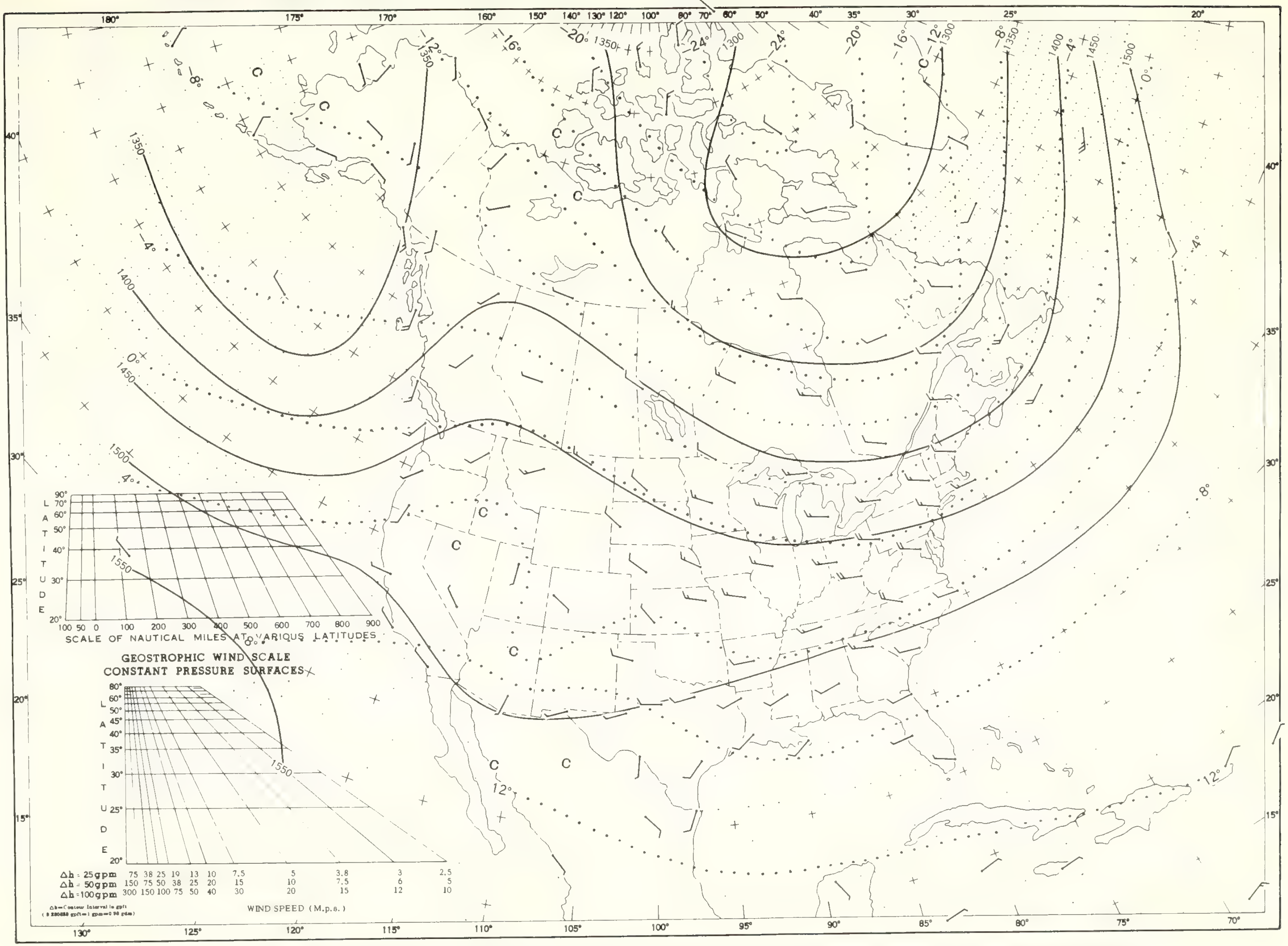
Circle indicates position of center at 7:00 a.m. E.S.T. Figure above circle indicates date, figure below, pressure to nearest millibar. Dots indicate intervening 6-hourly positions. Squares indicate position of stationary center for period shown. Dashed line in track indicates reformation at new position. Only those centers which could be identified for 24 hours or more are included.

Chart X. Average Sea Level Pressure (mb) and Resultant Surface Wind, March 1968. Inset: Departure of Average Pressure (mb) from Normal, March 1968.



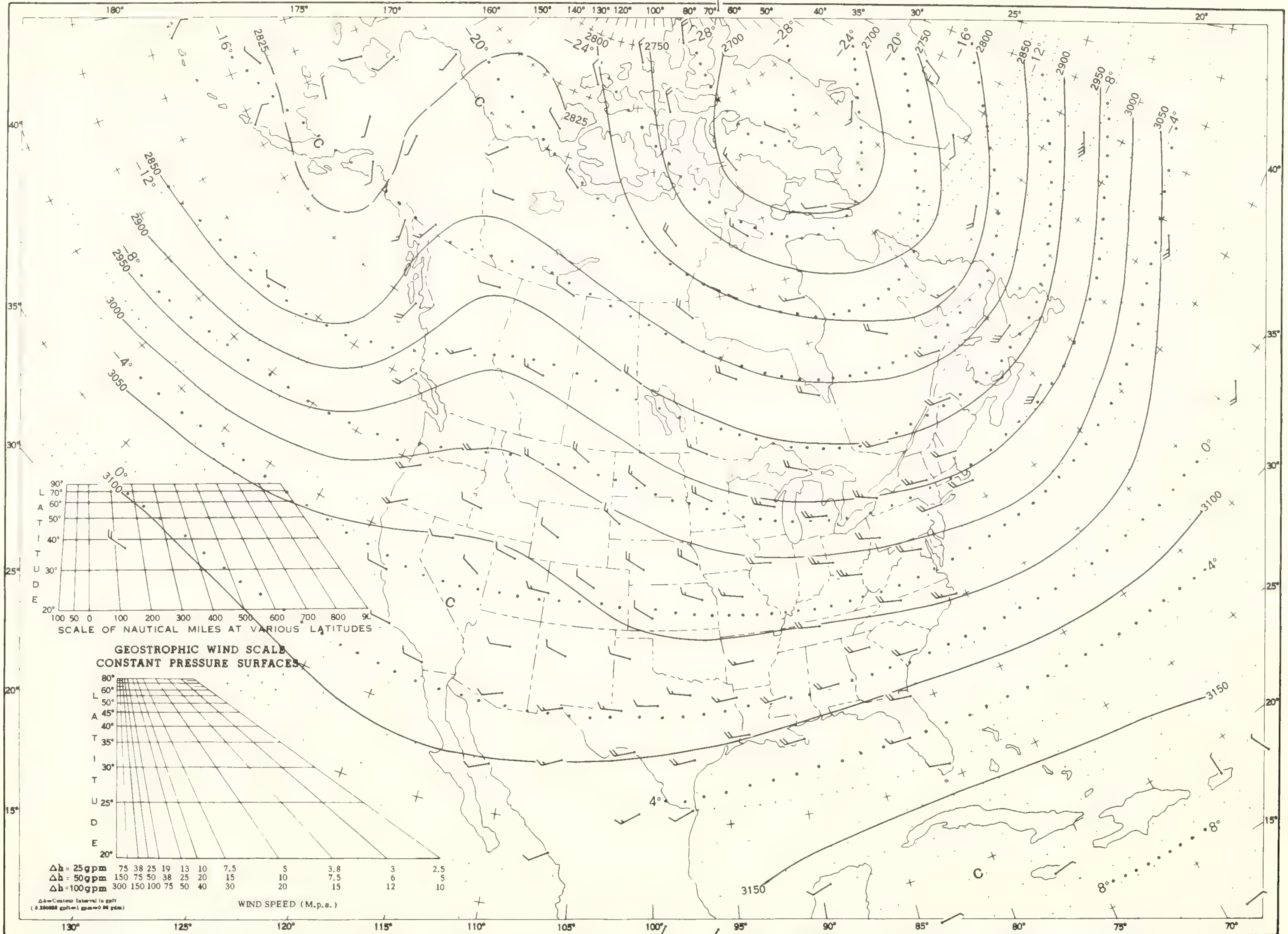
Average sea level pressures are obtained from eight daily 3-hourly observations. Resultant wind directions and speeds are shown by arrows. Constancy ratios (resultant speed÷average speed) are shown to two decimal places. Pressure normals are computed for stations having at least 10 years of record and for 10° intersections in a diamond grid over the oceans.

Chart XI. 850-mb. Surface, 1200 GMT, March 1968. Average Height and Temperature, and Resultant Winds.



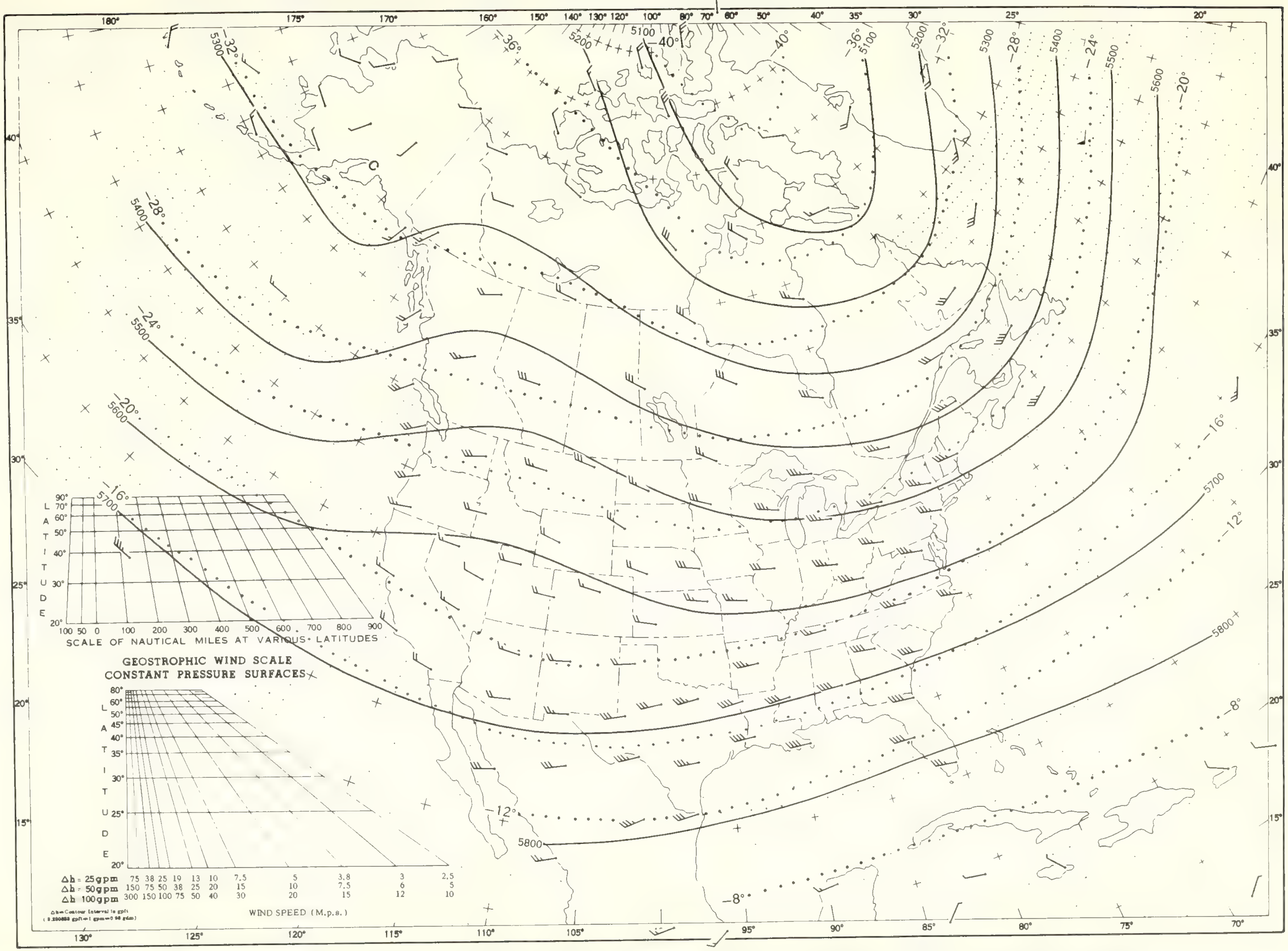
Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XII. 700-mb. Surface, 1200 GMT, March 1968. Average Height and Temperature, and Resultant Winds.



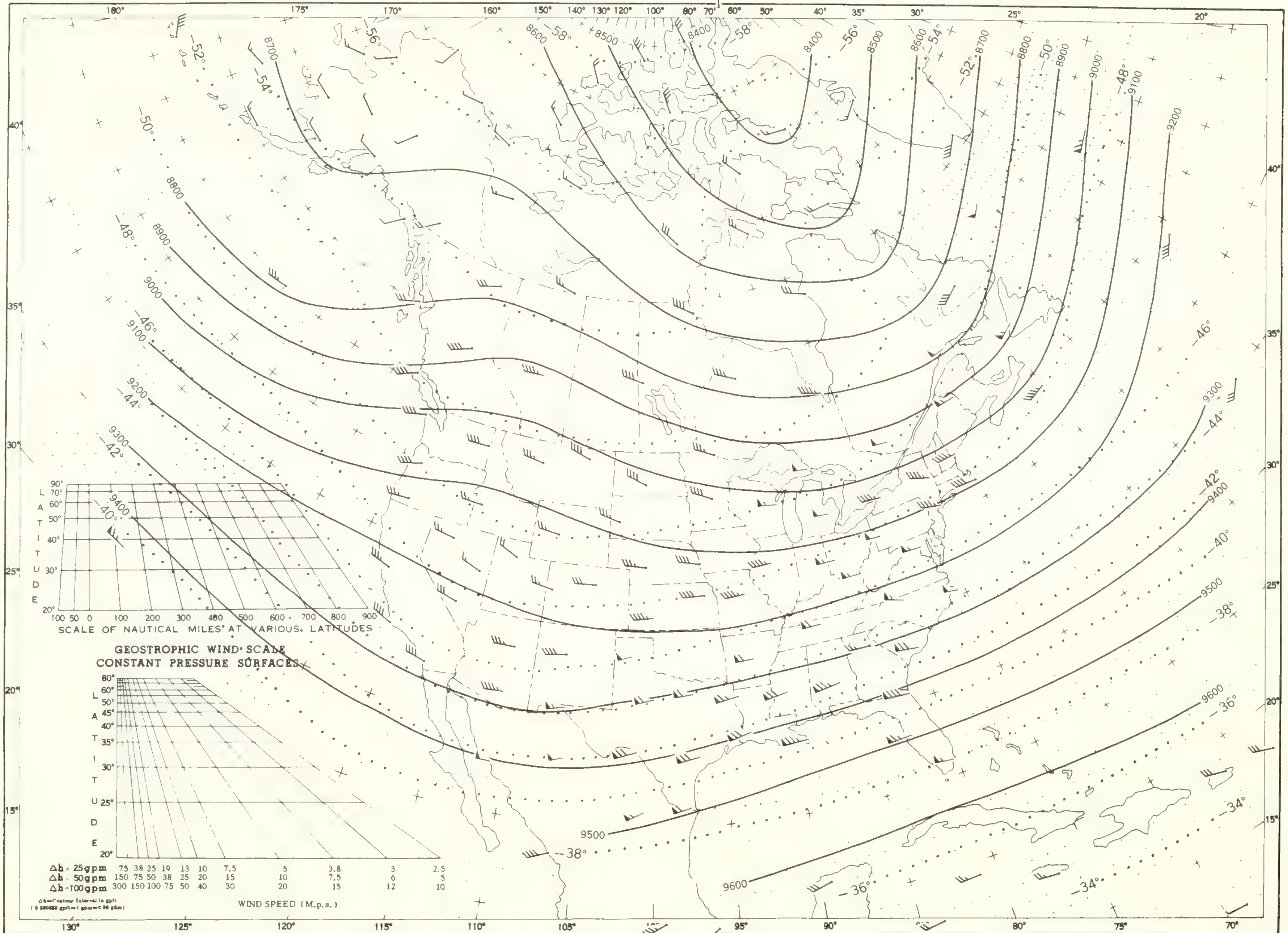
Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XIII. 500-mb. Surface, 1200 GMT, March 1968. Average Height and Temperature, and Resultant Winds.



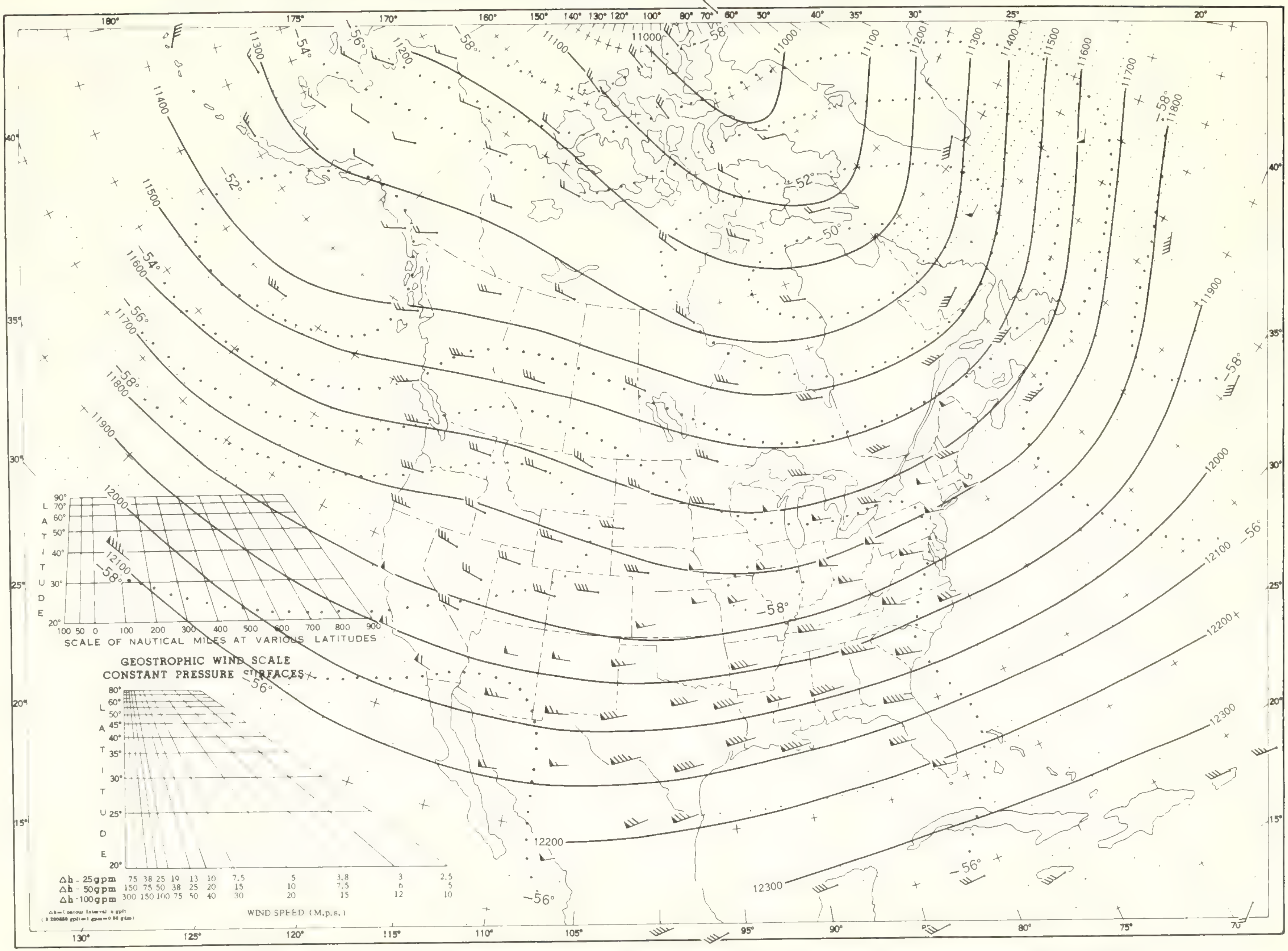
Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XIV. 300-mb. Surface, 1200 GMT, March 1968. Average Height and Temperature, and Resultant Winds.



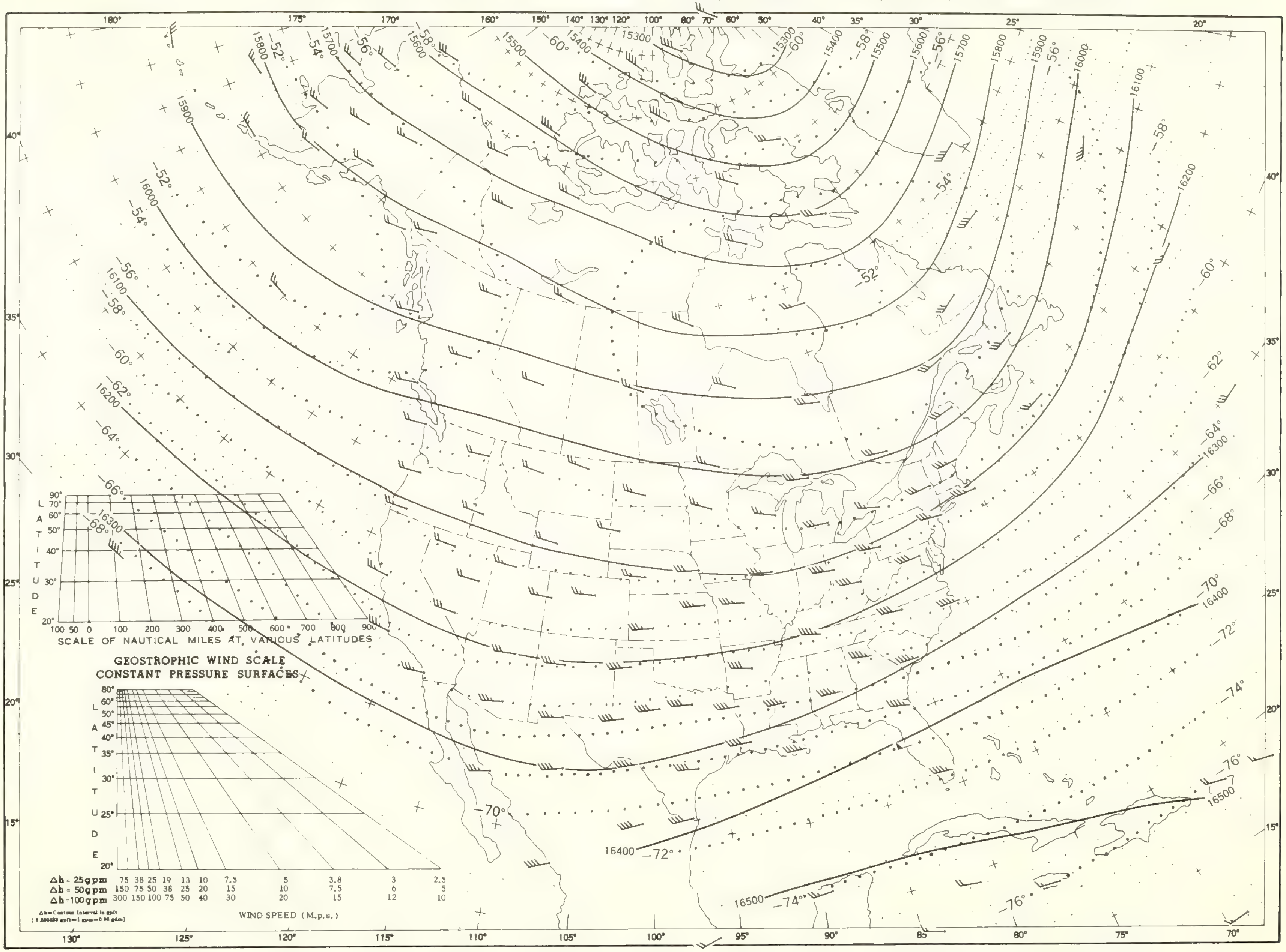
Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25mps, full feather 5mps, and half feather 2.5mps. All wind data are based on rawin observations.

Chart XV. 200-mb. Surface, 1200 GMT, March 1968. Average Height and Temperature, and Resultant Winds.



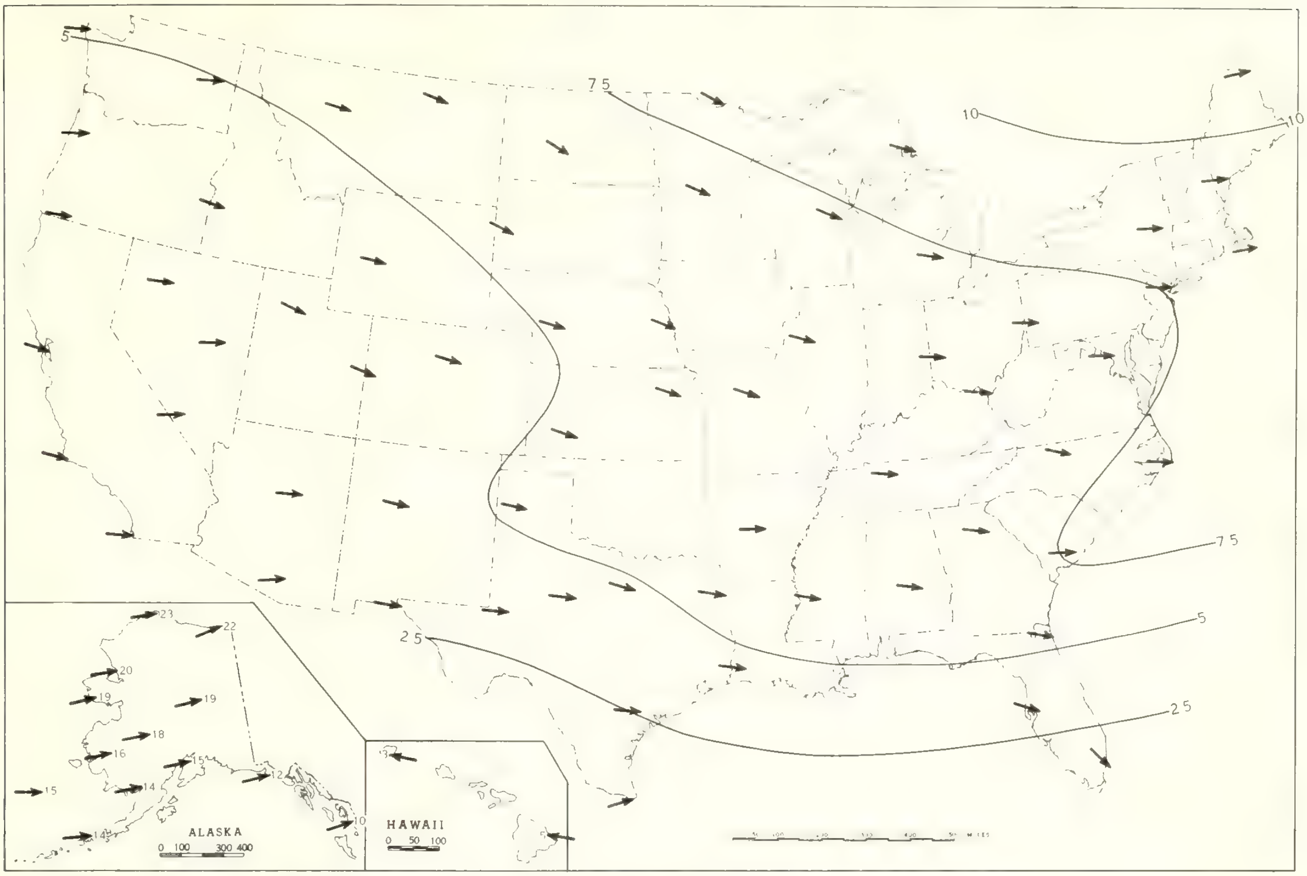
Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XVI. 100-mb. Surface, 1200 GMT, March 1968. Average Height and Temperature, and Resultant Winds.

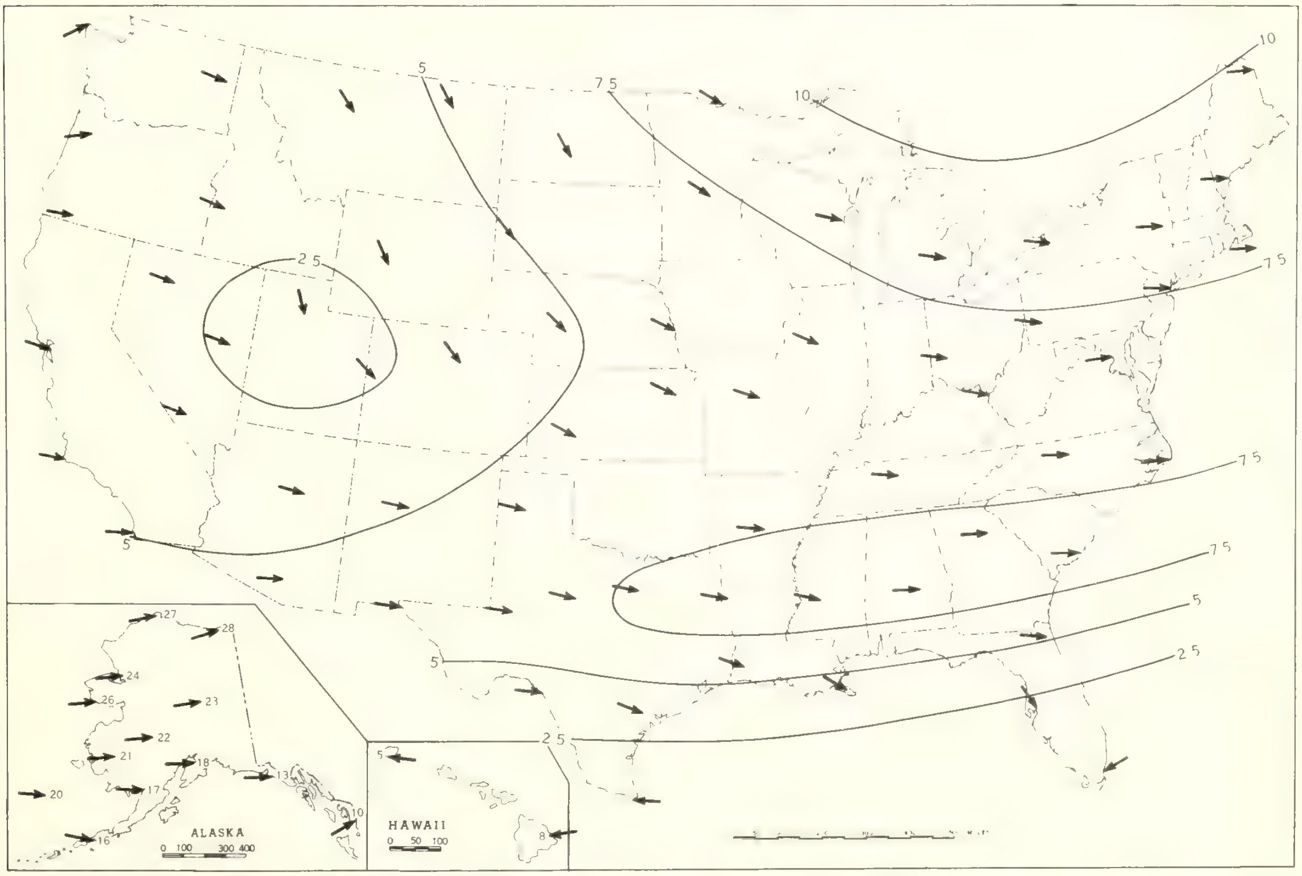


Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XVII. A. 50-mb. Surface, 1200 GMT, March 1968. Resultant Winds.



B. 30-mb. Surface, 1200 GMT, March 1968. Resultant Winds.



Wind speed (isotachs) in meters per second. Arrows show resultant wind direction. All wind data are based on rawin observations.

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CLIMATOLOGICAL DATA

NATIONAL SUMMARY

APRIL 1968
Volume 19 No. 4

ASHEVILLE: 1968

C O N T E N T S

NOTE: Delayed data and corrections will be carried in the June and December issues of this publication. An explanatory page "Description of Charts" will be carried in the January and July issues.

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CLIMATOLOGICAL DATA

NATIONAL SUMMARY

Volume 19 No. 4 APRIL 1968

GENERAL SUMMARY OF WEATHER CONDITIONS

HIGHLIGHTS:

1. West - Mostly cool and dry. Low temperatures damaged crops many areas.
2. Northeast - Warm and dry; very little snow.
3. South Central and Southeast - Warm, rainy, numerous severe storms.

TEMPERATURE.--In general, the West averaged cooler than normal in April and the East averaged warmer than normal. Albany, N. Y., experienced the warmest April in 27 years while Winnemucca, Nev., recorded the coldest average temperatures of any April of record. Phoenix, Ariz., registered 37° on the 19th, equaling the record low for so late in the season. Blossoms froze in the Reno, Nev., area on the 22d when the temperature dropped to 16°. Freezing temperatures caused extensive damage to crops in the Lewiston, Idaho, area on several days. In contrast, the temperature at Lakeland, Fla., soared to 95° on the 22d, setting a new record maximum for so early in the spring.

Cooler-than-normal weather persisted throughout the month in the Far Northwest. Much of the northern and central Great Plains experienced an erratic temperature pattern, averaging mostly warm during the first 3 weeks but cool near the end of the month. A large area from the Red River of the North to New England remained warm during the entire month. The Far Southwest was relatively cool except during the second week of April. Warm weather persisted along the Gulf of Mexico until the final week which was cool over almost the entire Nation.

PRECIPITATION.--Snow began falling early in April in the northern Great Plains and spread southward. Strong winds drifted the snow badly and many roads became impassable. Hundreds of persons became stranded when their cars stuck in the snow. Many schools in South Dakota closed due to snow-clogged roads. Snow depths ranged from 10 to 20 inches in northwestern and north-central Nebraska. Extensive drifting occurred in the Colorado Rockies. Snow fell above 6,500 feet in Arizona and above 4,000 feet in California. Moderate to heavy rains fell from the central Great Plains eastward to Virginia and the Carolinas and southward to the northern and central portions of the Gulf States. Storm totals ranged up to 3 to 5 inches in the southern Appalachians.

Heavy thundershowers drenched the western and central Gulf States early in the second week of April. Port Arthur, Texas, received over 7 1/3 inches in 24 hours on the 8th and 9th. The heavy rains caused extensive flooding of roads, bridges, and lowlands in Texas and Louisiana.

About mid-April, another snowstorm blanketed a large area extending from Nevada to Wyoming and southward to Arizona and New Mexico. Lander, Wyo., measured 11 inches on the 17th, and by the 19th 7 inches covered the ground at Flagstaff, Ariz. Thunderstorms and tornadoes occurred in the warm, humid air that flowed northward over the Great Plains and met the cold, dry air which plunged southward. Some of the thunderstorms were accompanied by damaging wind and hail. Twisters rampaged in the Tornado Belt on several days shortly after mid-April. One of the worst struck Greenwood, Ark., on the 19th, killing 14 persons, injuring 270, destroying 35 business establishments, and destroying or damaging 400 residences along a 5-mile path.

In the last week of April, heavy snow blocked roads and closed schools in northeastern Minnesota and showers in Iowa sent a few streams in the central and eastern part of the State to flood stages. Portions of western New England, where little rain had fallen in several weeks, received local flood-producing rains in the last week of April.

On the 23d, killer tornadoes struck Ohio and Kentucky, killing 9 persons and injuring about 50 in the former State and killing 6 and injuring about 100 persons in Kentucky. Tornadoes and other violent weather were widespread on the 23d occurring from Texas to Georgia and northward to Michigan.

The areas that received little precipitation in April included most of the Florida Peninsula, most of Oregon, eastern Colorado and western Kansas, southeastern New Mexico and extreme western Texas, southern Georgia, and most of Maryland.

CONDENSED CLIMATOLOGICAL SUMMARY

Section	Temperature: Monthly extremes: Station	Highest	Date	Station	Lowest	Date	Precipitation: Monthly extremes: Station	Greatest	Station	Least
		°F			°F			In.		In.
Alabama	2 Stations	92	23+	Waterloo	24	6	Cuba	8.98	Robertsdale 1E	1.60
Alaska	Data delayed									
Arizona	Parker	100	30	Hawley Lake	6	4	Junipine	3.42	17 Stations	.00
Arkansas	2 Stations	88	18+	3 Stations	24	6+	Eudora	12.80	Fulton	2.43
California	Palm Springs	101	29	2 Stations	-10	23+	Cuyamaca	2.99	25 Stations	.00
Colorado	Holyoke	87	30	Taylor Park	-20	9	Bonham Reservoir	5.50	Stonington	.05
Connecticut	Hartford WBAP	85	13	2 Stations	20	6	Round Pond	3.90	Groton	1.20
Delaware	3 Stations	82	14	Selbyville	23	7	Dover	1.98	Middletown 1WSW	1.37
Florida	Plant City	99	22	Fountain 3SSE	34	25	Monticello 3W	5.33	2 Stations	.00
Georgia	Bainbridge	97	22	Blairsville Exp Sta	28	16+	Franklin	8.85	Swainsboro	.80
Hawaii	Data delayed									
Idaho	Kooskia	90	29	Galena	-2	8	Fenn Ranger Station	3.85	Swann Falls Power House	.07
Illinois	Quincy	85	30	4 Stations	21	6+	Wayne City	6.79	Rockport	1.41
Indiana	Charlestown Ord Plant	85	30	Osgood	19	6	Mount Vernon	7.32	Richmond Waterworks	1.55
Iowa	Sioux City WBAP	91	30	Hampton 3NNE	11	5	Dubuque WBAP	7.47	Elkader	1.85
Kansas	Aetna 2S	92	16	Imperial	10	4	Lecompton	6.53	Greensburg	.18
Kentucky	Pikesville	89	20	Vanceburg	23	7	Russellville	9.02	Vanceburg	.51
Louisiana	Carville 2SW	90	21	Farmerville	34	6	Many	17.05	Gueydan 5S	1.09
Maine	2 Stations	84	14+	Ripogenus Dam	11	6	Rumford Power Plant	5.38	St Francis	1.10
Maryland	5 Stations	86	14+	Bittinger 2NW	17	6	Loch Raven Dam	2.72	Hancock Fruit Lab	.64
Massachusetts	2 Stations	85	14	Cummington Hill	19	6	South Egremont	4.77	Hatchville	1.24
Michigan	Marquette WB City	85	12	Herman	-8	5	Stephenson 5W	5.69	Saint Charles	.95
Minnesota	Stewart 6SSW	92	30	Big Fork	-4	5	Winona	7.39	Roseau 1E	.63
Mississippi	2 Stations	90	23+	Pontotoc	29	6	Moorhead	11.26	Gulfport Naval Center	1.54
Missouri	3 Stations	87	20+	Albany	16	1	Mercer 6NW	8.07	Middletown 5ENE	1.10
Montana	5 Stations	89	30	Summit	-11	3	Red Lodge	4.02	Stevensville	.15
Nebraska	Niobrara	91	30	Mullen 21NW	-3	4	Gresham 3SSW	7.21	Imperial	.34
Nevada	Las Vegas WBAP	92	30	Charleston	3	23	Lamoille Power House	2.56	2 Stations	.00
New Hampshire	Conway 1N	85	13	Mount Washington	-2	6	Pinkham Notch	6.07	Keene	1.80
New Jersey	4 Stations	85	14	2 Stations	21	7	High Point Park	3.66	Fortescue	1.12
New Mexico	Carlsbad FAA AP	89	15	Sandia Crest	-2	4	Sandia Crest	2.73	9 Stations	.00
New York	Watertown FAA AP	87	14	Old Forge 1E	8	6	Bakers Mills	5.13	Wilson 2NE	.65
North Carolina	2 Stations	92	22+	Cataloochee	21	12	Highlands 2S	5.97	Henderson 2SW	1.33
North Dakota	Washburn	93	10	Upham 3N	-8	4	Fullerton	5.04	Medora 22NNW	.11
Ohio	Toledo Blade	86	14	Oberlin	15	6	Peebles	8.05	St Marys 3W	1.32
Oklahoma	Mangum Research Sta	93	16	2 Stations	20	5+	Hee Mountain Tower	13.11	Gate 1NNE	.25
Oregon	4 Stations	90	30+	Juniper Lake	0	13	Brightwood	7.84	Juniper Lake	.00
Pennsylvania	2 Stations	87	14	Clermont 4NW	10	2	North East 2SE	3.71	Everett 1SW	.43
Puerto Rico	do	92	30+	Guineo Reservoir	50	23	Palmarito	5.54	Puerto Real	.00
Rhode Island	Greenville	81	13	Kingston	22	7	Woonsocket	1.76	Kingston	1.25
South Carolina	Andrews	95	21	Ninety Nine Islands	31	26+	Walterboro	5.50	Winthrop College	1.03
South Dakota	Menno	93	30	Ardmore 2N	-9	4	Miller	7.15	Belle Fourche 29NNW	.42
Tennessee	Mount Pleasant 2SW	90	19	2 Stations	24	16+	Cumberland City	11.79	Palmetto	2.87
Texas	Falcon Dam	99	18	Lipscomb	20	5	Hemphill	15.09	Tulia	.05
Utah	Saint George	88	30	Silver Lake Brighton	-4	14	Alta	10.96	Saint George	.08
Vermont	3 Stations	85	15+	Mount Mansfield	6	6	Mount Mansfield	5.26	Montpelier FAA AP	2.30
Virginia	Quantico 1S	88	14	Wytheville 1S	20	2	Trout Dale	5.61	Manassas	.35
Washington	Dallesport FAA AP	91	28	Rainier Paradise RS	9	12	Clearwater	10.65	Mazama 6SE	.00
West Virginia	Williamson	89	21	Bayard	15	2	Belleville Dam 20	4.91	Berkeley Springs	.52
Wisconsin	River Falls	92	30	Gordon 2ESE	2	5	Trempealeau Dam 6	6.99	Beloit	1.58
Wyoming	Redbird	85	30	Foxpark	-19	4	Foxpark	4.43	2 Stations	.01

\+ And also on an earlier date or dates.

NOTE: Dates in the above Condensed Climatological Summary apply to the period 24 hours prior to time of observation. In some cases the actual occurrence is on the calendar date preceding that shown. (See individual Climatological Data for times of observations).

CLIMATOLOGICAL DATA
ENGLISH UNITS

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No. of days: Max. 90° F. or above	Temperature: No. of days: Min. 32° F. or below	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No. of days: .01 inch or more	Precipitation: No. of days: With thunderstorms	Precipitation: Snow, Sleet: Total	Precipitation: Snow, Sleet: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile: Speed	Wind: Fastest mile: Direction	Wind: Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	No. of days (sunrise to sunset): Partly cloudy, 4-7	No. of days (sunrise to sunset): Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	Ft.	Mb.	Mb.	F.	F.	F.	F.	F.		F.				F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
ALABAMA																																
BIRMINGHAM	620	995.6	1018.0	76	50	62.9	- 0.2	86	19	34	6	0	0	50	65	6.23	1.76	2.20	12	7	0.0	0	0.7	15	26	W	4	7	3	20	6.6	62
HUNTSVILLE	624	994.6	1017.7	72	50	61.2	- 0.4	86	19	31	6	0	1	51	71	4.05	0.06	0.90	13	3	0.0	0	1.0	14	37	32	14	9	2	19	6.5	
MOBILE	211	1009.8	1017.5	81	60	70.3	2.7	88	22+	46	6	0	0	59	72	2.24	- 4.12	1.04	9	4	0.0	0	2.9	18	23	16	3	7	5	18	6.7	
MONTGOMERY	194	1010.8	1018.1	78	55	66.6	2.5	86	20	42	6	0	0	55	71	3.31	- 1.58	1.46	10	9	0.0	0	1.9	19	24	NW	4	7	6	17	6.7	59
ALASKA																																
ANCHORAGE	114	1002.4	1007.3	41	29	35.0	- 1.9	54	25+	14	8	B 0	21	22	61	0.85	0.43	0.41	10	0	7.8	3	1.0	22	23	15	26	6	5	19	7.3	46
ANNETTE	110	1010.8	1015.0	48	36	41.9	- 1.5	53	30+	26	12	0	5	33	75	13.63	4.51	2.46	23	0	8.1	2	6.2	16	33	14	17	5	3	22	8.0	
BARROW	31	1016.9	1017.4	1	-12	- 5.4	- 5.6	9	21	-23	11	0	30	- 9	82	0.05	- 0.06	0.04	3	0	0.7	18	8.3	7	25	9	12	8	6	16	6.4	
BARTER ISLAND	39	1014.9	1016.8	5	-13	- 4.0	- 4.9	16	20	-26	25	0	30	-10	72	T	- 0.17	T	0	0	0.7	24	2.5	8	25	8	13	9	10	11	5.6	
BETHEL	125	1001.4	1007.0	32	15	23.1	- 2.8	50	24+	-12	9	0	29	20	84	0.34	- 0.24	0.17	7	0	8.2	6	1.4	23	35	19	11	0	6	24	8.5	
COLD BAY	96	1003.1	1006.8	38	30	34.2	0.9	50	18	18	8+	0	15	28	79	1.37	- 0.09	0.40	20	0	5.1	1	4.8	27	39	16	14+	0	2	28	9.4	
FAIRBANKS	436	990.5	1007.7	40	18	29.2	- 0.2	52	23	- 6	11	0	30	10	44	0.29	0.04	0.22	4	0	5.0	19	1.8	31	20	28	19	4	8	18	7.4	
JUNEAU	12	1011.2	1012.0	44	32	37.9	- 0.1	52	25+	17	11	0	13	32	82	3.25	0.38	0.77	23	0	6.1	3	8.3	12	36	12	17	3	2	25	8.7	29
KING SALMON	49	1003.7	1005.7	36	24	30.1	- 2.7	49	24	- 1	9	0	25	20	66	1.41	0.77	0.45	16	0	16.0	4	2.3	14	40	9	20	0	6	24	8.6	
KOTZEBUE	10	1009.1	1009.8	20	1	10.6	- 2.6	35	13	-26	8	0	30	4	72	0.49	0.18	0.20	14	0	11.6	37	3.0	8	35	11	11	6	6	18	6.8	
MC GRATH	344	994.2	1007.1	37	16	26.6	- 1.0	49	24+	- 6	10+	0	30	14	57	0.29	- 0.18	0.13	7	0	4.9	18	1.4	27	23	21	18	4	6	20	7.9	
NOME	13	1006.4	1007.2	23	6	14.4	- 6.8	35	23+	-30	7	0	30	9	73	0.47	- 0.33	0.15	13	0	4.8	25	5.5	6	25	9	30+	7	3	20	7.3	46
ST. PAUL ISLAND	22	1005.8	1006.7	30	21	25.2	- 3.2	36	18+	5	7	0	30	23	90	0.94	- 0.02	0.40	18	0	9.7	7	8.3	35	46	7	10	1	6	23	8.5	
SHEMYA	122	1009.8	1013.6	37	30	33.5	- 2.0	41	11	25	1	0	27	29	82	0.67	- 1.39	0.19	13	0	4.7	3	6.6	29	49	23	17	0	7	23	8.4	
YAKUTAT	28	1008.5	1009.5	39	27	33.0	- 4.0	51	24	10	11	0	26	29	87	10.84	3.61	3.56	25	0	47.7	16	4.1	11	25	21	9	1	6	23	8.6	
ARIZONA																																
FLAGSTAFF	6993	785.6	1014.8	54	26	40.3	- 3.0	67	29	18	7	0	28	22	54	2.09	0.91	0.75	10	5	22.7	8	3.9	21	26	23	15	15	5	10	4.6	
PHOENIX	1117	973.6	1012.4	83	51	66.7	- 0.5	94	30+	37	19	6	0	34	32	T	- 0.32	T	0	2	0.0	0	1.9	20	39Y	WNW	18	23	4	3	2.1	92
TUCSON	2584	925.2	1012.6	77	49	63.2	- 2.7	89	30	37	19	0	0	32	35	0.62	0.35	0.25	5	3	0.0	0	3.3	20	32	SE	29	19	6	5	2.6	93
WINSLOW	4895	850.0	1014.1	65	37	51.2	- 4.4	76	29	28	9	0	5	22	36	0.50	0.05	0.21	4	2	2.0	1	6.5	23	35	19	21+	18	8	4	3.3	
YUMA	194	1005.8	1012.9	85	55	70.1	- 0.5	97	30+	46	18+	9	0	31	28	T	- 0.09	T	0	0	0.0	0	2.6	27	34	W	1	26	3	1	1.3	98
ARKANSAS																																
FORT SMITH	447	999.3	1015.7	74	49	61.3	- 0.4	85	17	32	5	0	1	46	62	3.71	- 0.53	1.89	10	4	0.0	0	0.6	12	26	W	23+	12	4	14	5.6	66
LITTLE ROCK	257	1006.4	1016.1	72	50	60.9	- 1.5	84	18	34	6+	0	0	46	59	4.85	- 0.08	1.45	12	7	0.0	0	1.4	20	34	S	3	10	5	15	5.9	72
TEXARKANA	391	1002.7	1015.8	76	55	65.4	1.5	84	17+	37	6+	0	0	53	68	3.34	- 1.96	0.88	11	6	0.0	0	2.8	18	25	17	3	9	6	15	6.2	
CALIFORNIA																																
BAKERSFIELD	475	998.6	1016.3	79	52	65.4	2.4	94	28	38	19	5	0	36	39	0.66	- 0.15	0.66	1	1	0.0	0	2.8	35	20	31	15+	18	9	3	2.9	
BISHOP	4108	873.4		71	37	53.9	- 1.2	84	30	25	23+	0	7			0.01	- 0.45	0.01	1		0.0	0						16	9	5	3.7	
BLUE CANYON	5280			56	38	47.3	1.7	69	29+	24	17	0	9			0.67	- 4.15	0.57	3		3.2	2			24	3	17	15	3	12	4.5	
EUREKA U	43			53	44	48.1	- 2.3	61	27	35	17	0	0			0.40	- 2.27	0.21	4		0.0	0			40	N	12	11	9	10	5.3	71
FRESNO	328	1004.4	1016.3	78	45	61.5	0.2	93	29	33	22	3	0	40	51	0.70	- 0.43	0.70	1	0	0.0	0	3.3	31	26	NW	21	19	9	2	3.0	90
LONG BEACH	34	1015.2	1016.6	74	53	63.5	3.5	95	10	42	18	2	0	46	60	0.38	- 0.39	0.38	1	0	0.0	0	3.3	23	22	28	23+	17	9	4	3.6	
LOS ANGELES	97	1012.5	1016.1	69	54	61.6	2.2	90	10	49	22	1	0	49	67	0.49	- 0.56	0.49	2	0	0.0	0	4.5	25	32Y	SW	1	18	7	5	3.4	
LOS ANGELES U	270			73	55	64.0	2.2	94	10	49	22	2	0			0.49	- 0.68	0.49	1		0.0	0			20	SW	18	19	7	4	3.3	31
MT SHASTA R	3544			60	33	46.6	- 0.9	78	28	22	22	0	14			0.40	- 2.37	0.20	4		T	T										
OAKLAND	6	1018.3	1018.6	65	49	57.0	0.4	83	27	45	22+	0	0	47	71	0.83	- 0.55	0.83	1	0	0.0	0	5.4	28	25	28	15+	15	10	5	3.5	
RED BLUFF	342	1005.4	1018.0	75	48	61.4	1.0	89	28	40	23+	0	0	33	41	0.29	- 1.54	0.29	1	0	0.0	0	7.0	34	30	N	26	17	8	5	3.5	91
SACRAMENTO	17	1016.3	1017.0	74	45	59.8	1.4	91	29	37	18	1	0	41	57	0.42	- 0.98	0.42	1	1	0.0	0	3.9	30	30	N	21	16	9	5	3.3	89
SANDBERG R	4517	862.9		58	39	48.4	- 2.4	74	30	28	18+	0	8	25	49	0.60	- 0.37	0.59	2		2.9	2	5.6	35	38	36	18	16	9	5	3.6	
SAN DIEGO	13	1015.6	1016.4	69	55	62.4	0.9	90	9	49	18	1	0	47	61	0.34	- 0.45	0.34	2	0	0.0	0	3.3	26	26	S	1	14	9	7	3.9	74
SAN FRANCISCO	8	1018.0	1018.7	64	45	54.9	- 0.8	79	27	39	21+	0	0	43	70	0.55	- 0.75	0.55	1	0	0.0	0	10.4	29	39	W	16+	17	8	5	3.2	
SAN FRANCISCO U	52			63	50	56.2	0.5	78	9	45	16	0	0			0.48	- 0.96	0.48	1		0.0	0			29	SW	15					95
SANTA MARIA	236			68	43	55.7	0.1	90	10	33	17	1	0			0.65	- 0.54	0.65	2		0.0	0						16	7	7	3.6	
STOCKTON	22	1016.6	1017.5	73	45	59.4	- 0.3	89	29	39	22+	0	0	39	52	1.01	- 0.13	1.01	1	1	0.0	0	7.3	30	33	32	21	16	8	6	3.5	
COLORADO																																
ALAMOSA	7536	769.1		54	21	37.3	- 4.5	68	30	10	8	0	28			0.27	- 0.42	0.16	5		5.0	1						8	16	6	5.1	
COLORADO SPRINGS	6145	808.3	1014.4	56	29	42.5	- 3.1	74	30	14	4	0	22	18	45	0.54	- 0.77	0.22	6	2	2.8	2	3.5	35	43	36	3	10	6	14	5.9	
DENVER	5283	833.7	1013.0	58	28	43.0	- 3.4	75	30	13	4	0	23	23	54	2.39	0.28	0.82	10	0	15.1	3	0.1	9	34	N	3	8	10	12	5.9	72
GRAND JUNCTION	4855	850.7	1014.3	59	34	46.3	- 6.0	77	30	24	14	0	13	24	48	0.67	- 0.08	0.25	12	1	0.6	T	0.9	5	33	NW	2	7	6	17	6.2	52

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure: Station ◊	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	No. of days: Max 90 F. or above	No. of days: Min. 32 F. or below	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	No. of days: .01 inch or more	No. of days: With thunderstorms	Snow, Sleet: Total	Snow, Sleet: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Fastest mile: Speed	Fastest mile: Direction	Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	Ft.	Mb.	Mb.	F.	F.	F.	F.	F.		F.				F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
COLORADO																																
PUEBLO	4684	853.0	1012.4	65	36	50.2	- 0.5	80	11	21	5	0	8	20	36	0.68	- 0.50	0.56	4	0	4.6	T	3.7	33	49	N	3	8	11	11	5.8	77
CONNECTICUT																																
BRIDGEPORT	7	1016.9	1017.5	62	42	51.8	3.8	74	13+	32	6	0	1	37	63	1.75	- 2.05	1.56	6	0	0.0	0	3.5	25	43	29	9	12	9	9	5.1	
HARTFORD	169	1009.8	1016.6	66	39	52.4	3.9	85	13	26	6	0	7	33	53	2.74	- 0.99	2.37	9	0	0.0	0	2.0	29	32	NW	9	12	9	9	5.1	76
NEW HAVEN	6	1016.9		61	40	50.4	3.5	73	9	30	6	0	3			1.56	- 2.33	1.27	8		0.0	0			31	W	9	12	9	9	4.9	75
DELAWARE																																
WILMINGTON	74	1015.2	1018.2	66	43	54.1	2.0	80	14	31	6	0	1	38	60	1.57	- 1.76	0.97	8	2	0.0	0	2.1	24	28	31	30	9	8	13	6.0	
DIST.OF COLUMBIA																																
WASH NATL AP	14	1015.9	1018.1	70	46	58.0	2.3	86	14	37	6+	0	0	39	52	1.53	- 1.62	0.87	8	2	0.0	0	1.7	22	35	NW	30	5	13	12	6.5	66
FLORIDA																																
APALACHICOLA U	13			77	63	69.8	2.3	84	21	52	25	0	0			0.53	- 3.77	0.32	4	1	0.0	0			24	N	11	9	11	10	5.8	74
DAYTONA BEACH	31	1017.3	1018.5	84	61	72.2	3.3	96	24	52	26	7	0	59	67	0.40	- 2.57	0.28	5	4	0.0	0	1.5	12	23	2	28+	6	17	7	5.9	
FORT MYERS	15	1018.0	1018.2	86	63	74.4	1.6	93	22	52	12	4	0	64	74	0.57	- 2.07	0.30	2	0	0.0	0	1.8	22	23	28	15	11	16	3	4.4	
JACKSONVILLE	20	1017.3	1018.4	85	61	73.0	4.3	95	21	46	12	7	0	58	67	0.99	- 2.56	0.59	6	2	0.0	0	0.4	21	27	W	24	4	12	14	6.7	71
KEY WEST	4	1016.9	1017.7	83	74	78.3	2.5	88	25	68	17	0	0	68	72	0.25	- 2.23	0.21	2	0	0.0	0	6.3	11	29	NE	12	16	13	1	3.7	88
LAKELAND U	214			85	64	74.3	2.8	95	22	55	12	5	0			0.53	- 2.98	0.36	3		0.0	0						10	17	3	4.7	67
MIAMI	7	1017.6	1017.8	83	69	75.9	1.7	89	21	61	15	0	0	65	70	1.27	- 2.61	0.77	2	1	0.0	0	4.1	13	23	8	12	12	17	1	4.4	
ORLANDO	108	1014.2	1018.5	86	61	73.5	2.3	96	23	54	12	8	0	59	67	0.30	- 3.12	0.18	3	1	0.0	0	0.3	18	22	29	15+	6	19	5	5.6	
PENSACOLA	112	1013.5	1017.5	77	59	68.3	0.4	86	23	45	25	0	0	60	77	1.39	- 3.86	0.92	9		0.0	0	2.4	19	27	SE	3	7	6	17	6.8	5
TALLAHASSEE	55	1015.9	1018.2	85	56	70.4	2.9	95	22	37	25	5	0	59	71	1.06	- 3.58	1.06	7	4	0.0	0	1.6	21	25	34	27	8	14	8	5.9	
TAMPA	19	1018.0	1018.2	84	61	72.5	1.1	90	28	50	12	1	0	61	71	0.74	- 2.10	0.64	2	0	0.0	0	1.8	27	21	29	16	7	16	7	5.1	89
WEST PALM BEACH	15	1017.6	1018.2	84	65	74.7	0.8	93	24	58	14	2	0	61	66	0.72	- 3.62	0.51	4	1	0.0	0	4.5	13	23	5	12+	9	15	6	5.3	
GEORGIA																																
ATHENS	802	988.8	1017.9	72	50	61.3	0.2	85	19	40	25	0	0	48	67	4.60	0.21	1.47	12	6	0.0	0	1.2	28	21	30	4	7	7	16	6.5	
ATLANTA	1010	981.4	1018.0	72	50	60.9	0.7	84	19	36	6	0	0	49	69	6.33	1.86	2.68	12	6	0.0	0	0.5	30	26	NW	4	8	5	17	6.5	62
AUGUSTA	145	1012.5	1017.6	78	51	64.5	1.3	92	20	36	12	2	0	50	67	2.44	- 1.12	0.69	9	6	0.0	0	1.0	29	28	16	9	7	8	15	6.5	
COLUMBUS	385			77	53	65.1	1.4	87	21+	38	12	0	0	54	71	2.58	- 2.01	0.71	8		0.0	0	0.7	33	23	26	23+	8	5	17	6.5	
MACON	354	1005.1	1017.9	79	51	64.8	- 0.8	91	19	36	12	3	0	50	64	1.98	- 1.77	0.72	10	3	0.0	0	1.1	30	25	SW	23	9	3	18	6.5	61
ROME	637			74	46	60.0	0.2	86	19	33	12	0	0			5.40	0.81	2.28	15		0.0	0										
SAVANNAH	46	1016.3	1017.9	80	56	68.0	2.3	93	20	39	12	4	0	55	69	2.09	- 1.61	0.56	8	3	0.0	0	1.1	18	30	NW	24	7	8	15	6.4	62
HAWAII																																
HILO	27	1013.5	1014.6	81	67	73.8	2.2	86	20	62	1	0	0	68	85	29.68	17.76	6.50	26	3	0.0	0	0.7	33	23	E	25	1	10	19	8.0	27
HONOLULU	7	1013.9	1014.2	84	70	76.7	2.5	87	7	64	9	0	0	65	69	3.14	1.83	2.07	14	4	0.0	0	5.7	4	34	NW	9	5	12	13	6.7	40
KAHULUI	48	1011.5	1014.0	82	66	74.1	0.7	86	23+	57	9	0	0	67	81	2.00	0.56	0.88	18	3	0.0	0	7.2	5	33	N	9	3	8	19	7.4	48
LIHUE	103	1010.5	1015.5	78	67	72.4	- 0.1	81	20+	58	11	0	0	67	86	1.84	- 1.50	0.52	18	2	0.0	0	7.5	4	25	N	9	3	13	14	7.0	57
IDAHO																																
BOISE	2838	917.4	1018.1	60	32	46.3	- 4.1	85	29	19	13	0	16	22	41	0.35	- 0.81	0.20	5	0	0.3	T	4.7	31	32	NW	23	12	7	11	5.2	75
LEWISTON	1413			60	37	48.4	- 2.4	85	29	26	17+	0	7			0.40	- 0.74	0.16	8		T	T						5	8	17	7.1	
POCATELLO	4454	862.9	1017.1	55	29	41.7	- 4.8	81	30	17	18	0	22	19	45	0.39	- 0.67	0.19	6	0	1.1	0	7.6	23	43	SW	1	7	9	14	6.3	68
ILLINOIS																																
CAIRO U	314			69	51	60.0	0.6	84	30	37	5	0	0			5.03	0.96	1.85	14		0.0	0			32	SE	22+	10	8	12	5.8	66
CHICAGO O HARE	658	990.2	1014.7	63	41	52.3	5.1	81	12	27	6	0	3	36	58	2.31	- 0.63	0.80	12	0	0.1	T	5.7	22	43	23	8	6	11	13	6.4	
CHICAGO MIDWAY	607	992.2		63	43	52.9	3.9	80	12	29	6	0	3	37	59	2.18	- 0.86	0.92	8	2	T	T	6.6	21	39	SW	23	6	10	14	6.4	54
MOLINE	582	992.2	1014.0	63	40	51.3	1.3	80	30+	26	1	0	8	36	61	3.57	0.40	0.89	11	6	T	T	6.5	21	39	NW	14	7	9	14	6.4	56
PEORIA	652	990.9	1015.0	64	41	52.4	1.6	79	12	28	6	0	5	38	62	2.20	- 1.77	0.95	11	6	T	T	5.4	21	34	SE	7	6	10	14	6.4	61
ROCKFORD	724	986.5	1013.7	61	39	49.7	1.9	76	12	25	5+	0	6	38	67	4.92	1.87	1.36	10	5	0.3	T	5.4	22	35	21	23+	7	8	15	6.4	
SPRINGFIELD	588	992.9	1015.2	64	42	52.9	- 0.5	79	30+	29	6	0	5	38	59	2.44	- 1.15	1.87	9	3	T	T	5.1	19	41	W	23	7	11	12	5.8	61
INDIANA																																
EVANSVILLE	381	1002.7	1016.9	68	45	56.6	- 1.1	82	20	34	11	0	0	41	57	3.59	- 0.39	1.46	11	7	0.0	0	1.7	21	34	E	22+	8	8	14	6.4	59
FORT WAYNE	791	986.1	1016.3	61	39	49.8	0.5	77	12	25	6	0	9	38	67	3.12	- 0.02	1.81	12	3	0.4	T	5.8	23	50	W	24	7	8	15	6.3	65

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	No. of days: Max. 90 F. or above	No. of days: Min. 32 F. or below	Average dew point	Average relative humidity	Precipitation: Total	Departure from normal	Greatest in 24 hours	No. of days: 01 inch or more	No. of days: With thunderstorms	Snow, Sleet: Total	Snow, Sleet: Maximum depth on ground	Wind: Resultant speed	Resultant direction	Fastest mile: Speed	Fastest mile: Direction	Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	Ft.	Mb.	Mb.	F.	F.	F.	F.	F.		F.				F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
INDIANA																																
INDIANAPOLIS	792	987.5	1016.6	65	43	53.7	2.9	78	20	28	6	0	1	38	58	2.86	- 0.88	1.84	5	4	T	T	3.0	22	39	SW	23	5	11	14	6.4	65
SOUTH BEND	773	987.5	1015.5	60	40	50.0	2.5	77	12	25	6	0	3	38	64	2.40	- 1.18	1.30	10	3	1.5	T	5.9	23	37	24	8	7	8	15	6.6	
IOWA																																
BURLINGTON	692			65	42	53.2	2.4	81	11	30	5+	0	6	38	59	3.36	- 0.08		9	4	T		4.6	22	32	30	23+	11	8	11	5.8	
DES MOINES	938	978.7	1013.5	63	39	51.1	2.4	85	11	20	5	0	10	35	58	4.19	1.66	1.63	12	6	0.1	T	4.1	23	45	NW	23+	8	10	12	6.0	52
DUBUQUE	1056	973.9		62	38	50.0	3.2	80	11	22	1	0	8			7.47	4.39	2.31	11		0.2	T						7	9	14	6.7	
SIOUX CITY	1095	972.6	1012.4	66	38	52.1	3.2	91	30	19	5	1	8	35	56	2.74	0.49	1.01	13	6	0.3	T	2.5	27	47	NW	23	9	8	13	6.0	61
WATERLOO	868	980.7	1012.7	63	38	50.4	3.1	84	11	20	1	0	10	37	65	5.15	2.45	2.30	11	5	T	T	4.8	23	41	33	23	9	5	16	6.6	
KANSAS																																
CONCORDIA	1470	959.7	1012.8	66	39	52.8	0.0	84	30+	19	5	0	6	37	61	3.15	1.03	1.04	9	7	0.1	T	3.5	22	43	S	16	14	6	10	4.8	69
DODGE CITY	2582	922.1	1012.7	69	40	54.9	1.3	86	16	22	5	0	4	28	43	0.93	- 0.91	0.40	7	2	T	T	2.9	26	47	NW	3	8	13	9	4.9	82
GOODLAND	3650	885.5	1012.3	65	33	48.7	0.6	85	30	15	4	0	12	23	46	0.46	- 1.13	0.36	4	2	0.7	T	4.8	30	48	33	3	9	9	12	5.6	
TOPEKA	876	982.1	1013.9	66	41	53.5	- 0.9	81	30	22	5	0	5	40	64	4.20	0.91	0.83	10	9	T	T	3.5	21	42	SW	19+	11	7	12	5.6	68
WICHITA	1321	965.8	1013.8	69	42	55.5	- 1.2	88	30	22	5	0	2	39	57	2.16	- 0.14	0.97	7	7	0.0	0	3.1	21	37	SW	19	13	4	13	5.0	72
KENTUCKY																																
COVINGTON	869	985.8	1017.3	66	45	55.5	3.3	81	20	33	11	0	0	40	60	3.47	0.25	0.94	7	4	0.0	0	2.6	23	29	25	23	4	10	16	6.9	
LEXINGTON	966	982.1	1017.8	66	44	55.1	0.7	79	20	33	11	0	0	41	62	3.23	- 0.81	1.89	11	4	0.0	0	2.4	18	27	19	23	5	11	14	6.7	
LOUISVILLE	477	999.3	1017.0	67	46	56.8	2.0	81	20	36	7	0	0	41	59	3.94	0.12	2.23	9	5	0.0	0	1.7	21	35	NW	14	4	13	13	6.7	55
LOUISIANA																																
ALEXANDRIA	92	1012.5	1016.7	76	56	65.9	0.1	85	20	40	6	0	0	59	80	5.54	- 0.16	2.47	9	7	0.0	0	1.8	17	23	29	29+	7	3	20	7.1	
BATON ROUGE	64	1014.2	1016.8	80	60	69.8	1.6	87	19	43	6	0	0	61	76	2.67	- 2.10	1.18	10	5	0.0	0	3.2	16	25	20	3	6	7	17	7.0	
LAKE CHARLES	9	1014.9	1016.1	79	62	70.5	2.6	85	20	47	6	0	0	62	79	2.39	- 1.98	2.05	5	0	0.0	0	4.2	15	26	18	3	6	5	19	7.4	
NEW ORLEANS	3	1016.3	1017.1	77	59	68.1	0.2	83	22+	40	25	0	0	62	79	3.59	- 0.96	1.88	8	3	0.0	0	3.9	16	27	17	3	5	8	17	7.0	
SHREVEPORT	254	1006.4	1015.7	77	56	66.5	1.2	85	22	39	6	0	0	55	70	9.38	4.81	2.50	12	7	0.0	0	2.7	16	22	34	27	7	6	17	6.7	49
MAINE																																
CARIBOU	624	991.9		51	31	41.0	4.6	77	13	18	6	0	17			2.15	- 0.48	0.88	13		T	1						8	8	14	6.6	
PORTLAND	47	1014.2	1016.6	57	34	45.1	2.6	74	13	21	7	0	13	31	63	3.37	- 0.36	1.61	10	0	0.0	0	1.5	26	36	W	9	11	10	9	5.1	61
MARYLAND																																
BALTIMORE	148	1012.5	1018.1	66	42	54.0	- 0.2	83	14	31	7+	0	3	39	62	1.61	- 1.99	1.10	10	3	0.0	0	1.7	24	42	SW	4	8	11	11	5.9	59
MASSACHUSETTS																																
BLUE HILL OBS R	629			59	39	48.8	3.1	78	13	28	6	0	3			1.94	- 2.06	1.07	8		0.0	0			51	WNW	9					67
BOSTON	15	1015.9	1017.0	57	42	49.6	1.7	69	9	32	6	0	1	35	61	1.72	- 2.05	0.87	7	0	0.0	0	1.5	26	36	SE	25	11	8	11	5.2	71
NANTUCKET	43	1016.9	1017.1	52	38	45.2	0.9	62	9	24	7	0	3	38	78	1.55	- 2.21	0.89	6	1	0.0	0	2.4	31	37	SW	5	10	6	14	5.9	57
PITTSFIELD	1170			62	35	48.4	5.4	77	14	20	6	0	10			3.47	- 0.40	2.80	8		0.0	0										
WORCESTER	986	979.7	1017.0	60	37	48.5	3.9	80	13	24	6	0	5	30	53	2.24	- 1.69	1.61	8	1	T	T	4.0	28	38	32	5	12	10	8	4.8	
MICHIGAN																																
ALPENA	689	988.8	1014.3	57	32	44.7	5.6	81	12	19	5	0	15	32	64	1.57	- 1.06	0.54	13	2	0.5	T	2.4	22	35	SW	8	9	6	15	6.2	59
DETROIT	619			62	43	52.5	4.9	79	13+	31	5	0	3	36	55	1.93	- 1.07	1.18	7	4	T		4.7	23	35	27	8					
DETROIT M WAYNE CO	633	991.2	1015.6	62	40	50.9	4.4	79	13+	28	6+	0	8	36	59	1.71	- 1.34	1.13	10	3	0.1	T	4.2	24	45	SW	8	10	6	14	5.8	61
DETROIT WILLOW RUN	711	987.5	1016.0	60	37	48.9	1.2	78	13+	27	7+	0	8	33	57	2.75	- 0.30	1.16	10	4	0.3	T	5.8	23	44	23	8	10	6	14	5.7	
FLINT	770	987.1	1015.1	60	38	48.9	3.6	76	13+	27	6+	0	8	33	58	1.68	- 0.98	0.96	10	4	0.2	T	6.0	22	44	24	8	10	6	14	6.0	
GRAND RAPIDS	784	985.4	1014.8	60	37	48.8	3.1	80	12	20	6	0	11	35	63	2.40	- 0.54	0.73	10	2	1.6	T	5.4	22	50	SW	8	8	7	15	6.1	54
HOUGHTON LAKE	1149	972.2	1014.6	57	34	45.3	4.6	73	12	18	5	0	14	33	64	1.28	- 1.03	0.34	13	5	0.7	T	4.1	24	29	24	8	7	10	13	6.0	
LANSING	841	983.4	1015.3	61	37	48.9	3.2	78	13+	24	11+	0	11	33	57	2.96	0.09	1.41	11	4	0.2	T	6.2	23	43	SW	8	10	6	14	5.7	60
MARQUETTE U	677			51	34	42.3	3.0	85	12	18	5	0	11			3.11	0.41	0.62	15		5.5	3			34	S	7	3	9	18	7.5	48
MUSKEGON	627	991.2	1014.4	59	39	49.0	3.8	75	12	23	6	0	6	35	61	1.66	- 0.92	0.57	9	0	0.7	T	5.6	22	35	23	14	8	8	14	6.3	
SAULT STE MARIE	721	986.8	1013.8	52	31	41.5	3.5	73	12	14	5	0	17	32	74	2.71	- 0.55	0.88	16	1	4.7	1	0.7	22	38	SW	8	6	5	19	7.3	47
MINNESOTA																																
DULUTH	1428	960.7	1013.0	50	31	40.5	3.5	78	11	12	5	0	21	26	60	4.83	2.47	2.15	13	0	8.7	5	1.9	3	45	NW	23	2	10	18	7.6	53
INTERNATIONAL FALLS	1179	970.2	1014.1	49	28	38.7	1.3	75	11	5	5	0	23	26	64	2.52	0.96	0.87	11	0	18.3	6	3.0	36	26	32	23	5	10	15	7.0	

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	No. of days: Max. 90 F. or above	No. of days: Min. 32 F. or below	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	No. of days: .01 inch or more	No. of days: With thunderstorms	Snow, Sleet: Total	Snow, Sleet: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Fastest mile: Speed	Fastest mile: Direction	Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	Ft.	Mb.	Mb.	F.	F.	F.	F.	F.		F.				F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
MINNESOTA																																
MINNEAPOLIS	834	981.4	1012.0	60	37	48.5	4.2	86	30	18	5	0	10	33	58	2.94	1.09	0.99	12	2	0.4	T	0.8	32	42	N	23	7	6	17	6.9	51
ROCHESTER	1297	964.1	1012.2	60	36	47.9	3.9	84	30	14	5	0	11	33	63	4.16	1.97	1.86	10	5	0.4	T	4.4	22	38	33	23	6	8	16	6.8	
ST CLOUD	1034	973.6	1011.9	58	34	46.0	3.2	86	30	15	5	0	13		60	4.51	2.49	1.32	13		0.6	T						7	7	16	6.7	
MISSISSIPPI																																
JACKSON	310	1005.1	1017.0	78	54	65.9	1.0	86	19	36	6	0	0	57	77	7.20	2.29	2.09	13	7	0.0	0	2.2	17	29	E	3	9	2	19	6.6	47
MERIDIAN	290	1006.8	1017.8	80	53	66.6	2.2	88	20	38	6	0	0	56	74	5.96	0.63	1.70	13	8	0.0	0	1.3	18	32	32	28	8	3	19	6.7	
MISSOURI																																
COLUMBIA	778	986.1	1014.5	68	45	56.3	1.7	81	30+	28	1	0	3	39	56	1.74	- 1.56	0.45	11	6	T	0	3.8	20	40	NW	23+	9	7	14	6.0	59
KANSAS CITY	742	986.8	1013.9	69	45	57.0	1.3	84	11	25	5	0	1	39	55	3.91	0.35	1.51	12	7	T	T	4.0	20	34	SW	20+	10	7	13	5.6	67
ST JOSEPH	811			69	42	55.4	1.8	85	11	22	5	0	5			4.99	1.84	1.80	9	5	0.0		3.9	20	40	31	23+	10	6	14	5.5	
ST LOUIS	535	995.3	1015.8	67	44	55.6	0.7	84	12	26	6	0	3	41	60	1.48	- 2.23	0.95	9	5	0.0	0	3.0	19	38	W	14	8	9	13	5.9	65
SPRINGFIELD	1268	969.9	1015.8	68	43	55.6	0.0	82	17	26	5	0	4	41	61	2.59	- 1.50	0.80	9	4	0.0	0	4.9	19	45	N	22	10	6	14	5.5	68
MONTANA																																
BILLINGS	3567	890.3	1015.1	56	34	45.3	- 0.7	84	30	20	3	0	10	20	40	1.50	0.19	0.39	10	0	12.3	3	5.4	28	33	W	11	4	9	17	7.1	57
GLASGOW	2284	932.3		55	29	42.0	- 1.4	85	30	10	3	0	21			0.67	- 0.34	0.59	4		6.2	4						7	9	14	6.5	
GREAT FALLS	3662	887.2	1016.3	53	28	40.6	- 3.0	83	30	12	17+	0	21	20	47	1.11	0.13	0.54	9	1	6.1	5	8.3	25	47	W	11	6	8	16	6.9	75
HAVRE	2582	921.8	1014.9	56	27	41.8	- 1.3	87	30	10	3	0	24	23	54	0.93	- 0.04	0.33	9	0	7.0	2	6.2	26	47	NW	15	4	8	18	7.4	80
HELENA	3828	880.5	1017.5	53	27	39.7	- 3.6	81	30	11	4	0	20	21	50	1.21	0.38	0.90	5	0	10.0	7	7.6	28	41	NW	15	6	8	16	6.8	66
KALISPELL	2965	911.6	1017.7	53	27	40.2	- 3.5	81	30+	14	13	0	23	25	60	0.26	- 0.78	0.14	6	1	1.9	1	3.0	18	35	19	30	4	4	22	7.5	
MILES CITY	2629	921.1	1015.1	57	30	43.6	- 2.1	88	30	13	4	0	19	25	53	0.48	- 0.58		8	0	3.9		4.1	32								
MISSOULA	3190	905.5	1018.8	55	29	42.1	- 2.2	83	29	20	17	0	24	25	57	0.94	- 0.03	0.40	10	0	5.8	1	3.9	30	36	SW	30	7	6	17	6.9	59
NEBRASKA																																
GRAND ISLAND	1841	946.5	1012.7	65	37	51.1	1.5	89	11	17	5	0	8	34	60	3.47	1.19	1.77	13	5	0.8	1	2.8	27	47	18	6	12	5	13	5.8	
LINCOLN U	1150			65	41	52.9	1.1	87	11	22	5	0	3			3.28	0.83	1.42	12		T	T			42	S	21	10	10	10	5.6	64
NORFOLK	1544			63	36	49.3	0.9	88	30	14	5	0	10			3.54	1.36	1.57	10		T	T						11	4	15	5.9	
NORTH PLATTE	2775	914.7	1013.1	61	31	46.2	- 1.5	85	30	14	4	0	16	27	54	3.04	1.03	1.47	8	2	2.2	2	4.1	34	38	NW	3	11	6	13	5.7	64
OMAHA	977	977.0	1012.6	66	39	52.5	0.8	87	11	19	5	0	7	38	62	3.93	1.37	1.11	11	7	T	T	2.6	25	47	NW	23	8	9	13	6.0	63
SCOTTSBLUFF	3957	877.4	1014.4	57	29	43.2	- 3.4	81	30	7	4	0	17	27	59	1.76	- 0.05	0.69	9	1	8.1	3	5.4	32	43	2	3	11	5	14	5.9	
VALENTINE	2587			58	30	44.3	- 1.4	86	30	6	4	0	16			4.01	2.03	1.38	11		9.6	9			44	N	3	10	5	15	6.1	70
NEVADA																																
ELKO	5050	844.6	1016.6	58	27	42.6	- 1.7	79	29	15	23	0	23	20	43	0.53	- 0.29	0.21	9	0	3.8	2	3.2	28	29	27	1	7	11	12	5.9	
ELY	6253	808.0	1016.1	53	23	38.0	- 4.6	71	30+	15	17	0	29	20	54	1.26	0.31	0.68	8	0	16.7	3	1.9	27	37	S	1	10	10	10	5.6	71
LAS VEGAS	2162	937.4	1013.6	76	48	62.0	- 2.5	92	30	35	19	1	0	20	23	0.10	- 0.13	0.10	1	0	0.0	0	2.8	28	40	SW	16	19	8	3	2.6	93
RENO	4404	866.9	1017.7	63	26	44.6	- 3.4	80	29	16	22	0	25	21	40	0.02	- 0.52	0.01	2	0	T	0	2.1	33	34	W	15+	10	8	12	5.3	86
WINNEMUCCA	4299	868.9	1018.3	60	25	42.4	- 3.5	81	29	8	22	0	27	20	44	0.47	- 0.35	0.35	2	1	T	T	2.8	31	29	NW	5	8	7	15	6.1	53
NEW HAMPSHIRE																																
CONCORD	342	1003.7	1016.6	60	29	44.8	1.0	81	13	16	7	0	23	31	60	2.85	- 0.46	1.38	9	0	0.0	0	2.0	29	36	W	9	11	12	7	4.9	67
MT WASHINGTON OBS	6262			34	19	26.6	3.6	50	13	- 2	6	0	28			4.74	- 1.15	1.93	18	0	10.3	2			95Y	W	10	5	10	15	6.8	44
NEW JERSEY																																
ATLANTIC CITY	64	1016.3	1018.6	63	39	51.0	0.0	82	13	23	7	0	4	38	66	1.50	- 1.91	1.13	6	1	0.0	0	2.1	21	29	24	4	9	11	10	5.8	61
ATLANTIC CITY U	11			59	46	52.6	2.7	76	9	34	6	0	0			1.13	- 2.25	0.89	7						39	NW	1					
NEWARK	7	1016.6	1017.8	65	43	54.0	2.7	79	13	32	6	0	1	34	52	2.24	- 1.27	1.58	9	0	0.0	0	2.5	23	29	22	4+	11	10	9	5.1	
TRENTON U	56			65	44	54.8	3.1	81	13	33	6	0	0			1.49	- 1.72	1.21	8		0.0	0			28	S	24+	9	12	9	5.3	71
NEW MEXICO																																
ALBUQUERQUE	5311	836.8	1012.9	68	39	53.4	- 2.3	77	15	30	8	0	3	23	35	0.51	0.04	0.20	4	3	T	T	3.1	26	49	NW	6	14	10	6	4.1	72
CLAYTON	4969			64	34	48.7	- 2.0	77	15+	20	4	0	14			1.00	- 0.19	0.91	5		T	T						13	10	7	4.3	
RATON	6379			61	28	44.2	- 2.7	73	30+	15	4	0	23			0.24	- 0.82	0.22	3		1.2	1						7	11	12	5.8	
ROSWELL	3617	889.9		74	37	55.5	- 3.5	87	15	28	29	0	9	29	43	0.06	- 0.67	0.06	1	0	0.0	0	2.7	23	38	SW	16	15	9	6	4.0	79
SILVER CITY	5373			66	38	52.0	- 4.4	76	15	25	23	0	4			0.04	- 0.25	0.02	2		T	0						16	12	2	3.5	
NEW YORK																																
ALBANY	275	1006.1	1017.0	66	37	51.1	4.9	83	14+	27	17+	0	11	33	54	2.64	- 0.13	2.20	7	0	0.0	0	3.5	26	34	NW	1	12	8	10	5.2	73

See footnotes at end of table

CLIMATOLOGICAL DATA
ENGLISH UNITS

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	No. of days: Max. 90 F. or above	No. of days: Min. 32 F. or below	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	No. of days: .01 inch or more	No. of days: With thunderstorms	Snow, Sleet: Total	Snow, Sleet: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Fastest mile: Speed	Fastest mile: Direction	Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	Ft.	Mb.	Mb.	F.	F.	F.	F.	F.		F.				F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
NEW YORK																																
BINGHAMTON	1590	957.7	1017.0	60	37	48.4	4.9	79	14	21	6	0	9	32	59	1.61	- 1.33	0.51	10	3	T	T	3.2	25	35	W	9	9	5	16	6.0	64
BUFFALO	705	990.5	1016.4	60	38	49.2	5.7	78	14	25	6	0	7	34	59	1.78	- 1.23	0.88	11	2	0.1	0	7.2	23	38	W	4	6	11	13	6.1	71
J.F. KENNEDY	13	1016.9	1017.8	59	42	50.5	1.5	70	13+	31	6	0	1	37	66	1.97	- 1.51	1.19	6	0	0.0	0	3.0	23	32	16	24	10	11	9	5.3	
NEW YORK U	132	1013.9	1017.3	65	45	55.0	3.6	82	13	32	6	0	1	33	51	2.82	- 0.61	2.20	8	0	0.0	0	1.2	27	27	NW	1					69
NEW YORK LA GUARDIA	11	1015.6	1017.4	63	45	54.0	2.8	79	13	32	6	0	1	35	53	2.59	- 0.98	2.07	8	0	0.0	0	1.9	26	31	W	9	10	10	10	5.3	
ROCHESTER	547	996.3	1016.8	62	37	49.5	4.4	85	14	23	6	0	9	33	57	1.33	- 1.34	0.54	11	1	T	T	4.9	25	36	SE	24+	8	8	14	6.1	65
SYRACUSE	410	1001.7	1016.8	61	35	48.1	2.1	83	14	22	6	0	11	33	60	2.40	- 0.68	0.63	11	1	T	T	3.6	25	36	W	8	11	7	12	5.5	70
NORTH CAROLINA																																
ASHEVILLE	2140	942.1	1018.2	67	42	54.8	0.2	84	20	29	12+	0	3	43	69	2.37	- 1.65	1.03	11	1	0.0	0	1.5	34	30	34	30	7	10	13	6.4	64
CAPE HATTERAS R	7	1018.0	1018.3	67	50	58.6	- 0.7	78	20	40	13+	0	0	51	76	4.07	1.08	2.00	9	6	0.0	0	3.8	1	29	N	28	8	10	12	6.0	
CHARLOTTE	736	990.5	1017.9	71	47	59.0	- 1.3	87	20	33	12	0	0	45	64	2.73	- 0.76	1.18	8	2	0.0	0	0.5	28	24	N	11	7	7	16	6.6	73
GREENSBORO	897	986.5	1018.1	73	48	60.2	2.8	88	19	35	2	0	0	47	65	2.64	- 0.79	0.76	10	2	0.0	0	0.2	1	32	W	4	4	11	15	6.7	47
RALEIGH	434	1002.0	1017.9	71	45	58.1	- 1.2	84	19	32	12	0	1	45	66	3.03	- 0.49	0.94	11	3	0.0	0	0.4	1	23	30	15	5	12	13	6.2	46
WILMINGTON	28	1016.9	1018.3	75	52	63.2	0.7	89	19	40	7	0	0	51	68	3.50	0.64	1.82	12	4	0.0	0	0.5	12	31	N	11	9	6	15	6.3	73
NORTH DAKOTA																																
BISMARCK	1647	954.3	1014.6	55	30	42.8	- 0.7	86	30	15	4	0	18	25	54	1.30	0.08	0.70	8	0	3.6	1	4.3	34	45	N	3	5	9	16	6.8	72
FARGO	896	980.4	1013.4	56	31	43.9	1.9	85	11	11	5	0	19	31	66	4.09	2.37	0.91	10	0	11.6	4	4.4	1	45	N	3	5	10	15	6.7	62
WILLISTON	1899	945.5	1014.8	57	27	42.0	- 0.3	89	30	6	4	0	22	24	55	0.78	- 0.16	0.44	5	0	2.9	3	3.8	33	45	NW	11	6	15	9	6.0	79
OHIO																																
AKRON	1208	972.6	1017.2	63	41	52.2	3.5	79	13	21	6	0	5	35	56	2.35	- 0.99	0.92	9	4	0.1	T	3.4	24	40	30	10	8	6	16	6.3	
CINCINNATI OBS	761			67	45	55.8	1.6	82	20	32	6	0	1			3.67	0.04	1.03	9		0.0	0			25	SW	24+					68
CLEVELAND	777	987.8	1017.2	60	39	49.4	2.4	78	13	21	6	0	10	36	61	2.25	- 1.16	0.93	10	3	0.2	T	4.8	22	35	W	8	8	8	14	6.0	59
COLUMBUS	812	987.5	1017.7	64	42	53.1	2.3	78	13	29	6	0	3	37	58	2.20	- 1.29	0.85	9	5	T	0	2.2	23	37	SW	4	4	9	17	6.7	50
DAYTON	1002	980.7	1017.1	64	42	52.9	2.2	77	13	28	6	0	3	36	56	1.44	- 1.88	0.37	8	4	T	0	3.2	22	43	SW	4	5	8	17	7.2	58
MANSFIELD	1295			62	41	51.3	4.4	77	13	23	6	0	5	36	58	1.84	- 1.47	0.63	11	3	0.3	T	4.8	21	35	28	10	9	6	15	6.3	
TOLEDO	669	991.5	1016.7	62	37	49.5	2.6	79	13	23	6	0	10	36	62	3.01	0.24	1.81	11	4	0.2	T	4.9	23	40	SW	8	9	7	14	6.2	64
YOUNGSTOWN	1178	974.3	1017.4	60	38	48.9	1.9	76	13	19	6	0	10	34	61	2.34	- 1.36	0.77	13	5	T	T	3.2	24	31	30	30	8	8	14	6.5	
OKLAHOMA																																
OKLAHOMA CITY	1285	968.5	1014.8	71	46	58.1	- 1.8	83	13	28	5	0	2	43	60	3.03	- 0.09	1.26	9	5	0.0	0	1.8	18	45	N	3	12	8	10	4.9	70
TULSA	650	990.9	1015.0	72	47	59.3	0.4	86	17	29	5	0	1	42	58	4.40	0.38	1.84	12	5	0.0	0	3.9	20	40	SW	19	12	6	12	5.1	70
OREGON																																
ASTORIA	8	1022.7	1023.4	54	38	46.1	- 2.9	70	28	29	13	0	4	39	77	4.22	- 0.96	1.10	18	0	0.0	0	4.5	27	25	32	10	2	12	16	7.6	
BURNS U	4151	874.7	1019.5	56	25	40.6	- 5.4	80	29	14	13	0	28	21	49	0.09	- 0.66	0.04	5		0.4	T	5.5	31				11	9	10	5.3	
EUGENE	359	1009.8	1023.6	60	37	48.5	- 2.3	83	28	28	13	0	3	40	76	1.06	- 1.32	0.24	7	1	0.0	0	2.2	25	20	20	30	6	7	17	6.7	
MEACHAM	4050	878.4	1020.1	46	29	37.8	- 3.0	76	29	17	13	0	24			2.05	- 0.75	0.52	15		14.1	2			23	29	30+	4	8	18	7.4	
MEDFORD	1298	974.3	1022.5	65	34	49.3	- 1.3	88	29	25	17	0	16	33	58	0.38	- 0.68	0.25	5	1	T	T	3.0	32	26	30	30	11	10	9	5.2	
PENDLETON	1482	965.8	1020.2	61	39	49.6	- 2.4	88	29	25	13	0	4	29	49	0.17	- 0.92	0.06	5	1	T	0	9.1	26	40	26	30	6	12	12	6.2	
PORTLAND	21	1021.7	1023.0	58	38	48.0	- 3.8	81	28	30	13	0	3	39	72	1.91	- 0.18	0.33	15	1	T	0	2.8	27	20	SW	30	5	6	19	7.2	52
SALEM	196	1015.9	1023.4	59	35	46.9	- 4.2	84	28	23	13	0	9	38	73	1.47	- 0.86	0.31	14	1	T		2.2	24	17	23	30+	5	12	13	6.7	
SEXTON SUMMIT R	3836	887.2	1021.9	51	31	41.0	- 3.7	73	28	22	16+	0	20			0.71	- 1.14	0.35	6		1.3	1			33	33	12	11	10	9	5.0	
PACIFIC AREA																																
JOHNSTON	7	1012.9	1013.4	83	74	78.3	0.3	85	30+	69	5	0	0	69	75	2.63	0.35	0.92	10	0	0.0	0	13.1	8	30	SE	15	8	8	14	6.5	43
KOROR R	94	1006.8	1010.5	89	76	82.2	0.9	90	26+	74	29+	8	0	74	81	7.50	- 2.83	3.28	14	1	0.0	0	4.9	6	21	NW	8	0	9	21	8.3	82
KWAJALEIN	8	1008.8	1009.7	86	76	80.8	0.0	88	7	72	15	0	0	76	85	11.63	6.61	2.58	21	0	0.0	0	10.2	8	30	6	1	0	1	29	9.7	
MAJURO	10	1009.8	1010.1	85	76	80.6	0.0	87	8+	72	24	0	0	75	82	8.86	- 3.45	2.70	25	0	0.0	0	6.7	8	26	E	24	0	10	20	8.3	60
MARCUS ISLAND	20			80	68	73.9	- 1.8	84	24	63	11+	0	0			2.06	0.15	1.41	7		0.0	0			29	N	9					32
PAGO PAGO	12	1010.2	1010.2	85	72	78.4		88	14+	68	27	0	0	74	87	12.60		3.02	22	5	0.0	0	0.6	7	24	SE	22	3	5	22	8.4	37
PONAPE R	123	1003.4	1008.7	86	73	79.9	- 0.6	90	10	69	19	1	0	74	84	21.09	1.05	4.26	25	1	0.0	0	4.5	1	24	SW	7	3	5	22	8.0	48
TAGUAC GUAM R	361			84	70	77.2	- 2.7	87	30	63	21+	0	0			1.69	- 1.34	0.33	20		0.0	0			27	NW	11	1	13	16	7.4	71
TRUK MOEN ISLAND	5	1008.1	1008.3	85	76	80.7	- 0.1	88	27+	73	8+	0	0	75	83	20.50	8.18	5.47	20	2	0.0	0	3.8	3	38	NW	8	0	4	26	9.1	56
WAKE	11	1014.2	1014.4	83	72	77.6	- 0.8	86	27+	69	3+	0	0	69		6.22	4.35	3.77	17	1	0.0	0	17.0	7	33	E	1	5	17	8	5.9	67
YAP R	44	1008.1	1010.0	88	74	81.0	- 0.8	89	27+	71	20+	0	0	73	78	1.82	- 4.56	0.50	14	0	0.0	0	7.4	6	20	N	8	0	12	18	7.9	65

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure: Station ∅	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	No. of days: Max. 90 F. or above	No. of days: Min. 32 F. or below	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	No. of days: .01 inch or more	No. of days: With thunderstorms	Snow, Sleet: Total	Snow, Sleet: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Fastest mile: Speed	Fastest mile: Direction	Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	Ft.	Mb.	Mb.	F.	F.	F.	F.	F.		F.				F	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
PENNSYLVANIA																																
ALLENTOWN	387	1003.7	1017.7	66	38	52.0	2.7	84	13	25	6	0	5	34	56	3.14	-0.62	2.52	7	2	0.0	0	3.0	26	31	29	9	8	13	9	5.7	
ERIE	731	990.2	1017.1	58	39	48.3	2.8	75	14+	23	6	0	8	33	58	2.64	-0.92	0.92	11	4	0.4	T	5.7	23	32	29	4	9	9	12	5.7	
HARRISBURG	338	1004.7	1017.7	66	42	53.7	1.9	81	14	30	6	0	2	37	57	2.43	-0.59	1.67	8	2	0.0	0	1.4	23	35	NW	30	5	11	14	6.4	74
PHILADELPHIA	5	1016.9	1017.9	66	43	54.6	2.6	80	14+	33	7+	0	0	36	53	1.57	-1.83	1.22	6	1	0.0	0	2.2	26	32	W	30+	9	10	11	5.7	63
PITTSBURGH	1137	973.2	1017.6	63	40	51.2	2.2	77	13	21	6	0	9	31	49	2.33	-0.75	1.07	9	5	T	0	3.0	26	43	29	14	6	6	18	6.8	58
READING U	266			66	44	55.1	2.5	84	13	32	6	0	1			2.79	-0.63	2.00	7		0.0	0			40	NW	30+	10	9	11	5.4	64
SCRANTON	930	983.4	1017.7	66	40	52.9	4.5	84	14	26	6	0	4	34	54	2.37	-0.90	1.50	7	2	0.0	0	2.4	25	36	W	9	7	11	12	5.9	67
WILLIAMSPORT	524	998.3	1017.5	65	39	52.0	2.6	81	14	26	6	0	7	36	59	1.05	-2.50	0.36	9	2	0.0	0	1.1	25	28	28	10	8	11	11	5.7	
RHODE ISLAND																																
BLOCK ISLAND	110			53	40	46.6	2.0	63	13	32	6	0	1			1.26	-2.35	0.66	5		0.0	0						12	7	11	5.2	
PROVIDENCE	51	1014.9	1017.1	61	39	49.9	2.7	73	13+	27	7	0	4	32	55	1.49	-2.26	0.98	7	0	0.0	0	2.5	27	35	27	9	15	3	12	4.9	69
SOUTH CAROLINA																																
CHARLESTON	40	1016.3	1017.9	78	54	65.7	0.9	93	20	36	12	1	0	52	66	1.99	-0.89	0.85	10	4	0.0	0	1.1	21	38Y	SW	27	7	11	12	5.9	51
CHARLESTON U	9			74	59	66.5	0.9	91	20	50	12	1	0			1.98	-0.56	0.76	10		0.0	0			32	W	27					
COLUMBIA	213	1010.2	1018.1	77	51	63.8	0.2	92	19	34	12	2	0	51	68	4.52	0.51	1.87	10	4	0.0	0	1.7	31	20	36	11	7	12	11	6.1	66
GNVLE-SPARTANBURG	957	983.4	1018.1	72	48	60.2	-0.7	86	21+	37	26+	0	0	45	62	2.40	-1.54	0.62	11	2	0.0	0	1.0	31	26	NW	1	8	10	12	6.2	59
SOUTH DAKOTA																																
ABERDEEN	1296	965.8	1013.2	57	31	44.0	-0.8	87	30	6	5	0	19	31	65	4.81	2.77	2.14	9	1	15.5	11	5.0	36	49	36	4+	8	8	14	6.4	
HURON	1282	965.8	1012.8	59	32	45.5	0.5	87	30	17	5	0	15	30	58	5.39	3.55	1.81	12	2	5.3	2	3.1	33	40	N	22+	8	8	14	6.2	66
RAPID CITY	3162	902.5	1014.5	56	30	42.6	-1.9	85	30	10	4	0	16	24	53	1.82	0.15	0.73	10	0	13.7	6	7.1	34	43	NW	3+	6	7	17	6.9	58
SIOUX FALLS	1418	960.4	1012.1	61	34	47.8	1.9	89	30	19	5	0	10	33	62	4.34	2.03	2.06	9	3	0.1	T	3.1	30	38	33	23	12	8	10	5.4	
TENNESSEE																																
BRISTOL	1507	964.1	1018.3	67	44	55.8	-0.8	82	20	31	16+	0	2	44	67	4.12	0.96	1.49	16	4	0.0	0	1.4	28	35	23	4	7	7	16	6.6	
CHATTANOOGA	665	993.2	1017.9	70	46	57.9	-3.0	84	19+	32	6	0	1	44	64	3.72	-0.57	1.48	13	5	0.0	0	1.0	22	29	SW	4	8	5	17	6.5	48
KNOXVILLE	980	982.4	1017.3	70	48	59.0	0.1	84	23	36	12	0	0	47	68	4.12	0.42	0.77	12	5	0.0	0	1.7	29	30	SW	4	7	7	16	6.7	56
MEMPHIS	258	1006.4	1016.7	73	52	62.7	1.3	84	18	32	6	0	1	47	58	5.15	0.52	1.39	11	10	0.0	0	2.6	16	36	SW	3	8	4	18	6.5	59
NASHVILLE	590	995.6	1017.2	71	47	58.7	-0.9	84	18	34	25	0	0	46	65	3.57	-0.17	0.92	13	7	0.0	0	2.8	19	42	SW	4	6	8	16	6.5	56
OAK RIDGE R	905			69	47	58.2	0.4	83	20	36	12	0	0			5.21	1.01	0.89	11		0.0	0			41Y		4	10	2	18	6.6	
TEXAS																																
ABILENE	1762	953.6	1014.7	72	51	61.7	-2.6	83	16	35	5	0	0	48	65	3.32	1.05	1.86	8	6	0.0	0	3.3	19	38	NW	8	11	6	13	5.6	71
AMARILLO	3604	889.6	1012.2	70	41	55.3	-2.2	84	15	27	4	0	3	29	42	0.93	-0.39	0.80	4	1	0.0	0	3.6	22	50	W	19	13	11	6	3.8	82
AUSTIN	597	993.6	1015.4	77	59	68.1	0.4	86	27	41	5	0	0	57	71	1.87	-1.68	0.76	9	5	0.0	0	2.1	15	30	NW	4	6	6	18	7.1	45
BROWNSVILLE	19	1013.2	1013.9	82	66	74.2	0.3	87	27+	51	5	0	0	66	78	1.27	-0.28	0.98	5	2	0.0	0	8.7	14	34	SE	3+	1	3	26	8.6	54
CORPUS CHRISTI	41	1012.9	1014.4	80	64	71.7	0.0	91	3	47	6	1	0	63	78	0.82	-1.32	0.37	7	2	0.0	0	8.5	13	36	SE	2	1	8	21	8.5	41
DALLAS	481	998.0	1015.1	75	56	65.5	0.5	85	17	37	5	0	0	51	63	2.53	-1.47	0.83	8	7	0.0	0	3.5	16	28	N	14	8	7	15	6.3	56
DEL RIO	1026	978.0	1013.8	81	58	69.4	-2.2	93	27+	43	5	4	0	54	65	2.53	1.17	2.02	6	4	0.0	0	4.7	11	29	36	23	6	4	20	7.3	
EL PASO	3918	880.8	1011.8	75	48	61.4	-2.0	84	15	33	24	0	0	28	33	0.10	-0.19	0.09	2	0	0.0	0	4.5	26	52	SW	2	17	9	4	3.3	84
FORT WORTH	537	994.9	1015.4	74	53	63.4	-1.4	83	22+	34	5	0	0	52	71	2.41	-1.19	0.80	9	6	0.0	0	2.2	18	29	31	28	9	7	14	6.2	
GALVESTON U	7			74	66	69.7	1.2	78	28+	52	5	0	0			3.93	1.34	2.80	7		0.0	0			38	NE	9					47
HOUSTON	50	1013.5	1015.7	80	62	71.1	2.6	87	20	46	5	0	0	60	74	3.02	-0.22	2.66	10	4	0.0	0	4.4	15	26	3	9+	6	3	21	7.8	36
LUBBOCK	3254	902.5	1013.4	70	41	55.3	-4.2	84	16	29	5+	0	4	33	50	0.58	-0.57	0.38	4	1	0.0	0	2.9	21	39	27	19	13	8	9	4.8	
MIDLAND	2851	915.0	1013.0	74	48	60.8	-4.1	87	16	34	4	0	0	40	54	1.59	0.76	1.08	5	3	0.0	0	3.3	19	32	26	19+	13	8	9	4.6	
PORT ARTHUR	16	1015.6	1016.3	78	62	69.9	1.7	84	27+	45	5	0	0	63	81	7.38	3.44	7.23	6	2	0.0	0	5.0	14	42	NE	9	6	3	21	7.4	50
SAN ANGELO	1903	947.5	1013.8	74	50	62.2	-4.9	86	26	31	5	0	1	50	67	2.26	0.25	1.57	9	4	0.0	0	2.4	18	30	20	8	11	6	13	5.6	
SAN ANTONIO	788	987.1	1015.1	77	59	68.1	-0.1	85	27	41	25+	0	0	58	72	1.92	-0.90	0.66	12	6	0.0	0	3.2	11	42	N	23	6	4	20	7.5	41
VICTORIA	104	1010.8	1014.9	80	63	71.2	1.2	86	14	43	5	0	0	61	75	0.81	-1.81	0.38	8	3	0.0	0	5.2	14	53Y	N	28	2	6	22	8.3	
WACO	501	997.3	1015.2	74	56	64.8	-1.8	85	27	38	5	0	0	56	77	2.94	-0.94	1.28	8	6	0.0	0	3.1	16	35	32	4	8	6	16	6.6	
WICHITA FALLS	994	978.3	1014.7	74	48	61.3	-2.7	88	17	32	5	0	1	47	63	1.80	-0.73	1.02	6	4	0.0	0	2.4	18	35	33	4+	10	5	15	5.9	
UTAH																																
MILFORD	5028	845.9		57	28	42.7	-5.0	78	30	19	9	0	26			1.33	0.61	0.39	11		8.3	3						13	6	11	5.1	
SALT LAKE CITY	4220	871.3	1016.2	57	34	45.4	-4.5	79	30	27	23+	0	13	28	55	2.82	1.06	0.79	11	0	14.2	4	1.4	25	32	S	1	8	9	13	6.3	63
WENDOVER	4237	871.0	1016.9	58	36	47.1	-4.5	79	30	27	22	0	11			0.40	-0.11	0.26	5		3.2	3										

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	No. of days: Max. 90 F. or above	No. of days: Min. 32 F. or below	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	No. of days: .01 inch or more	No. of days: With thunderstorms	Snow, Sleet: Total	Snow, Sleet: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Fastest mile: Speed	Fastest mile: Direction	Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	Ft.	Mb.	Mb.	F.	F.	F.	F.	F.		F.				F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
VERMONT																																
BURLINGTON	332	1003.4	1016.0	59	33	46.2	5.0	84	14	18	6	0	14	31	59	3.54	0.91	2.16	8	0	T	0	1.9	24	37	SW	4	9	11	10	5.4	78
VIRGINIA																																
LYNCHBURG	916			68	44	56.0	-0.2	83	21+	30	2	0	1			2.48	-0.66	0.94	9		0.0	0			27	NW	30	6	10	14	6.3	59
NORFOLK	22	1017.6	1018.6	65	46	55.1	-2.9	80	27	37	7+	0	0	42	63	3.17	0.01	1.25	11	1	0.0	0	1.7	7	51	NW	30	6	12	12	6.2	72
RICHMOND	164	1012.5	1018.4	72	45	58.8	0.7	85	14	33	7+	0	0	43	60	2.93	-0.22	0.68	8	5	0.0	0	0.7	15	27	SW	4	7	10	13	6.3	63
ROANOKE	1149	976.0	1017.8	68	45	56.5	0.1	83	21	30	2	0	1	39	54	2.73	-0.37	1.00	13	4	0.0	0	1.2	28	35	32	30	7	11	12	6.1	
WALLOPS ISLAND	9			60	44	52.1		77	9	32	7	0	1			1.35		0.63	8		0.0	0			51Y	NW	30	10	8	12	5.7	
WASHINGTON																																
OLYMPIA	195	1014.6	1022.1	57	37	47.0	-3.0	79	28	27	17	0	7	37	72	3.02	0.06	0.99	14	0	T	T	5.6	23	30	26	6	1	14	15	7.3	
QUILLAYUTE	179	1014.6	1022.2	53	38	45.1	-2.1	67	28	30	17+	0	4	40	84	8.15	0.76	2.77	20	0	0.6	0	3.9	25	23	NW	11	3	5	22	8.0	30
SEATTLE TACOMA	400	1005.1	1021.8	57	41	48.7	-0.5	76	28	33	13+	0	0	37	69	1.33	-1.07	0.44	12	0	0.5	0	4.9	21	27	19	30+	0	12	18	8.1	46
SPOKANE	2356	933.0	1017.6	55	31	43.0	-4.3	80	29	19	13	0	19	26	54	0.10	-0.81	0.05	6	0	T	T	6.8	21	42	SW	30	3	9	18	7.3	53
STAMPEDE PASS R	3958	881.1		39	28	33.6	-2.9	67	28	19	13	0	27			9.71	4.11	1.56	22		88.7	75						1	4	25	8.6	
WALLA WALLA U	949			61	41	50.7	-3.1	86	29	30	13	0	2			0.43	-0.97	0.21	8		0.3	T			31	NW	30	6	4	20	7.2	57
YAKIMA	1052	980.7	1019.7	62	33	47.9	-2.6	82	29	22	13	0	14	25	43	T	-0.47	T	0	1	T	T	6.5	29	32	28	30	7	11	12	6.1	
WEST INDIES																																
SAN JUAN P.R.	13	1014.2	1016.7	83	71	77.0	0.4	88	17	64	12	0	0	67	74	0.50	-3.22	0.18	8	0	0.0	0	6.1	5	25	E	10+	6	21	3	5.4	85
SWAN ISLAND	28			85	75	79.9	-1.6	86	30+	72	17+	0	0			0.82	-0.02	0.38	8		0.0	0						14	13	3	3.9	
WEST VIRGINIA																																
BECKLEY	2504	929.2	1017.8	63	41	52.1	1.3	76	14	29	16+	0	3	36	60	3.36	-0.59	0.80	14	3	0.0	0	2.3	22	32	26	25	4	8	18	7.2	
CHARLESTON	939	983.1	1017.4	69	44	56.4	1.1	83	14	28	2	0	2	40	59	2.58	-1.10	1.50	13	4	0.0	0	1.9	23	35	28	14	5	8	17	7.1	
ELKINS	1970	946.5	1018.2	64	36	49.9	-0.3	78	14+	21	2	0	13	37	66	1.54	-1.94	0.45	14	3	0.1	0	2.8	27	40	30	14	4	5	21	7.7	
HUNTINGTON	827	987.5	1017.8	68	44	55.7	0.0	80	20	32	12+	0	3	41	62	2.81	-0.86	1.17	10	3	0.0	0	1.8	24	44	18	23	3	10	17	7.1	
PARKERSBURG U	615			66	44	54.9	0.8	80	13	31	2	0	2			2.63	-0.62	1.48	9		0.0	0			33	W	24					55
WISCONSIN																																
GREEN BAY	682	987.5	1013.3	57	36	46.5	3.3	78	12	16	5	0	10	36	70	4.84	2.38	1.22	11	4	0.7	1	3.1	22	40	SW	7	5	9	16	7.0	55
LA CROSSE	651	987.8	1012.5	63	40	51.3	4.3	86	30	23	1	0	8	37	64	4.46	1.71	1.65	13	9	T	T	2.4	20	40	27	9	5	7	18	6.9	
MADISON	858	981.7	1013.2	61	35	47.8	3.4	79	12	18	5	0	13	35	64	4.18	1.61	1.12	10	3	0.4	T	4.6	22	36	SW	7	6	8	16	6.9	54
MILWAUKEE	672	988.5	1014.0	58	37	47.6	4.0	80	12	24	6+	0	9	34	64	2.90	0.37	0.90	11	3	0.4	T	4.4	22	42	SW	8	7	9	14	6.3	55
WYOMING																																
CASPER	5338	835.4	1015.2	51	26	38.4	-4.7	75	30	1	3	0	23	23	62	1.18	-0.51	0.28	14	1	14.5	8	5.3	25	37	24	15	8	5	17	6.7	
CHEYENNE	6126	809.3	1014.6	50	28	38.9	-3.7	69	30+	9	4	0	23	19	50	2.34	0.46	1.33	10	2	15.4	8	9.6	31	56	NW	3	10	7	13	5.7	63
LANDER	5563	827.0	1015.0	51	27	38.7	-4.5	74	30	15	19+	0	23	22	57	2.43	-0.02	0.95	10	1	39.5	12	2.5	24	61	SW	12	6	4	20	6.8	68
SHERIDAN	3964	877.8	1016.3	53	27	40.2	-3.4	81	30	7	4	0	25	22	52	0.71	-1.45	0.28	10	0	7.1	2	3.4	30	37	NW	7	6	8	16	6.8	61

Data from airport unless otherwise specified. U indicates Urban, R indicates Rural, sites.

Precipitation data in column headed "Greatest in 24 hours" are computed on a 24-hour basis without regard to calendar day - data may include precipitation with a measurable amount from the last day of the previous month or the first day of the following month.

Wind directions under resultant direction are in tens of degrees.

Value entered in column "Fastest Mile" is the highest observed 1-minute wind speed when the direction is in tens of degrees. These stations are not equipped with a recording anemometer from which "Fastest Mile" data can be evaluated.

A Maximum hourly average.
B Number of days maximum 70 F. or above for Alaskan Stations.
Y Peak Gust.
\+ And also on an earlier date or dates.
Ø Station pressures apply to elevations shown in the "Elevations - Station Pressure" table of the annual issue of this publication.

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure		Temperature								No. of days			Average relative humidity	Precipitation			No of days		Snow, Sleet		Wind					No of days (sunrise to sunset)				
		Station ☉	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max 32.2 °C or above	Min 0 C or lower	Average dew point		Total	Departure from normal	Greatest in 24 hours	25 mm or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Fastest mile (1.6 kilometers) Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	M.	Mb.	Mb.	C.	C	C.	C	C.		C				C.	%	Mm.	Mm.	Mm			Mm	Mm.	M.p.s		M.p.s.							%
ALABAMA																																
BIRMINGHAM	189	995.6	1018.0	24.4	10.0	17.2	-0.1	30.0	19	1.1	6	0	0	10.0	65	158	45	56	14	7	0	0	0.3	15	11.6	W	4	7	3	20	6.6	62
HUNTSVILLE	190	994.6	1017.7	22.2	10.0	16.2	-0.2	30.0	19	- 0.6	6	0	1	10.6	71	103	2	23	13	3	0	0	0.4	14	16.5	32	14	9	2	19	6.5	
MOBILE	64	1009.8	1017.5	27.2	15.6	21.3	1.5	31.1	22+	7.8	6	0	0	15.0	72	57	-105	26	9	4	0	0	1.3	18	10.3	16	3	7	5	18	6.7	
MONTGOMERY	59	1010.8	1018.1	25.6	12.8	19.2	1.4	30.0	20	5.6	6	0	0	12.8	71	84	- 40	37	10	9	0	0	0.8	19	10.7	NW	4	7	6	17	6.7	59
ALASKA												B																				
ANCHORAGE	35	1002.4	1007.3	5.0	- 1.7	1.7	-1.1	12.2	25+	-10.0	8	0	21	- 5.6	61	22	11	10	10	0	198	76	0.4	22	10.3	15	26	6	5	19	7.3	46
ANNETTE	34	1010.8	1015.0	8.9	2.2	5.5	-0.8	11.7	30+	- 3.3	12	0	5	0.6	75	346	115	62	23	0	206	51	2.8	16	14.8	14	17	5	3	22	8.0	
BARROW	9	1016.9	1017.4	-17.2	-24.4	-20.8	-3.1	-12.8	21	-30.6	11	0	30	-22.8	82	1	- 2	1	3	0	18	457	3.7	7	11.2	9	12	8	6	16	6.4	
BARTER ISLAND	12	1014.9	1016.8	-15.0	-25.0	-20.0	-2.7	- 8.9	20	-32.2	25	0	30	-23.3	72	T	- 4	T	0	0	18	610	1.1	8	11.2	8	13	9	10	11	5.6	
BETHEL	38	1001.4	1007.0	0.0	- 9.4	- 4.9	-1.6	10.0	24+	-24.4	9	0	29	- 6.7	84	9	- 6	4	7	0	208	152	0.6	23	15.6	19	11	0	6	24	8.5	
COLD BAY	29	1003.1	1006.8	3.3	- 1.1	1.2	0.5	10.0	18	- 7.8	8+	0	15	- 2.2	79	35	- 2	10	20	0	130	25	2.1	27	17.4	16	14+	0	2	28	9.4	
FAIRBANKS	133	990.5	1007.7	4.4	- 7.8	- 1.6	-0.1	11.1	23	-21.1	11	0	30	-12.2	44	7	1	6	4	0	127	483	0.8	31	8.9	28	19	4	8	18	7.4	
JUNEAU	4	1011.2	1012.0	6.7	0.0	3.3	-0.1	11.1	25+	- 8.3	11	0	13	0.0	82	83	10	20	23	0	155	76	3.7	12	16.1	12	17	3	2	25	8.7	29
KING SALMON	15	1003.7	1005.7	2.2	- 4.4	- 1.1	-1.5	9.4	24	-18.3	9	0	25	- 6.7	66	36	20	11	16	0	406	102	1.0	14	17.9	9	20	0	6	24	8.6	
KOTZEBUE	3	1009.1	1009.8	- 6.7	-17.2	-11.9	-1.4	1.7	13	-32.2	8	0	30	-15.6	72	12	5	5	14	0	295	940	1.3	8	15.6	11	11	6	6	18	6.8	
MC GRATH	105	994.2	1007.1	2.8	- 8.9	- 3.0	-0.6	9.4	24+	-21.1	10+	0	30	-10.0	57	7	- 5	3	7	0	124	457	0.6	27	10.3	21	18	4	6	20	7.9	
NOME	4	1006.4	1007.2	- 5.0	-14.4	- 9.8	-3.8	1.7	23+	-34.4	7	0	30	-12.8	73	12	- 8	4	13	0	122	635	2.5	6	11.2	9	30+	7	3	20	7.3	46
ST. PAUL ISLAND	7	1005.8	1006.7	- 1.1	- 6.1	- 3.8	-1.8	2.2	18+	-15.0	7	0	30	- 5.0	90	24	- 1	10	18	0	246	178	3.7	35	20.6	7	10	1	6	23	8.5	
SHEMYA	37	1009.8	1013.6	2.8	- 1.1	0.8	-1.1	5.0	11	- 3.9	1	0	27	- 1.7	82	17	- 35	5	13	0	119	76	3.0	29	21.9	23	17	0	7	23	8.4	
YAKUTAT	9	1008.5	1009.5	3.9	- 2.8	0.6	-2.2	10.6	24	-12.2	11	0	26	- 1.7	87	275	92	90	25	0	1212	406	1.8	11	11.2	21	9	1	6	23	8.6	
ARIZONA																																
FLAGSTAFF	2131	785.6	1014.8	12.2	- 3.3	4.6	-1.7	19.4	29	- 7.8	7	0	28	- 5.6	54	53	23	19	10	5	577	203	1.7	21	11.6	23	15	15	5	10	4.6	
PHOENIX	340	973.6	1012.4	28.3	10.6	19.3	-0.3	34.4	30+	2.8	19	6	0	1.1	32	T	- 8	T	0	2	0	0	0.8	20	17.4Y	WNW	18	23	4	3	2.1	92
TUCSON	788	925.2	1012.6	25.0	9.4	17.3	-1.5	31.7	30	2.8	19	0	0	0.0	35	16	9	6	5	3	0	0	1.5	20	14.3	SE	29	19	6	5	2.6	93
WINSLOW	1492	850.0	1014.1	18.3	2.8	10.7	-2.4	24.4	29	- 2.2	9	0	5	- 5.6	36	13	1	5	4	2	51	25	2.9	23	15.6	19	21+	18	8	4	3.3	
YUMA	59	1005.8	1012.9	29.4	12.8	21.2	-0.3	36.1	30+	7.8	18+	9	0	- 0.6	28	T	- 2	T	0	0	0	0	1.2	27	15.2	W	1	26	3	1	1.3	98
ARKANSAS																																
FORT SMITH	136	999.3	1015.7	23.3	9.4	16.3	-0.2	29.4	17	0.0	5	0	1	7.8	62	94	- 13	48	10	4	0	0	0.3	12	11.6	W	23+	12	4	14	5.6	66
LITTLE ROCK	78	1006.4	1016.1	22.2	10.0	16.1	-0.8	28.9	18	1.1	6+	0	0	7.8	59	123	- 2	37	12	7	0	0	0.6	20	15.2	S	3	10	5	15	5.9	72
TEXARKANA	119	1002.7	1015.8	24.4	12.8	18.6	0.8	28.9	17+	2.8	6+	0	0	11.7	68	85	- 50	22	11	6	0	0	1.3	18	11.2	17	3	9	6	15	6.2	
CALIFORNIA																																
BAKERSFIELD	145	998.6	1016.3	26.1	11.1	18.6	1.3	34.4	28	3.3	19	5	0	2.2	39	17	- 4	17	1	1	0	0	1.3	35	8.9	31	15+	18	9	3	2.9	
BISHOP	1252	873.4		21.7	2.8	12.2	-0.7	28.9	30	- 3.9	23+	0	7			T	- 11	T	1		0	0						16	9	5	3.7	
BLUE CANYON	1609			13.3	3.3	8.5	0.9	20.6	29+	- 4.4	17	0	9			17	-105	14	3		81	51			10.7	3	17	15	3	12	4.5	
EUREKA U	13			11.7	6.7	8.9	-1.3	16.1	27	1.7	17	0	0			10	- 58	5	4		0	0			17.9	N	12	11	9	10	5.3	71
FRESNO	100	1004.4	1016.3	25.6	7.2	16.4	0.1	33.9	29	0.6	22	3	0	4.4	51	18	- 11	18	1	0	0	0	1.5	31	11.6	NW	21	19	9	2	3.0	90
LONG BEACH	10	1015.2	1016.6	23.3	11.7	17.5	1.9	35.0	10	5.6	18	2	0	7.8	60	10	- 10	10	1	0	0	0	1.5	23	9.8	28	23+	17	9	4	3.6	
LOS ANGELES	30	1012.5	1016.1	20.6	12.2	16.4	1.2	32.2	10	9.4	22	1	0	9.4	67	12	- 14	12	2	0	0	0	2.0	25	14.3Y	SW	1	18	7	5	3.4	
LOS ANGELES U	82			22.8	12.8	17.8	1.2	34.4	10	9.4	22	2	0			12	- 17	12	1		0	0			8.9	SW	18	19	7	4	3.3	31
MT SHASTA R	1080			15.6	0.6	8.1	-0.5	25.6	28	- 5.6	22	0	14			10	- 60	5	4		T	T										
OAKLAND	2	1018.3	1018.6	18.3	9.4	13.9	0.2	28.3	27	7.2	22+	0	0	8.3	71	21	- 14	21	1	0	0	0	2.4	28	11.2	28	15+	15	10	5	3.5	
RED BLUFF	104	1005.4	1018.0	23.9	8.9	16.3	0.6	31.7	28	4.4	23+	0	0	0.6	41	7	- 39	7	1	0	0	0	3.1	34	13.4	N	26	17	8	5	3.5	91
SACRAMENTO	5	1016.3	1017.0	23.3	7.2	15.4	0.8	32.8	29	2.8	18	1	0	5.0	57	11	- 25	11	1	1	0	0	1.7	30	13.4	N	21	16	9	5	3.3	89
SANDBERG R	1377	862.9		14.4	3.9	9.1	-1.3	23.3	30	- 2.2	18+	0	8	- 3.9	49	15	- 9	15	2		74	51	2.5	35	17.0	36	18	16	9	5	3.6	
SAN DIEGO	4	1015.6	1016.4	20.6	12.8	16.9	0.5	32.2	9	9.4	18	1	0	8.3	61	9	- 11	9	2	0	0	0	1.5	26	11.6	S	1	14	9	7	3.9	74
SAN FRANCISCO	2	1018.0	1018.7	17.8	7.2	12.7	-0.4	26.1	27	3.9	21+	0	0	6.1	70	14	- 19	14	1	0	0	0	4.6	29	17.4	W	16+	17	8	5	3.2	
SAN FRANCISCO U	16			17.2	10.0	13.4	0.3	25.6	9	7.2	16	0	0			12	- 24	12	1		0	0			13.0	SW	15					95
SANTA MARIA	72			20.0	6.1	13.2	0.1	32.2	10	0.6	17	1	0			17	- 14	17	2		0	0						16	7	7	3.6	
STOCKTON	7	1016.6	1017.5	22.8	7.2	15.2	-0.2	31.7	29	3.9	22+	0	0	3.9	52	26	- 3	26	1	1	0	0	3.3	30	14.8	32	21	16	8	6	3.5	
COLORADO																																
ALAMOSA	2297	769.1		12.2	- 6.1	2.9	-2.5	20.0	30	-12.2	8	0	28			7	- 11	4	5		127	25						8	16	6	5.1	
COLORADO SPRINGS	1873	808.3	1014.4	13.3	- 1.7	5.8	-1.7	23.3	30	-10.0	4	0	22	- 7.8	45	14	- 20	6	6	2	71	51	1.6	35	19.2	36	3	10	6	14	5.9	
DENVER	1610	833.7	1013.0	14.4	- 2.2	6.1	-1.9	23.9	30	-10.6	4	0	23	- 5.0	54	61	7	21	10	0	384	76	0.0	9	15.2	N	3	8	10	12	5.9	72
GRAND JUNCTION	1480	850.7	1014.3	15.0	1.1	7.9	-3.3	25.0	30	- 4.4	14	0	13	- 4.4	48	17	- 2	6	12	1	15	T	0.4	5	14.8	NW	2	7	6	17	6.2	52
PUEBLO	1428	853.0	1012.4	18.3	2.2	10.1	-0.3	26.7	11	- 6.1	5	0	8	- 6.7	36	17	- 13	14	4	0	117	T	1.7	33	21.9	N	3	8	11	11	5.8	77
CONNECTICUT																																
BRIDGEPORT	2	1016.9	1017.5	16.7	5.6	11.0	2.1	23.3	13+	0.0	6	0	1	2.8	63	44	- 52	40	6	0	0	0	1.6	25	19.2	29	9	12	9	9	5.1	

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure: Station Ⓞ	Pressure: Sea level	Temperature: Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	No. of days: Max 32.2 °C or above	No. of days: Min. 0 C or lower	Average dew point	Average relative humidity	Precipitation: Total	Departure from normal	Greatest in 24 hours	No. of days: 25 mm. or more	No. of days: With thunderstorms	Snow, Sleet: Total	Snow, Sleet: Maximum depth on ground	Wind: Resultant speed	Resultant direction	Fastest mile (1.6 kilometers): Speed	Direction	Date	No. of days (sunrise to sunset): Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	M.	Mb.	Mb.	C.	C.	C.	C.	C.		C.				C.	%	Mm.	Mm.	Mm			Mm.	Mm	M.p.s.		M.p.s.							%
CONNECTICUT																																
HARTFORD	52	1009.8	1016.6	18.9	3.9	11.3	2.2	29.4	13	- 3.3	6	0	7	0.6	53	70	- 25	60	9	0	0	0	0.9	29	14.3	NW	9	12	9	9	5.1	76
NEW HAVEN	2	1016.9		16.1	4.4	10.2	1.9	22.8	9	- 1.1	6	0	3			40	- 59	32	8		0	0			13.9	W	9	12	9	9	4.9	75
DELAWARE																																
WILMINGTON	23	1015.2	1018.2	18.9	6.1	12.3	1.1	26.7	14	- 0.6	6	0	1	3.3	60	40	- 45	25	[illegible]	2	0	0	0.9	24	12.5	31	30	9	8	13	6.0	
DIST.OF COLUMBIA																																
WASH NATL AP	4	1015.9	1018.1	21.1	7.8	14.4	1.3	30.0	14	2.8	6+	0	0	3.9	52	39	- 41	22	8	2	0	0	0.8	22	15.6	NW	30	5	13	12	6.5	66
FLORIDA																																
APALACHICOLA U	4			25.0	17.2	21.0	1.3	28.9	21	11.1	25	0	0			13	- 96	8	4	1	0	0			10.7	N	11	9	11	10	5.8	74
DAYTONA BEACH	9	1017.3	1018.5	28.9	16.1	22.3	1.8	35.6	24	11.1	26	7	0	15.0	67	10	- 65	7	5	4	0	0	0.7	12	10.3	2	28+	6	17	7	5.9	
FORT MYERS	5	1018.0	1018.2	30.0	17.2	23.6	0.9	33.9	22	11.1	12	4	0	17.8	74	14	- 53	8	2	0	0	0	0.8	22	10.3	28	15	11	16	3	4.4	
JACKSONVILLE	6	1017.3	1018.4	29.4	16.1	22.8	2.4	35.0	21	7.8	12	7	0	14.4	67	25	- 65	15	6	2	0	0	0.2	21	12.1	W	24	4	12	14	6.7	71
KEY WEST	1	1016.9	1017.7	28.3	23.3	25.7	1.4	31.1	25	20.0	17	0	0	20.0	72	6	- 57	5	2	0	0	0	2.8	11	13.0	NE	12	16	13	1	3.7	88
LAKELAND U	65			29.4	17.8	23.5	1.6	35.0	22	12.8	12	5	0			13	- 76	9	3		0	0						10	17	3	4.7	67
MIAMI	2	1017.6	1017.8	28.3	20.6	24.4	0.9	31.7	21	16.1	15	0	0	18.3	70	32	- 66	20	2	1	0	0	1.8	13	10.3	8	12	12	17	1	4.4	
ORLANDO	33	1014.2	1018.5	30.0	16.1	23.1	1.3	35.6	23	12.2	12	8	0	15.0	67	8	- 79	5	3	1	0	0	0.1	18	9.8	29	15+	6	19	5	5.6	
PENSACOLA	34	1013.5	1017.5	25.0	15.0	20.2	0.2	30.0	23	7.2	25	0	0	15.6	77	35	- 98	23	9		0	0	1.1	19	12.1	SE	3	7	6	17	6.8	59
TALLAHASSEE	17	1015.9	1018.2	29.4	13.3	21.3	1.6	35.0	22	2.8	25	5	0	15.0	71	27	- 91	27	7	4	0	0	0.7	21	11.2	34	27	8	14	8	5.9	
TAMPA	6	1018.0	1018.2	28.9	16.1	22.5	0.6	32.2	28	10.0	12	1	0	16.1	71	19	- 53	16	2	0	0	0	0.8	27	9.4	29	16	7	16	7	5.1	89
WEST PALM BEACH	5	1017.6	1018.2	28.9	18.3	23.7	0.4	33.9	24	14.4	14	2	0	16.1	66	18	- 92	13	4	1	0	0	2.0	13	10.3	5	12+	9	15	6	5.3	
GEORGIA																																
ATHENS	244	988.8	1017.9	22.2	10.0	16.3	0.1	29.4	19	4.4	25	0	0	8.9	67	117	5	37	12	6	0	0	0.5	28	9.4	30	4	7	7	16	6.5	
ATLANTA	308	981.4	1018.0	22.2	10.0	16.1	0.4	28.9	19	2.2	6	0	0	9.4	69	161	47	68	12	6	0	0	0.2	30	11.6	NW	4	8	5	17	6.5	62
AUGUSTA	44	1012.5	1017.6	25.6	10.6	18.1	0.7	33.3	20	2.2	12	2	0	10.0	67	62	- 28	18	9	6	0	0	0.4	29	12.5	16	9	7	8	15	6.5	
COLUMBUS	117			25.0	11.7	18.4	0.8	30.6	21+	3.3	12	0	0	12.2	71	66	- 51	18	8		0	0	0.3	33	10.3	26	23+	8	5	17	6.5	
MACON	108	1005.1	1017.9	26.1	10.6	18.2	-0.4	32.8	19	2.2	12	3	0	10.0	64	50	- 45	18	10	3	0	0	0.5	30	11.2	SW	23	9	3	18	6.5	61
ROME	194			23.3	7.8	15.6	0.1	30.0	19	0.6	12	0	0			137	21	58	15		0	0										
SAVANNAH	14	1016.3	1017.9	26.7	13.3	20.0	1.3	33.9	20	3.9	12	4	0	12.8	69	53	- 41	14	8	3	0	0	0.5	18	13.4	NW	24	7	8	15	6.4	62
HAWAII																																
HILO	8	1013.5	1014.6	27.2	19.4	23.2	1.2	30.0	20	16.7	1	0	0	20.0	85	754	451	165	26	3	0	0	0.3	33	10.3	E	25	1	10	19	8.0	27
HONOLULU	2	1013.9	1014.2	28.9	21.1	24.8	1.4	30.6	7	17.8	9	0	0	18.3	69	80	46	53	14	4	0	0	2.5	4	15.2	NW	9	5	12	13	6.7	40
KAHULUI	15	1011.5	1014.0	27.8	18.9	23.4	0.4	30.0	23+	13.9	9	0	0	19.4	81	51	14	22	18	3	0	0	3.2	5	14.8	N	9	3	8	19	7.4	48
LIHUE	31	1010.5	1015.5	25.6	19.4	22.4	-0.1	27.2	20+	14.4	11	0	0	19.4	86	47	- 38	13	18	2	0	0	3.4	4	11.2	N	9	3	13	14	7.0	57
IDAHO																																
BOISE	865	917.4	1018.1	15.6	0.0	7.9	-2.3	29.4	29	- 7.2	13	0	16	- 5.6	41	9	- 21	5	5	0	8	T	2.1	31	14.3	NW	23	12	7	11	5.2	75
LEWISTON	431			15.6	2.8	9.1	-1.3	29.4	29	- 3.3	17+	0	7			10	- 19	4	8		T	T						5	8	17	7.1	
POCATELLO	1358	862.9	1017.1	12.8	- 1.7	5.4	-2.7	27.2	30	- 8.3	18	0	22	- 7.2	45	10	- 17	5	6	0	28	0	3.4	23	19.2	SW	1	7	9	14	6.3	68
ILLINOIS																																
CAIRO U	96			20.6	10.6	15.6	0.3	28.9	30	2.8	5	0	0			128	24	47	14		0	0			14.3	SE	22+	10	8	12	5.8	66
CHICAGO O HARE	201	990.2	1014.7	17.2	5.0	11.3	2.8	27.2	12	- 2.8	6	0	3	2.2	58	59	- 16	20	12	0	T	T	2.5	22	19.2	23	8	6	11	13	6.4	
CHICAGO MIDWAY	185	992.2		17.2	6.1	11.6	2.2	26.7	12	- 1.7	6	0	3	2.8	59	55	- 22	23	8	2	T	T	3.0	21	17.4	SW	23	6	10	14	6.4	54
MOLINE	177	992.2	1014.0	17.2	4.4	10.7	0.7	26.7	30+	- 3.3	1	0	8	2.2	61	91	10	23	11	6	T	T	2.9	21	17.4	NW	14	7	9	14	6.4	56
PEORIA	199	990.9	1015.0	17.8	5.0	11.3	0.9	26.1	12	- 2.2	6	0	5	3.3	62	56	- 45	24	11	6	T	T	2.4	21	15.2	SE	7	6	10	14	6.4	61
ROCKFORD	221	986.5	1013.7	16.1	3.9	9.8	1.1	24.4	12	- 3.9	5+	0	6	3.3	67	125	47	35	10	5	8	T	2.4	22	15.6	21	23+	7	8	15	6.4	
SPRINGFIELD	179	992.9	1015.2	17.8	5.6	11.6	-0.3	26.1	30+	- 1.7	6	0	5	3.3	59	62	- 29	47	9	3	T	T	2.3	19	18.3	W	23	7	11	12	5.8	61
INDIANA																																
EVANSVILLE	116	1002.7	1016.9	20.0	7.2	13.7	-0.6	27.8	20	1.1	11	0	0	5.0	57	91	- 10	37	11	7	0	0	0.8	21	15.2	E	22+	8	8	14	6.4	59
FORT WAYNE	241	986.1	1016.3	16.1	3.9	9.9	0.3	25.0	12	- 3.9	6	0	9	3.3	67	79	- 1	46	12	3	10	T	2.6	23	22.4	W	24	7	8	15	6.3	65
INDIANAPOLIS	241	987.5	1016.6	18.3	6.1	12.1	1.6	25.6	20	- 2.2	6	0	1	3.3	58	73	- 22	47	5	4	T	T	1.3	22	17.4	SW	23	5	11	14	6.4	65
SOUTH BEND	236	987.5	1015.5	15.6	4.4	10.0	1.4	25.0	12	- 3.9	6	0	3	3.3	64	61	- 30	33	10	3	38	T	2.6	23	16.5	24	8	7	8	15	6.6	
IOWA																																
BURLINGTON	211			18.3	5.6	11.8	1.3	27.2	11	- 1.1	5+	0	6	3.3	59	85	- 2		9	4	T		2.1	22	14.3	30	23+	11	8	11	5.8	
DES MOINES	286	978.7	1013.5	17.2	3.9	10.6	1.3	29.4	11	- 6.7	5	0	10	1.7	58	106	42	41	12	6	T	T	1.8	23	20.1	NW	23+	8	10	12	6.0	52
DUBUQUE	322	973.9		16.7	3.3	10.0	1.8	26.7	11	- 5.6	1	0	8			190	112	59	11		5	T						7	9	14	6.7	
SIOUX CITY	334	972.6	1012.4	18.9	3.3	11.2	1.8	32.8	30	- 7.2	5	1	8	1.7	56	70	12	26	13	6	8	T	1.1	27	21.0	NW	23	9	8	13	6.0	61

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure: Station O	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	No. of days: Max 32.2 °C or above	No. of days: Min 0 C or lower	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	No. of days: 25 mm or more	No. of days: With thunderstorms	Snow, Sleet: Total	Snow, Sleet: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Fastest mile (1.6 kilometers): Speed	Fastest mile: Direction	Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	M.	Mb.	Mb	C.	C	C	C	C.		C				C	%	Mm.	Mm	Mm			Mm	Mm.	M.p.s.		M.p.s							%
IOWA																																
WATERLOO	265	980.7	1012.7	17.2	3.3	10.2	1.7	28.9	11	- 6.7	1	0	10	2.8	65	131	62	58	11	5	T	T	2.1	23	18.3	33	23	9	5	16	6.6	
KANSAS																																
CONCORDIA	448	959.7	1012.8	18.9	3.9	11.6	0.0	28.9	30+	- 7.2	5	0	6	2.8	61	80	26	26	9	7	T	T	1.6	22	19.2	3	16	14	6	10	4.8	69
DODGE CITY	787	922.1	1012.7	20.6	4.4	12.7	0.7	30.0	16	- 5.6	5	0	4	- 2.2	43	24	- 23	10	7	2	T	T	1.3	26	21.0	NW	3	8	13	9	4.9	82
GOODLAND	1113	885.5	1012.3	18.3	0.6	9.3	0.3	29.4	30	- 9.4	4	0	12	- 5.0	46	12	- 29	9	4	2	18	T	2.1	30	21.5	33	3	9	9	12	5.6	
TOPEKA	267	982.1	1013.9	18.9	5.0	11.9	-0.5	27.2	30	- 5.6	5	0	5	4.4	64	107	23	21	10	9	T	T	1.6	21	18.8	SW	19+	11	7	12	5.6	68
WICHITA	403	965.8	1013.8	20.6	5.6	13.1	-0.7	31.1	30	- 5.6	5	0	2	3.9	57	55	- 4	25	7	7	0	0	1.4	21	16.5	SW	19	13	4	13	5.0	72
KENTUCKY																																
COVINGTON	265	985.8	1017.3	18.9	7.2	13.1	1.8	27.2	20	0.6	11	0	0	4.4	60	88	6	24	7	4	0	0	1.2	23	13.0	25	23	4	10	16	6.9	
LEXINGTON	294	982.1	1017.8	18.9	6.7	12.8	0.4	26.1	20	0.6	11	0	0	5.0	62	82	- 21	48	11	4	0	0	1.1	18	12.1	19	23	5	11	14	6.7	
LOUISVILLE	145	999.3	1017.0	19.4	7.8	13.8	1.1	27.2	20	2.2	7	0	0	5.0	59	100	3	57	9	5	0	0	0.8	21	15.6	NW	14	4	13	13	6.7	55
LOUISIANA																																
ALEXANDRIA	28	1012.5	1016.7	24.4	13.3	18.8	0.1	29.4	20	4.4	6	0	0	15.0	80	141	- 4	63	9	7	0	0	0.8	17	10.3	29	29+	7	3	20	7.1	
BATON ROUGE	20	1014.2	1016.8	26.7	15.6	21.0	0.9	30.6	19	6.1	6	0	0	16.1	76	68	- 53	30	10	5	0	0	1.4	16	11.2	20	3	6	7	17	7.0	
LAKE CHARLES	3	1014.9	1016.1	26.1	16.7	21.4	1.4	29.4	20	8.3	6	0	0	16.7	79	61	- 50	52	5	0	0	0	1.9	15	11.6	18	3	6	5	19	7.4	
NEW ORLEANS	1	1016.3	1017.1	25.0	15.0	20.1	0.1	28.3	22+	4.4	25	0	0	16.7	79	91	- 24	48	8	3	0	0	1.7	16	12.1	17	3	5	8	17	7.0	
SHREVEPORT	77	1006.4	1015.7	25.0	13.3	19.2	0.7	29.4	22	3.9	6	0	0	12.8	70	258	122	64	12	7	0	0	1.2	16	9.8	34	27	7	6	17	6.7	49
MAINE																																
CARIBOU	190	991.9		10.6	- 0.6	5.0	2.6	25.0	13	- 7.8	6	0	17			55	- 12	22	13		T	25						8	8	14	6.6	
PORTLAND	14	1014.2	1016.6	13.9	1.1	7.3	1.4	23.3	13	- 6.1	7	0	13	- 0.6	63	86	- 9	41	10	0	0	0	0.7	26	16.1	W	9	11	10	9	5.1	61
MARYLAND																																
BALTIMORE	45	1012.5	1018.1	18.9	5.6	12.2	-0.1	28.3	14	- 0.6	7+	0	3	3.9	62	41	- 51	28	10	3	0	0	0.8	24	18.8	SW	4	8	11	11	5.9	59
MASSACHUSETTS																																
BLUE HILL OBS R	192			15.0	3.9	9.3	1.7	25.6	13	- 2.2	6	0	3			49	- 52	27	8		0	0			22.8	WNW	9					67
BOSTON	5	1015.9	1017.0	13.9	5.6	9.8	0.9	20.6	9	0.0	6	0	1	1.7	61	44	- 52	22	7	0	0	0	0.7	26	16.1	SE	25	11	8	11	5.2	71
NANTUCKET	13	1016.9	1017.1	11.1	3.3	7.3	0.5	16.7	9	- 4.4	7	0	3	3.3	78	39	- 56	23	6	1	0	0	1.1	31	16.5	SW	5	10	6	14	5.9	57
PITTSFIELD	357			16.7	1.7	9.1	3.0	25.0	14	- 6.7	6	0	10			88	- 10	71	8		0	0										
WORCESTER	301	979.7	1017.0	15.6	2.8	9.2	2.2	26.7	13	- 4.4	6	0	5	- 1.1	53	57	- 43	41	8	1	T	T	1.8	28	17.0	32	5	12	10	8	4.8	
MICHIGAN																																
ALPENA	210	988.8	1014.3	13.9	0.0	7.1	3.1	27.2	12	- 7.2	5	0	15	0.0	64	40	- 27	14	13	2	13	T	1.1	22	15.6	SW	8	9	6	15	6.2	59
DETROIT	189			16.7	6.1	11.4	2.7	26.1	13+	- 0.6	5	0	3	2.2	55	49	- 27	30	7	4	T		2.1	23	15.6	27	8					
DETROIT M WAYNE CO	193	991.2	1015.6	16.7	4.4	10.5	2.4	26.1	13+	- 2.2	6+	0	8	2.2	59	43	- 34	29	10	3	T	T	1.9	24	20.1	SW	8	10	6	14	5.8	61
DETROIT WILLOW RUN	217	987.5	1016.0	15.6	2.8	9.4	0.7	25.6	13+	- 2.8	7+	0	8	0.6	57	70	- 8	29	10	4	8	T	2.6	23	19.7	23	8	10	6	14	5.7	
FLINT	235	987.1	1015.1	15.6	3.3	9.4	2.0	24.4	13+	- 2.8	6+	0	8	0.6	58	43	- 25	24	10	4	5	T	2.7	22	19.7	24	8	10	6	14	6.0	
GRAND RAPIDS	239	985.4	1014.8	15.6	2.8	9.3	1.7	26.7	12	- 6.7	6	0	11	1.7	63	61	- 14	19	10	2	41	T	2.4	22	22.4	SW	8	8	7	15	6.1	54
HOUGHTON LAKE	350	972.2	1014.6	13.9	1.1	7.4	2.6	22.8	12	- 7.8	5	0	14	0.6	64	33	- 26	9	13	5	18	T	1.8	24	13.0	24	8	7	10	13	6.0	
LANSING	256	983.4	1015.3	16.1	2.8	9.4	1.8	25.6	13+	- 4.4	11+	0	11	0.6	57	75	2	36	11	4	5	T	2.8	23	19.2	SW	8	10	6	14	5.7	60
MARQUETTE U	206			10.6	1.1	5.7	1.7	29.4	12	- 7.8	5	0	11			79	10	16	15		140	76			15.2	S	7	3	9	18	7.5	48
MUSKEGON	191	991.2	1014.4	15.0	3.9	9.4	2.1	23.9	12	- 5.0	6	0	6	1.7	61	42	- 23	14	9	0	18	T	2.5	22	15.6	23	14	8	8	14	6.3	
SAULT STE MARIE	220	986.8	1013.8	11.1	- 0.6	5.3	1.9	22.8	12	-10.0	5	0	17	0.0	74	69	14	22	16	1	119	25	0.3	22	17.0	SW	8	6	5	19	7.3	47
MINNESOTA																																
DULUTH	435	960.7	1013.0	10.0	- 0.6	4.7	1.9	25.6	11	-11.1	5	0	21	- 3.3	60	123	63	55	13	0	221	127	0.8	3	20.1	NW	23	2	10	18	7.6	53
INTERNATIONAL FALLS	359	970.2	1014.1	9.4	- 2.2	3.7	0.7	23.9	11	-15.0	5	0	23	- 3.3	64	64	24	22	11	0	465	152	1.3	36	11.6	32	23	5	10	15	7.0	
MINNEAPOLIS	254	981.4	1012.0	15.6	2.8	9.2	2.3	30.0	30	- 7.8	5	0	10	0.6	58	75	28	25	12	2	10	T	0.4	32	18.8	N	23	7	6	17	6.9	51
ROCHESTER	395	964.1	1012.2	15.6	2.2	8.8	2.2	28.9	30	-10.0	5	0	11	0.6	63	106	50	47	10	5	10	T	2.0	22	17.0	33	23	6	8	16	6.8	
ST CLOUD	315	973.6	1011.9	14.4	1.1	7.8	1.8	30.0	30	- 9.4	5	0	13		60	115	63	34	13		15	T						7	7	16	6.7	
MISSISSIPPI																																
JACKSON	94	1005.1	1017.0	25.6	12.2	18.8	0.6	30.0	19	2.2	6	0	0	13.9	77	183	58	53	13	7	0	0	1.0	17	13.0	E	3	9	2	19	6.6	47
MERIDIAN	88	1006.8	1017.8	26.7	11.7	19.2	1.2	31.1	20	3.3	6	0	0	13.3	74	151	16	43	13	8	0	0	0.6	18	14.3	32	28	8	3	19	6.7	
MISSOURI																																
COLUMBIA	237	986.1	1014.5	20.0	7.2	13.5	0.9	27.2	30+	- 2.2	1	0	3	3.9	56	44	- 40	11	11	6	T	0	1.7	20	17.9	NW	23+	9	7	14	6.0	59
KANSAS CITY	226	986.8	1013.9	20.6	7.2	13.9	0.7	28.9	11	- 3.9	5	0	1	3.9	55	99	9	38	12	7	T	T	1.8	20	15.2	SW	20+	10	7	13	5.6	67
ST JOSEPH	247			20.6	5.6	13.0	1.0	29.4	11	- 5.6	5	0	5			127	47	46	9	5	0		1.7	20	17.9	31	23+	10	6	14	5.5	

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure: Station ⊙	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	No. of days: Max 32.2 °C or above	No. of days: Min. 0 C or lower	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	No. of days: 25 mm or more	No. of days: With thunderstorms	Snow, Sleet: Total	Snow, Sleet: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Fastest mile (1.6 kilometers): Speed	Fastest mile: Direction	Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	M.	Mb.	Mb.	C.	C.	C.	C	C.		C				C	%	Mm.	Mm.	Mm			Mm.	Mm.	M.p.s.		M.p.s.							%
MISSOURI																																
ST LOUIS	163	995.3	1015.8	19.4	6.7	13.1	0.4	28.9	12	- 3.3	6	0	3	5.0	60	38	- 57	24	9	5	0	0	1.3	19	17.0	W	14	8	9	13	5.9	65
SPRINGFIELD	386	969.9	1015.8	20.0	6.1	13.1	0.0	27.8	17	- 3.3	5	0	4	5.0	61	66	- 38	20	9	4	0	0	2.2	19	20.1	N	22	10	6	14	5.5	68
MONTANA																																
BILLINGS	1087	890.3	1015.1	13.3	1.1	7.4	-0.4	28.9	30	- 6.7	3	0	10	- 6.7	40	38	5	10	10	0	312	76	2.4	28	14.8	W	11	4	9	17	7.1	57
GLASGOW	696	932.3		12.8	- 1.7	5.6	-0.8	29.4	30	-12.2	3	0	21			17	- 9	15	4		157	102						7	9	14	6.5	
GREAT FALLS	1116	887.2	1016.3	11.7	- 2.2	4.8	-1.7	28.3	30	-11.1	17+	0	21	- 6.7	47	28	3	14	9	1	155	127	3.7	25	21.0	W	11	6	8	16	6.9	75
HAVRE	787	921.8	1014.9	13.3	- 2.8	5.4	-0.7	30.6	30	-12.2	3	0	24	- 5.0	54	24	- 1	8	9	0	178	51	2.8	26	21.0	NW	15	4	8	18	7.4	80
HELENA	1167	880.5	1017.5	11.7	- 2.8	4.3	-2.0	27.2	30	-11.7	4	0	20	- 6.1	50	31	10	23	5	0	254	178	3.4	28	18.3	NW	15	6	8	16	6.8	66
KALISPELL	904	911.6	1017.7	11.7	- 2.8	4.6	-1.9	27.2	30+	-10.0	13	0	23	- 3.9	60	7	- 20	4	6	1	48	25	1.3	18	15.6	19	30	4	4	22	7.5	
MILES CITY	801	921.1	1015.1	13.9	- 1.1	6.4	-1.2	31.1	30	-10.6	4	0	19	- 3.9	53	12	- 15		8	0	99		1.8	32								
MISSOULA	972	905.5	1018.8	12.8	- 1.7	5.6	-1.2	28.3	29	- 6.7	17	0	24	- 3.9	57	24	- 1	10	10	0	147	25	1.7	30	16.1	SW	30	7	6	17	6.9	59
NEBRASKA																																
GRAND ISLAND	561	946.5	1012.7	18.3	2.8	10.6	0.8	31.7	11	- 8.3	5	0	8	1.1	60	88	30	45	13	5	20	25	1.3	27	21.0	18	6	12	5	13	5.8	
LINCOLN U	351			18.3	5.0	11.6	0.6	30.6	11	- 5.6	5	0	3			83	21	36	12		T	T			18.8	S	21	10	10	10	5.6	64
NORFOLK	471			17.2	2.2	9.6	0.5	31.1	30	-10.0	5	0	10			90	35	40	10		T	T						11	4	15	5.9	
NORTH PLATTE	846	914.7	1013.1	16.1	- 0.6	7.9	-0.8	29.4	30	-10.0	4	0	16	- 2.8	54	77	26	37	8	2	56	51	1.8	34	17.0	NW	3	11	6	13	5.7	64
OMAHA	298	977.0	1012.6	18.9	3.9	11.4	0.4	30.6	11	- 7.2	5	0	7	3.3	62	100	35	28	11	7	T	T	1.2	25	21.0	NW	23	8	9	13	6.0	63
SCOTTSBLUFF	1206	877.4	1014.4	13.9	- 1.7	6.2	-1.9	27.2	30	-13.9	4	0	17	- 2.8	59	45	- 1	18	9	1	206	76	2.4	32	19.2	2	3	11	5	14	5.9	
VALENTINE	789			14.4	- 1.1	6.8	-0.8	30.0	30	-14.4	4	0	16			102	52	35	11		244	229			19.7	N	3	10	5	15	6.1	70
NEVADA																																
ELKO	1539	844.6	1016.6	14.4	- 2.8	5.9	-0.9	26.1	29	- 9.4	23	0	23	- 6.7	43	13	- 7	5	9	0	97	51	1.4	28	13.0	27	1	7	11	12	5.9	
ELY	1906	808.0	1016.1	11.7	- 5.0	3.3	-2.6	21.7	30+	- 9.4	17	0	29	- 6.7	54	32	8	17	8	0	424	76	0.8	27	16.5	S	1	10	10	10	5.6	71
LAS VEGAS	659	937.4	1013.6	24.4	8.9	16.7	-1.4	33.3	30	1.7	19	1	0	- 6.7	23	3	- 3	3	1	0	0	0	1.3	28	17.9	SW	16	19	8	3	2.6	93
RENO	1342	866.9	1017.7	17.2	- 3.3	7.0	-1.9	26.7	29	- 8.9	22	0	25	- 6.1	40	1	- 13	T	2	0	T	0	0.9	33	15.2	W	15+	10	8	12	5.3	86
WINNEMUCCA	1310	868.9	1018.3	15.6	- 3.9	5.8	-1.9	27.2	29	-13.3	22	0	27	- 6.7	44	12	- 9	9	2	1	T	T	1.3	31	13.0	NW	5	8	7	15	6.1	53
NEW HAMPSHIRE																																
CONCORD	104	1003.7	1016.6	15.6	- 1.7	7.1	0.6	27.2	13	- 8.9	7	0	23	- 0.6	60	72	- 12	35	9	0	0	0	0.9	29	16.1	W	9	11	12	7	4.9	67
MT WASHINGTON OBS	1909			1.1	- 7.2	- 3.0	2.0	10.0	13	-18.9	6	0	28			120	- 29	49	18	0	262	51			42.5Y	W	10	5	10	15	6.8	44
NEW JERSEY																																
ATLANTIC CITY	20	1016.3	1018.6	17.2	3.9	10.6	0.0	27.8	13	- 5.0	7	0	4	3.3	66	38	- 49	29	6	1	0	0	0.9	21	13.0	24	4	9	11	10	5.8	61
ATLANTIC CITY U	3			15.0	7.8	11.4	1.5	24.4	9	1.1	6	0	0			29	- 57	23	7						17.4	NW	1					
NEWARK	2	1016.6	1017.8	18.3	6.1	12.2	1.5	26.1	13	0.0	6	0	1	1.1	52	57	- 32	40	9	0	0	0	1.1	23	13.0	22	4+	11	10	9	5.1	
TRENTON U	17			18.3	6.7	12.7	1.7	27.2	13	0.6	6	0	0			38	- 44	31	8		0	0			12.5	3	24+	9	12	9	5.3	71
NEW MEXICO																																
ALBUQUERQUE	1619	836.8	1012.9	20.0	3.9	11.9	-1.3	25.0	15	- 1.1	8	0	3	- 5.0	35	13	1	5	4	3	T	T	1.4	26	21.9	NW	6	14	10	6	4.1	72
CLAYTON	1515			17.8	1.1	9.3	-1.1	25.0	15+	- 6.7	4	0	14			25	- 5	23	5		T	T						13	10	7	4.3	
RATON	1944			16.1	- 2.2	6.8	-1.5	22.8	30+	- 9.4	4	0	23			6	- 21	6	3		30	25						7	11	12	5.8	
ROSWELL	1102	889.9		23.3	2.8	13.1	-1.9	30.6	15	- 2.2	29	0	9	- 1.7	43	2	- 17	2	1	0	0	0	1.2	23	17.0	SW	16	15	9	6	4.0	79
SILVER CITY	1638			18.9	3.3	11.1	-2.4	24.4	15	- 3.9	23	0	4			1	- 6	1	2		T	0						16	12	2	3.5	
NEW YORK																																
ALBANY	84	1006.1	1017.0	18.9	2.8	10.6	2.7	28.3	14+	- 2.8	17+	0	11	0.6	54	67	- 3	56	7	0	0	0	1.6	26	15.2	NW	1	12	8	10	5.2	73
BINGHAMTON	485	957.7	1017.0	15.6	2.8	9.1	2.7	26.1	14	- 6.1	6	0	9	0.0	59	41	- 34	13	10	3	T	T	1.4	25	15.6	W	9	9	5	16	6.0	64
BUFFALO	215	990.5	1016.4	15.6	3.3	9.6	3.2	25.6	14	- 3.9	6	0	7	1.1	59	45	- 31	22	11	2	T	0	3.2	23	17.0	W	4	6	11	13	6.1	71
J.F. KENNEDY	4	1016.9	1017.8	15.0	5.6	10.3	0.8	21.1	13+	- 0.6	6	0	1	2.8	66	50	- 38	30	6	0	0	0	1.3	23	14.3	16	24	10	11	9	5.3	
NEW YORK U	40	1013.9	1017.3	18.3	7.2	12.8	2.0	27.8	13	0.0	6	0	1	0.6	51	72	- 15	56	8	0	0	0	0.5	27	12.1	NW	1					69
NEW YORK LA GUARDIA	3	1015.6	1017.4	17.2	7.2	12.2	1.6	26.1	13	0.0	6	0	1	1.7	53	66	- 25	53	8	0	0	0	0.8	26	13.9	W	9	10	10	10	5.3	
ROCHESTER	167	996.3	1016.8	16.7	2.8	9.7	2.4	29.4	14	- 5.0	6	0	9	0.6	57	34	- 34	14	11	1	T	T	2.2	25	16.1	SE	24+	8	8	14	6.1	65
SYRACUSE	125	1001.7	1016.8	16.1	1.7	8.9	1.2	28.3	14	- 5.6	6	0	11	0.6	60	61	- 17	16	11	1	T	T	1.6	25	16.1	W	8	11	7	12	5.5	70
NORTH CAROLINA																																
ASHEVILLE	652	942.1	1018.2	19.4	5.6	12.7	0.1	28.9	20	- 1.7	12+	0	3	6.1	69	60	- 42	26	11	1	0	0	0.7	34	13.4	34	30	7	10	13	6.4	64
CAPE HATTERAS R	2	1018.0	1018.3	19.4	10.0	14.8	-0.4	25.6	20	4.4	13+	0	0	10.6	76	103	27	51	9	6	0	0	1.7	1	13.0	N	28	8	10	12	6.0	
CHARLOTTE	224	990.5	1017.9	21.7	8.3	15.0	-0.7	30.6	20	0.6	12	0	0	7.2	64	69	- 19	30	8	2	0	0	0.2	28	10.7	N	11	7	7	16	6.6	73
GREENSBORO	273	986.5	1018.1	22.8	8.9	15.7	1.6	31.1	19	1.7	2	0	0	8.3	65	67	- 20	19	10	2	0	0	0.1	1	14.3	W	4	4	11	15	6.7	47
RALEIGH	132	1002.0	1017.9	21.7	7.2	14.5	-0.7	28.9	19	0.0	12	0	1	7.2	66	77	- 12	24	11	3	0	0	0.2	1	10.3	30	15	5	12	13	6.2	46
WILMINGTON	9	1016.9	1018.3	23.9	11.1	17.3	0.4	31.7	19	4.4	7	0	0	10.6	68	89	16	46	12	4	0	0	0.2	12	13.9	N	11	9	6	15	6.3	73

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure: Station ⊙	Pressure: Sea level	Temperature: Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	No. of days: Max 32.2 °C or above	No. of days: Min 0 C or lower	Average dew point	Average relative humidity	Precipitation: Total	Departure from normal	Greatest in 24 hours	No. of days: 25 mm or more	No. of days: With thunderstorms	Snow, Sleet: Total	Maximum depth on ground	Wind: Resultant speed	Resultant direction	Fastest mile (1.6 kilometers): Speed	Direction	Date	No. of days (sunrise to sunset): Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	M.	Mb	Mb.	C	C.	C	C	C.		C				C.	%	Mm	Mm	Mm			Mm	Mm	M.p.s		M.p.s							%
NORTH DAKOTA																																
BISMARCK	502	954.3	1014.6	12.8	- 1.1	6.0	-0.4	30.0	30	- 9.4	4	0	18	- 3.9	54	33	2	18	8	0	91	25	1.9	34	20.1	N	3	5	9	16	6.8	72
FARGO	273	980.4	1013.4	13.3	- 0.6	6.6	1.1	29.4	11	-11.7	5	0	19	- 0.6	66	104	60	23	10	0	295	102	2.0	1	20.1	N	3	5	10	15	6.7	62
WILLISTON	579	945.5	1014.8	13.9	- 2.8	5.6	-0.2	31.7	30	-14.4	4	0	22	- 4.4	55	20	- 4	11	5	0	74	76	1.7	33	20.1	NW	11	6	15	9	6.0	79
OHIO																																
AKRON	368	972.6	1017.2	17.2	5.0	11.2	1.9	26.1	13	- 6.1	6	0	5	1.7	56	60	- 25	23	9	4	T	T	1.5	24	17.9	30	10	8	6	16	6.3	
CINCINNATI OBS	232			19.4	7.2	13.2	0.9	27.8	20	0.0	6	0	1			93	1	26	9		0	0			11.2	SW	24+					68
CLEVELAND	237	987.8	1017.2	15.6	3.9	9.7	1.3	25.6	13	- 6.1	6	0	10	2.2	61	57	- 29	24	10	3	5	T	2.1	22	15.6	W	8	8	8	14	6.0	59
COLUMBUS	247	987.5	1017.7	17.8	5.6	11.7	1.3	25.6	13	- 1.7	6	0	3	2.8	58	56	- 33	22	9	5	T	0	1.0	23	16.5	SW	4	4	9	17	6.7	50
DAYTON	305	980.7	1017.1	17.8	5.6	11.6	1.2	25.0	13	- 2.2	6	0	3	2.2	56	37	- 48	9	8	4	T	0	1.4	22	19.2	SW	4	5	8	17	7.2	58
MANSFIELD	395			16.7	5.0	10.7	2.4	25.0	13	- 5.0	6	0	5	2.2	58	47	- 37	16	11	3	8	T	2.1	21	15.6	28	10	9	6	15	6.3	
TOLEDO	204	991.5	1016.7	16.7	2.8	9.7	1.4	26.1	13	- 5.0	6	0	10	2.2	62	76	6	46	11	4	5	T	2.2	23	17.9	SW	8	9	7	14	6.2	64
YOUNGSTOWN	359	974.3	1017.4	15.6	3.3	9.4	1.1	24.4	13	- 7.2	6	0	10	1.1	61	59	- 35	20	13	5	T	T	1.4	24	13.9	30	30	8	8	14	6.5	
OKLAHOMA																																
OKLAHOMA CITY	392	968.5	1014.8	21.7	7.8	14.5	-1.0	28.3	13	- 2.2	5	0	2	6.1	60	77	- 2	32	9	5	0	0	0.8	18	20.1	N	3	12	8	10	4.9	70
TULSA	198	990.9	1015.0	22.2	8.3	15.2	0.2	30.0	17	- 1.7	5	0	1	5.6	58	112	10	47	12	5	0	0	1.7	20	17.9	SW	19	12	6	12	5.1	70
OREGON																																
ASTORIA	2	1022.7	1023.4	12.2	3.3	7.8	-1.6	21.1	28	- 1.7	13	0	4	3.9	77	107	- 24	28	18	0	0	0	2.0	27	11.2	32	10	2	12	16	7.6	
BURNS U	1265	874.7	1019.5	13.3	- 3.9	4.8	-3.0	26.7	29	-10.0	13	0	28	- 6.1	49	2	- 17	1	5		10	T	2.5	31				11	9	10	5.3	
EUGENE	109	1009.8	1023.6	15.6	2.8	9.2	-1.3	28.3	28	- 2.2	13	0	3	4.4	76	27	- 34	6	7	1	0	0	1.0	25	8.9	20	30	6	7	17	6.7	
MEACHAM	1234	878.4	1020.1	7.8	- 1.7	3.2	-1.7	24.4	29	- 8.3	13	0	24			52	- 19	13	15		358	51			10.3	29	30+	4	8	18	7.4	
MEDFORD	396	974.3	1022.5	18.3	1.1	9.6	-0.7	31.1	29	- 3.9	17	0	16	0.6	58	10	- 17	6	5	1	T	T	1.3	32	11.6	30	30	11	10	9	5.2	
PENDLETON	452	965.8	1020.2	16.1	3.9	9.8	-1.3	31.1	29	- 3.9	13	0	4	- 1.7	49	4	- 23	2	5	1	T	0	4.1	26	17.9	26	30	6	12	12	6.2	
PORTLAND	6	1021.7	1023.0	14.4	3.3	8.9	-2.1	27.2	28	- 1.1	13	0	3	3.9	72	49	- 5	8	15	1	T	0	1.3	27	11.6	SW	30	5	6	19	7.2	52
SALEM	60	1015.9	1023.4	15.0	1.7	8.3	-2.3	28.9	28	- 5.0	13	0	9	3.3	73	37	- 22	8	14	1	T		1.0	24	7.6	23	30+	5	12	13	6.7	
SEXTON SUMMIT R	1169	887.2	1021.9	10.6	- 0.6	5.0	-2.1	22.8	28	- 5.6	16+	0	20			18	- 29	9	6		33	25			14.8	33	12	11	10	9	5.0	
PACIFIC AREA																																
JOHNSTON	2	1012.9	1013.4	28.3	23.3	25.7	0.2	29.4	30+	20.6	5	0	0	20.6	75	67	9	23	10	0	0	0	5.9	8	13.4	SE	15	8	8	14	6.5	43
KOROR R	29	1006.8	1010.5	31.7	24.4	27.9	0.5	32.2	26+	23.3	29+	8	0	23.3	81	192	- 72	83	14	1	0	0	2.2	6	9.4	NW	8	0	9	21	8.3	82
KWAJALEIN	2	1008.8	1009.7	30.0	24.4	27.1	0.0	31.1	7	22.2	15	0	0	24.4	85	295	168	66	21	0	0	0	4.6	8	13.4	6	1	0	1	29	9.7	
MAJURO	3	1009.8	1010.1	29.4	24.4	27.0	0.0	30.6	8+	22.2	24	0	0	23.9	82	225	- 88	69	25	0	0	0	3.0	8	11.6	E	24	0	10	20	8.3	60
MARCUS ISLAND	6			26.7	20.0	23.3	-1.0	28.9	24	17.2	11+	0	0			52	4	36	7		0	0			13.0	N	9					32
PAGO PAGO	4	1010.2	1010.2	29.4	22.2	25.8		31.1	14+	20.0	27	0	0	23.3	87	320		77	22	5	0	0	0.3	7	10.7	SE	22	3	5	22	8.4	37
PONAPE R	37	1003.4	1008.7	30.0	22.8	26.6	-0.3	32.2	10	20.6	19	1	0	23.3	84	536	27	108	25	1	0	0	2.0	10	10.7	SW	7	3	5	22	8.0	48
TAGUAC GUAM R	110			28.9	21.1	25.1	-1.5	30.6	30	17.2	21+	0	0			43	- 34	8	20		0	0			12.1	NW	11	1	13	16	7.4	71
TRUK MOEN ISLAND	2	1008.1	1008.3	29.4	24.4	27.1	-0.1	31.1	27+	22.8	8+	0	0	23.9	83	521	208	139	20	2	0	0	1.7	3	17.0	NW	8	0	4	26	9.1	56
WAKE	3	1014.2	1014.4	28.3	22.2	25.3	-0.4	30.0	27+	20.6	3+	0	0	20.6		158	110	96	17	1	0	0	7.6	7	14.8	E	1	5	17	8	5.9	67
YAP R	13	1008.1	1010.0	31.1	23.3	27.2	-0.4	31.7	27+	21.7	20+	0	0	22.8	78	46	-116	13	14	0	0	0	3.3	6	8.9	N	8	0	12	18	7.9	65
PENNSYLVANIA																																
ALLENTOWN	118	1003.7	1017.7	18.9	3.3	11.1	1.5	28.9	13	- 3.9	6	0	5	1.1	56	80	- 16	64	7	2	0	0	1.3	26	13.9	29	9	8	13	9	5.7	
ERIE	223	990.2	1017.1	14.4	3.9	9.1	1.6	23.9	14+	- 5.0	6	0	8	0.6	58	67	- 23	23	11	4	10	T	2.5	23	14.3	29	4	9	9	12	5.7	
HARRISBURG	103	1004.7	1017.7	18.9	5.6	12.1	1.1	27.2	14	- 1.1	6	0	2	2.8	57	62	- 15	42	8	2	0	0	0.6	23	15.6	NW	30	5	11	14	6.4	74
PHILADELPHIA	2	1016.9	1017.9	18.9	6.1	12.6	1.4	26.7	14+	0.6	7+	0	0	2.2	53	40	- 46	31	6	1	0	0	1.0	26	14.3	W	30+	9	10	11	5.7	63
PITTSBURGH	347	973.2	1017.6	17.2	4.4	10.7	1.2	25.0	13	- 6.1	6	0	9	- 0.6	49	59	- 19	27	9	5	T	0	1.3	26	19.2	29	14	6	6	18	6.8	58
READING U	81			18.9	6.7	12.8	1.4	28.9	13	0.0	6	0	1			71	- 16	51	7		0	0			17.9	NW	30+	10	9	11	5.4	64
SCRANTON	283	983.4	1017.7	18.9	4.4	11.6	2.5	28.9	14	- 3.3	6	0	4	1.1	54	60	- 23	38	7	2	0	0	1.1	25	16.1	W	9	7	11	12	5.9	67
WILLIAMSPORT	160	998.3	1017.5	18.3	3.9	11.1	1.4	27.2	14	- 3.3	6	0	7	2.2	59	27	- 64	9	9	2	0	0	0.5	25	12.5	28	10	8	11	11	5.7	
RHODE ISLAND																																
BLOCK ISLAND	34			11.7	4.4	8.1	1.1	17.2	13	0.0	6	0	1			32	- 60	17	5		0	0						12	7	11	5.2	
PROVIDENCE	16	1014.9	1017.1	16.1	3.9	9.9	1.5	22.8	13+	- 2.8	7	0	4	0.0	55	38	- 57	25	7	0	0	0	1.1	27	15.6	27	9	15	3	12	4.9	69
SOUTH CAROLINA																																
CHARLESTON	12	1016.3	1017.9	25.6	12.2	18.7	0.5	33.9	20	2.2	12	1	0	11.1	66	51	- 23	22	10	4	0	0	0.5	21	17.0Y	SW	27	7	11	12	5.9	51
CHARLESTON U	3			23.3	15.0	19.2	0.5	32.8	20	10.0	12	1	0			50	- 14	19	10		0	0			14.3	W	27					
COLUMBIA	65	1010.2	1018.1	25.0	10.6	17.7	0.1	33.3	19	1.1	12	2	0	10.6	68	115	13	47	10	4	0	0	0.8	31	8.9	36	11	7	12	11	6.1	66
GNVLE-SPARTANBURG	292	983.4	1018.1	22.2	8.9	15.7	-0.4	30.0	21+	2.8	26+	0	0	7.2	62	61	- 39	16	11	2	0	0	0.4	31	11.6	NW	1	8	10	12	6.2	59

See footnotes at end of table

CLIMATOLOGICAL DATA
METRIC UNITS

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	No. of days: Max 32.2 °C or above	No. of days: Min. 0 C or lower	Average dew point	Average relative humidity	Precipitation: Total	Departure from normal	Greatest in 24 hours	No. of days: 25 mm or more	No. of days: With thunderstorms	Snow, Sleet: Total	Snow, Sleet: Maximum depth on ground	Wind: Resultant speed	Resultant direction	Fastest mile (1.6 kilometers): Speed	Direction	Date	No. of days (sunrise to sunset): Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	M.	Mb	Mb.	C	C.	C.	C.	C.		C.				C.	%	Mm.	Mm.	Mm.			Mm	Mm.	M.p.s.		M.p.s							%
SOUTH DAKOTA																																
ABERDEEN	395	965.8	1013.2	13.9	- 0.6	6.7	-0.4	30.6	30	-14.4	5	0	19	- 0.6	65	122	70	54	9	1	394	279	2.2	36	21.9	36	4+	8	8	14	6.4	
HURON	391	965.8	1012.8	15.0	0.0	7.5	0.3	30.6	30	- 8.3	5	0	15	- 1.1	58	137	90	46	12	2	135	51	1.4	33	17.9	N	22+	8	8	14	6.2	66
RAPID CITY	964	902.5	1014.5	13.3	- 1.1	5.9	-1.1	29.4	30	-12.2	4	0	16	- 4.4	53	46	4	19	10	0	348	152	3.2	34	19.2	NW	3+	6	7	17	6.9	58
SIOUX FALLS	432	960.4	1012.1	16.1	1.1	8.8	1.1	31.7	30	- 7.2	5	0	10	0.6	62	110	52	52	9	3	T	T	1.4	30	17.0	33	23	12	8	10	5.4	
TENNESSEE																																
BRISTOL	459	964.1	1018.3	19.4	6.7	13.2	-0.4	27.8	20	- 0.6	16+	0	2	6.7	67	105	24	38	16	4	0	0	0.6	28	15.6	23	4	7	7	16	6.6	
CHATTANOOGA	203	993.2	1017.9	21.1	7.8	14.4	-1.7	28.9	19+	0.0	6	0	1	6.7	64	94	- 14	38	13	5	0	0	0.4	22	13.0	SW	4	8	5	17	6.5	48
KNOXVILLE	299	982.4	1017.3	21.1	8.9	15.0	0.1	28.9	23	2.2	12	0	0	8.3	68	105	11	20	12	5	0	0	0.8	29	13.4	SW	4	7	7	16	6.7	56
MEMPHIS	79	1006.4	1016.7	22.8	11.1	17.1	0.7	28.9	18	0.0	6	0	1	8.3	58	131	13	35	11	10	0	0	1.2	16	16.1	SW	3	8	4	18	6.5	59
NASHVILLE	180	995.6	1017.2	21.7	8.3	14.8	-0.5	28.9	18	1.1	25	0	0	7.8	65	91	- 4	23	13	7	0	0	1.3	19	18.8	SW	4	6	8	16	6.5	56
OAK RIDGE R	276			20.6	8.3	14.6	0.2	28.3	20	2.2	12	0	0			132	26	23	11		0	0			18.3Y		4	10	2	18	6.6	
TEXAS																																
ABILENE	537	953.6	1014.7	22.2	10.6	16.5	-1.4	28.3	16	1.7	5	0	0	8.9	65	84	27	47	8	6	0	0	1.5	19	17.0	NW	8	11	6	13	5.6	71
AMARILLO	1098	889.6	1012.2	21.1	5.0	12.9	-1.2	28.9	15	- 2.8	4	0	3	- 1.7	42	24	- 10	20	4	1	0	0	1.6	22	22.4	W	19	13	11	6	3.8	82
AUSTIN	182	993.6	1015.4	25.0	15.0	20.1	0.2	30.0	27	5.0	5	0	0	13.9	71	47	- 43	19	9	5	0	0	0.9	15	13.4	NW	4	6	6	18	7.1	45
BROWNSVILLE	6	1013.2	1013.9	27.8	18.9	23.4	0.2	30.6	27+	10.6	5	0	0	18.9	78	32	- 7	25	5	2	0	0	3.9	14	15.2	SE	3+	1	3	26	8.6	54
CORPUS CHRISTI	12	1012.9	1014.4	26.7	17.8	22.1	0.0	32.8	3	8.3	6	1	0	17.2	78	21	- 34	9	7	2	0	0	3.8	13	16.1	SE	2	1	8	21	8.5	41
DALLAS	147	998.0	1015.1	23.9	13.3	18.6	0.3	29.4	17	2.8	5	0	0	10.6	63	64	- 37	21	8	7	0	0	1.6	16	12.5	N	14	8	7	15	6.3	56
DEL RIO	313	978.0	1013.8	27.2	14.4	20.8	-1.2	33.9	27+	6.1	5	4	0	12.2	65	64	- 30	51	6	4	0	0	2.1	11	13.0	36	23	6	4	20	7.3	
EL PASO	1194	880.8	1011.8	23.9	8.9	16.3	-1.1	28.9	15	0.6	24	0	0	- 2.2	33	3	- 5	2	2	0	0	0	2.0	26	23.2	SW	2	17	9	4	3.3	84
FORT WORTH	164	994.9	1015.4	23.3	11.7	17.4	-0.8	28.3	22+	1.1	5	0	0	11.1	71	61	- 30	20	9	6	0	0	1.0	18	13.0	31	28	9	7	14	6.2	
GALVESTON U	2			23.3	18.9	20.9	0.7	25.6	28+	11.1	5	0	0			100	34	71	7		0	0			17.0	NE	9					47
HOUSTON	15	1013.5	1015.7	26.7	16.7	21.7	1.4	30.6	20	7.8	5	0	0	15.6	74	77	- 6	68	10	4	0	0	2.0	15	11.6	3	9+	6	3	21	7.8	36
LUBBOCK	992	902.5	1013.4	21.1	5.0	12.9	-2.3	28.9	16	- 1.7	5+	0	4	0.6	50	15	- 14	10	4	1	0	0	1.3	21	17.4	27	19	13	8	9	4.8	
MIDLAND	869	915.0	1013.0	23.3	8.9	16.0	-2.3	30.6	16	1.1	4	0	0	4.4	54	40	19	27	5	3	0	0	1.5	19	14.3	26	19+	13	8	9	4.6	
PORT ARTHUR	5	1015.6	1016.3	25.6	16.7	21.1	0.9	28.9	27+	7.2	5	0	0	17.2	81	187	87	184	6	2	0	0	2.2	14	18.8	NE	9	6	3	21	7.4	50
SAN ANGELO	580	947.5	1013.8	23.3	10.0	16.8	-2.7	30.0	26	- 0.6	5	0	1	10.0	67	57	6	40	9	4	0	0	1.1	18	13.4	20	8	11	6	13	5.6	
SAN ANTONIO	240	987.1	1015.1	25.0	15.0	20.1	-0.1	29.4	27	5.0	25+	0	0	14.4	72	49	- 23	17	12	6	0	0	1.4	11	18.8	N	23	6	4	20	7.5	41
VICTORIA	32	1010.8	1014.9	26.7	17.2	21.8	0.7	30.0	14	6.1	5	0	0	16.1	75	21	- 46	10	8	3	0	0	2.3	14	23.7Y	N	28	2	6	22	8.3	
WACO	153	997.3	1015.2	23.3	13.3	18.2	-1.0	29.4	27	3.3	5	0	0	13.3	77	75	- 24	33	8	6	0	0	1.4	16	15.6	32	4	8	6	16	6.6	
WICHITA FALLS	303	978.3	1014.7	23.3	8.9	16.3	-1.5	31.1	17	0.0	5	0	1	8.3	63	46	- 19	26	6	4	0	0	1.1	18	15.6	33	4+	10	5	15	5.9	
UTAH																																
MILFORD	1533	845.9		13.9	- 2.2	5.9	-2.8	25.6	30	- 7.2	9	0	26			34	15	10	11		211	76						13	6	11	5.1	
SALT LAKE CITY	1286	871.3	1016.2	13.9	1.1	7.4	-2.5	26.1	30	- 2.8	23+	0	13	- 2.2	55	72	27	20	11	0	361	102	0.6	25	14.3	S	1	8	9	13	6.3	63
WENDOVER	1291	871.0	1016.9	14.4	2.2	8.4	-2.5	26.1	30	- 2.8	22	0	11			10	- 3	7	5		81	76										
VERMONT																																
BURLINGTON	101	1003.4	1016.0	15.0	0.6	7.9	2.8	28.9	14	- 7.8	6	0	14	- 0.6	59	90	23	55	8	0	T	0	0.8	24	16.5	SW	4	9	11	10	5.4	78
VIRGINIA																																
LYNCHBURG	279			20.0	6.7	13.3	-0.1	28.3	21+	- 1.1	2	0	1			63	- 17	24	9		0	0			12.1	NW	30	6	10	14	6.3	59
NORFOLK	7	1017.6	1018.6	18.3	7.8	12.8	-1.6	26.7	27	2.8	7+	0	0	5.6	63	81	0	32	11	1	0	0	0.8	7	22.8	NW	30	6	12	12	6.2	72
RICHMOND	50	1012.5	1018.4	22.2	7.2	14.9	0.4	29.4	14	0.6	7+	0	0	6.1	60	74	- 6	17	8	5	0	0	0.3	15	12.1	SW	4	7	10	13	6.3	63
ROANOKE	350	976.0	1017.8	20.0	7.2	13.6	0.1	28.3	21	- 1.1	2	0	1	3.9	54	69	- 9	25	13	4	0	0	0.5	28	15.6	32	30	7	11	12	6.1	
WALLOPS ISLAND	3			15.6	6.7	11.2		25.0	9	0.0	7	0	1			34		16	8		0	0			22.8Y	NW	30	10	8	12	5.7	
WASHINGTON																																
OLYMPIA	59	1014.6	1022.1	13.9	2.8	8.3	-1.7	26.1	28	- 2.8	17	0	7	2.8	72	77	2	25	14	0	T	T	2.5	23	13.4	26	6	1	14	15	7.3	
QUILLAYUTE	55	1014.6	1022.2	11.7	3.3	7.3	-1.2	19.4	28	- 1.1	17+	0	4	4.4	84	207	19	70	20	0	15	0	1.7	25	10.3	NW	11	3	5	22	8.0	30
SEATTLE TACOMA	122	1005.1	1021.8	13.9	5.0	9.3	-0.3	24.4	28	0.6	13+	0	0	2.8	69	34	- 27	11	12	0	13	0	2.2	21	12.1	19	30+	0	12	18	8.1	46
SPOKANE	718	933.0	1017.6	12.8	- 0.6	6.1	-2.4	26.7	29	- 7.2	13	0	19	- 3.3	54	3	- 21	1	6	0	T	T	3.0	21	18.8	SW	30	3	9	18	7.3	53
STAMPEDE PASS R	1206	881.1		3.9	- 2.2	0.9	-1.6	19.4	28	- 7.2	13	0	27			247	104	40	22		2253	1905						1	4	25	8.6	
WALLA WALLA U	289			16.1	5.0	10.4	-1.7	30.0	29	- 1.1	13	0	2			11	- 25	5	8		8	T			13.9	NW	30	6	4	20	7.2	57
YAKIMA	321	980.7	1019.7	16.7	0.6	8.8	-1.4	27.8	29	- 5.6	13	0	14	- 3.9	43	T	- 12	T	0	1	T	T	2.9	29	14.3	28	30	7	11	12	6.1	
WEST INDIES																																
SAN JUAN P.R.	4	1014.2	1016.7	28.3	21.7	25.0	0.2	31.1	17	17.8	12	0	0	19.4	74	13	- 82	5	8	0	0	0	2.7	5	11.2	E	10+	6	21	3	5.4	85
SWAN ISLAND	9			29.4	23.9	26.6	-0.9	30.0	30+	22.2	17+	0	0			21	- 1	10	8		0	0						14	13	3	3.9	

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	No. of days: Max 32.2 °C or above	No. of days: Min. 0 C or lower	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	No. of days: 25 mm or more	No. of days: With thunderstorms	Snow, Sleet: Total	Snow, Sleet: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Fastest mile (1.6 kilometers): Speed	Fastest mile: Direction	Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	M	Mb.	Mb.	C.	C.	C.	C	C.		C.				C	%	Mm.	Mm.	Mm.			Mm.	Mm.	M.p.s.		M.p.s.							%
WEST VIRGINIA																																
BECKLEY	763	929.2	1017.8	17.2	5.0	11.2	0.7	24.4	14	- 1.7	16+	0	3	2.2	60	85	- 15	20	14	3	0	0	1.0	22	14.3	26	25	4	8	18	7.2	
CHARLESTON	286	983.1	1017.4	20.6	6.7	13.6	0.6	28.3	14	- 2.2	2	0	2	4.4	59	66	- 28	38	13	4	0	0	0.8	23	15.6	28	14	5	8	17	7.1	
ELKINS	600	946.5	1018.2	17.8	2.2	9.9	-0.2	25.6	14+	- 6.1	2	0	13	2.8	66	39	- 49	11	14	3	T	0	1.3	27	17.9	30	14	4	5	21	7.7	
HUNTINGTON	252	987.5	1017.8	20.0	6.7	13.2	0.0	26.7	20	0.0	12+	0	3	5.0	62	71	- 22	30	10	3	0	0	0.8	24	19.7	18	23	3	10	17	7.1	
PARKERSBURG U	187			18.9	6.7	12.7	0.4	26.7	13	- 0.6	2	0	2			67	- 16	38	9		0	0			14.8	W	24					55
WISCONSIN																																
GREEN BAY	208	987.5	1013.3	13.9	2.2	8.1	1.8	25.6	12	- 8.9	5	0	10	2.2	70	143	60	31	11	4	18	25	1.4	22	17.9	SW	7	5	9	16	7.0	55
LA CROSSE	198	987.8	1012.5	17.2	4.4	10.7	2.4	30.0	30	- 5.0	1	0	8	2.8	64	113	43	42	13	9	T	1	1.1	20	17.9	27	9	5	7	18	6.9	
MADISON	262	981.7	1013.2	16.1	1.7	8.8	1.9	26.1	12	- 7.8	5	0	13	1.7	64	106	41	28	10	3	10	T	2.1	22	16.1	SW	7	6	8	16	6.9	54
MILWAUKEE	205	988.5	1014.0	14.4	2.8	8.7	2.2	26.7	12	- 4.4	6+	0	9	1.1	64	74	9	23	11	3	10	T	2.0	22	18.8	SW	8	7	9	14	6.3	55
WYOMING																																
CASPER	1627	835.4	1015.2	10.6	- 3.3	3.6	-2.6	23.9	30	-17.2	3	0	23	- 5.0	62	30	- 13	7	14	1	368	203	2.4	25	16.5	24	15	8	5	17	6.7	
CHEYENNE	1867	809.3	1014.6	10.0	- 2.2	3.8	-2.1	20.6	30+	-12.8	4	0	23	- 7.2	50	59	12	34	10	2	391	203	4.3	31	25.0	NW	3	10	7	13	5.7	63
LANDER	1696	827.0	1015.0	10.6	- 2.8	3.7	-2.5	23.3	30	- 9.4	19+	0	23	- 5.6	57	62	- 1	24	10	1	1003	305	1.1	24	27.3	SW	12	6	4	20	6.8	68
SHERIDAN	1208	877.8	1016.3	11.7	- 2.8	4.6	-1.9	27.2	30	-13.9	4	0	25	- 5.6	52	18	- 37	7	10	0	180	51	1.5	30	16.5	NW	7	6	8	16	6.8	61

Data from airport unless otherwise specified. U indicates Urban, R indicates Rural, sites.

Precipitation data in column headed "Greatest in 24 hours" are computed on a 24-hour basis without regard to calendar day - data may include precipitation with a measurable amount from the last day of the previous month or the first day of the following month.

Wind directions under resultant direction are in tens of degrees.

Value entered in column "Fastest Mile" is the highest observed 1-minute wind speed when the direction is in tens of degrees. These stations are not equipped with a recording anemometer from which "Fastest Mile" data can be evaluated.

A Maximum hourly average.
B Number of days maximum 21.1°C. or above for Alaskan Stations.
Y Peak Gust.
\+ And also on an earlier date or dates.
Ø Station pressures apply to elevations shown in the "Elevations - Station Pressure" table of the annual issue of this publication.

Data in this table are obtained by conversion from data in the English Units table.

HEATING DEGREE DAYS

(Base 65°F.)

APRIL 1968

State and station	Current season: This month	Current season: Period July through this month	Normals July through this month
ALABAMA			
BIRMINGHAM	108	3145	2542
HUNTSVILLE	148	3658	3051
MOBILE	12	1780	1560
MONTGOMERY	41	2463	2291
ALASKA			
ANCHORAGE	894	9186	9820
ANNETTE	688	5917	6258
BARROW	2119	18281	17772
BARTER ISLAND	2070	18027	17565
BETHEL	1250	11685	11988
COLD BAY	917	8332	8498
FAIRBANKS	1069	12969	13502
JUNEAU	808	8160	8093
KING SALMON	1039	10434	10262
KOTZEBUE	1631	14471	14412
MC GRATH	1145	12951	13377
NOME	1511	13029	12668
ST. PAUL ISLAND	1184	9226	9537
SHEMYA	935	8124	8154
YAKUTAT	956	8707	8025
ARIZONA			
FLAGSTAFF	733	6388	6535
PHOENIX	39	1331	1765
TUCSON	91	1450	1794
WINSLOW	407	5425	4686
YUMA	14	842	1217
ARKANSAS			
FORT SMITH	131	3446	3270
LITTLE ROCK	147	3563	3210
TEXARKANA	61	2650	2533
CALIFORNIA			
BAKERSFIELD	81	1708	2103
BISHOP	324	3778	4048
BLUE CANYON	522	4475	4915
EUREKA U	498	3716	3986
FRESNO	139	2248	2436
LONG BEACH	72	968	1603
LOS ANGELES	115	988	1624
LOS ANGELES U	70	765	1263
MT SHASTA R	549	5010	5216
OAKLAND	237	2175	2600
RED BLUFF	138	2178	2468
SACRAMENTO	171	2364	2665
SANDBERG R	492	3975	3888
SAN DIEGO	85	911	1319
SAN FRANCISCO	293	2443	2675
SAN FRANCISCO U	263	2244	2582
SANTA MARIA	276	2124	2569
STOCKTON	182	2500	2642
COLORADO			
ALAMOSA	823	8548	7921
COLORADO SPRINGS	669	6044	6020
DENVER	655	5809	5929
GRAND JUNCTION	552	6041	5474
PUEBLO	437	5670	5273
CONNECTICUT			
BRIDGEPORT	391	5389	5382
HARTFORD	374	5950	5971
NEW HAVEN	435	5625	5607
DELAWARE			
WILMINGTON	319	5073	4812
DIST.OF COLUMBIA			
WASH NATL AP	216	4245	4150
FLORIDA			
APALACHICOLA U	3	1539	1308
DAYTONA BEACH	0	942	879
FORT MYERS	0	338	442
JACKSONVILLE	4	1304	1239
KEY WEST	0	33	108
LAKELAND U	0	706	661
MIAMI	0	239	214
ORLANDO	0	742	766
PENSACOLA	17	1850	1463
TALLAHASSEE	16	1704	1485
TAMPA	0	820	683
WEST PALM BEACH	0	344	253
GEORGIA			
ATHENS	146	3247	2907
ATLANTA	154	3369	2958
AUGUSTA	78	2771	2397
COLUMBUS	57	2617	2383
MACON	72	2836	2136
ROME	172	3640	3292
SAVANNAH	34	2147	1819
IDAHO			
BOISE	555	5273	5483
LEWISTON	493	4658	5213
POCATELLO	689	6712	6573
ILLINOIS			
CAIRO U	159	4085	3774
CHICAGO O HARE	376	6066	6307
CHICAGO MIDWAY	360	5778	5896
MOLINE	409	6296	6180
PEORIA	371	6030	5809
ROCKFORD	453	6547	6534
SPRINGFIELD	358	5752	5275
INDIANA			
EVANSVILLE	256	4852	4367
FORT WAYNE	448	6486	5977
INDIANAPOLIS	333	5504	5483
SOUTH BEND	444	6325	6140
IOWA			
BURLINGTON	350	5951	5904
DES MOINES	411	5140	6558
DUBUQUE	446	6809	7038
SIOUX CITY	385	6374	6698
WATERLOO	431	7047	7037
KANSAS			
CONCORDIA	369	5324	5312
DODGE CITY	306	4714	4853
GOODLAND	484	5488	5863
TOPEKA	338	5185	5046
WICHITA	285	4634	4527
KENTUCKY			
COVINGTON	284	5134	5092
LEXINGTON	298	4933	4578
LOUISVILLE	247	4688	4546
LOUISIANA			
ALEXANDRIA	64	2641	1921
BATON ROUGE	19	1975	1560
LAKE CHARLES	14	1741	1459
NEW ORLEANS	29	1778	1385
SHREVEPORT	49	2406	2184
MAINE			
CARIBOU	715	8795	9116
PORTLAND	590	7098	7028
MARYLAND			
BALTIMORE	324	4861	4564
MASSACHUSETTS			
BLUE HILL OBS R	478	6253	6032
BOSTON	454	5710	5390
NANTUCKET	585	5598	5378
PITTSFIELD	491	7153	7147
WORCESTER	490	6712	6587
MICHIGAN			
ALPENA	603	7832	7904
DETROIT	373	5845	5970
DETROIT M WAYNE CO	416	6379	6196
DETROIT WILLOW RUN	473	6535	5984
FLINT	481	6772	6524
GRAND RAPIDS	482	6650	6604
HOUGHTON LAKE	582	7842	7805
LANSING	480	6864	6567
MARQUETTE U	676	7766	7748
MUSKEGON	471	6319	6308
SAULT STE MARIE	697	8749	8370
MINNESOTA			
DULUTH	729	8925	9312
INTERNATIONAL FALLS	785	9753	9989
MINNEAPOLIS	491	7509	8013
ROCHESTER	507	7680	7901
ST CLOUD	566	8119	8448
MISSISSIPPI			
JACKSON	64	2814	2203
MERIDIAN	45	2674	2289
MISSOURI			
COLUMBIA	263	4925	4913
KANSAS CITY	245	4663	4602
ST JOSEPH	284	5094	5336
ST LOUIS	290	4984	4764
SPRINGFIELD	281	4581	4450
MONTANA			
BILLINGS	589	6109	6662
GLASGOW	683	7798	8511
GREAT FALLS	724	6504	7180
HAVRE	688	7373	8200
HELENA	751	7144	7553
KALISPELL	735	6963	7587
MILES CITY	636	7184	7348
MISSOULA	678	6758	7515
NEBRASKA			
GRAND ISLAND	414	5904	6274
LINCOLN U	371	5566	5663
NORFOLK	469	6539	6698
NORTH PLATTE	558	6635	6379
OMAHA	380	5872	6024
SCOTTSBLUFF	648	6448	6313
VALENTINE	614	6913	7053
NEVADA			
ELKO	664	5758	6832
ELY	802	6834	7052
LAS VEGAS	110	2222	2703
RENO	606	5290	5786
WINNEMUCCA	672	5621	6245
NEW HAMPSHIRE			
CONCORD	598	7245	7010
MT WASHINGTON OBS	1147	12383	12284
NEW JERSEY			
ATLANTIC CITY	417	5608	4664
ATLANTIC CITY U	371	4559	4528
NEWARK	325	5005	4931
TRENTON U	298	4900	4847
NEW MEXICO			
ALBUQUERQUE	343	4188	4267
CLAYTON	482	5050	4954
RATON	617	6115	5864
ROSWELL	283	3865	3762
SILVER CITY	383	3857	3618
NEW YORK			
ALBANY	412	6707	6591
BINGHAMTON	493	7100	6874
BUFFALO	469	6485	6655
J.F. KENNEDY	427	5430	5040
NEW YORK U	292	5000	4744
NEW YORK LA GUARDIA	323	5029	4681
ROCHESTER	463	6510	6421
SYRACUSE	501	6611	6463
NORTH CAROLINA			
ASHEVILLE	306	4649	4346
CAPE HATTERAS R	196	2958	2587
CHARLOTTE	197	3499	3169
GREENSBORO	170	3692	3758
RALEIGH	213	3630	3359
WILMINGTON	106	2714	2347
NORTH DAKOTA			
BISMARCK	660	8564	8405
FARGO	628	8479	8795
WILLISTON	683	8239	8745
OHIO			
AKRON	379	5979	5796
CINCINNATI OBS	277	5136	4679
CLEVELAND	459	6069	5886
COLUMBUS	351	5812	5462
DAYTON	356	5661	5425
MANSFIELD	406	6143	6098
TOLEDO	458	6422	6192
YOUNGSTOWN	476	6706	6109
OKLAHOMA			
OKLAHOMA CITY	215	3776	3691
TULSA	184	3858	3813
OREGON			
ASTORIA	560	4243	4592
BURNS U	724	6102	6414
EUGENE	487	3743	4312
MEACHAM	805	6504	7008
MEDFORD	466	4199	4688
PENDLETON	462	4362	4859
PORTLAND	500	3940	4285
SALEM	536	3974	4337
SEXTON SUMMIT R	712	5339	5510
PENNSYLVANIA			
ALLENTOWN	386	6033	5619
ERIE	494	6317	6103
HARRISBURG	331	5423	5115
PHILADELPHIA	305	4845	4974
PITTSBURGH	406	6011	5753
PITTSBURGH U	325	5450	5146
READING U	294	5011	4840
SCRANTON	357	6135	6026
WILLIAMSPORT	385	5845	5733
RHODE ISLAND			
BLOCK ISLAND	543	5644	5361
PROVIDENCE	447	5850	5667
SOUTH CAROLINA			
CHARLESTON	67	2526	2033
CHARLESTON U	50	2044	1794
COLUMBIA	106	3027	2484
GNVLE-SPARTANBURG	169	3372	3021
SOUTH DAKOTA			
ABERDEEN	623	7908	8088
HURON	577	7235	7848
RAPID CITY	669	6648	6893
SIOUX FALLS	511	7157	7491
TENNESSEE			
BRISTOL	276	4611	4075
CHATTANOOGA	227	3801	3229
KNOXVILLE	191	3966	3451
MEMPHIS	114	3416	3210
NASHVILLE	205	4209	3538
OAK RIDGE R	216	4079	3761
TEXAS			
ABILENE	134	2869	2624
AMARILLO	290	4055	3929
AUSTIN	37	2067	1711
BROWNSVILLE	4	797	600
CORPUS CHRISTI	9	1325	914
DALLAS	68	2448	2357
DEL RIO	28	1830	1504
EL PASO	128	2791	2700
FORT WORTH	100	2582	2405
GALVESTON U	8	1362	1235
HOUSTON	17	1483	1396
LUBBOCK	293	3850	3547
MIDLAND	143	2855	2591
PORT ARTHUR	18	1671	1447
SAN ANGELO	127	2496	2255
SAN ANTONIO	39	1897	1546
VICTORIA	16	1481	1173
WACO	79	2174	2030
WICHITA FALLS	133	3023	2826
UTAH			
MILFORD	660	5940	6131
SALT LAKE CITY	583	5548	5735
WENDOVER	532	5458	5550
VERMONT			
BURLINGTON	562	7900	7826
VIRGINIA			
LYNCHBURG	268	4554	4088
NORFOLK	294	4045	3384
RICHMOND	191	4101	3812
ROANOKE	255	4361	4085
WALLOPS ISLAND	279	4769	
WASHINGTON			
OLYMPIA	534	4487	4752
QUILLAYUTE	589	4651	5066
SEATTLE TACOMA	485	3809	4691
SPOKANE	654	5905	6232
STAMPEDE PASS R	931	7496	8146
WALLA WALLA U	430	4030	4583
YAKIMA	508	5078	5652
WEST VIRGINIA			
BECKLEY	381	5744	5195
CHARLESTON	263	4938	4371
ELKINS	444	6092	5429
HUNTINGTON	279	5026	4335
PARKERSBURG U	300	5127	4633
WISCONSIN			
GREEN BAY	551	7552	7595
LA CROSSE	411	6775	7275
MADISON	510	7169	7451
MILWAUKEE	521	6612	7128
WYOMING			
CASPER	794	7129	6900
CHEYENNE	777	6598	6795
LANDER	780	7676	7336
SHERIDAN	740	7274	7167

Data from airport unless otherwise specified.
U indicates Urban, R indicates Rural, sites.

STORM SUMMARY

APRIL 1968

STATE	TORNADOES					HAILSTORMS				WINDSTORMS				LIGHTNING				‡ HEAVY SNOWSTORMS AND BLIZZARDS				# ICE STORMS				Ø ALL OTHER			
								†DAMAGE				†DAMAGE				†DAMAGE				†DAMAGE				†DAMAGE				†DAMAGE	
	NUMBER	DAYS	DEATHS	INJURIES	†DAMAGE	DEATHS	INJURIES	PROPERTY	CROPS	DEATHS	INJURIES	PROPERTY	CROPS	DEATHS	INJURIES	PROPERTY	CROPS	DEATHS	INJURIES	PROPERTY	CROPS	DEATHS	INJURIES	PROPERTY	CROPS	DEATHS	INJURIES	PROPERTY	CROPS
Alabama	2	1	0	0	5	0	0	4	4	0	0	5	0																
Alaska *																													
Arizona *																													
Arkansas	10	3	20	310	6	0	0	5	6	0	0	4	3																
California *																													
Colorado										0	0	°4	C					0	0	°4	C								
Connecticut *																													
Delaware *																													
Florida *																													
Georgia	1	1	0	0	3	0	0	5	4	0	0	3	0																
Hawaii																										0	0	°5	5
Idaho *																													
Illinois	3	1	0	0	5																								
Indiana	6	2	0	0	5	0	0	4	3	1	1	4	3																
Iowa	5	2	0	0	5	0	0	4	0	0	0	5	0	1	0	5	0									0	0	5	0
Kansas	4	3	0	0	5	0	0	5	5	0	8	5	4	0	0	4	0												
Kentucky	5	3	7	378	7	0	2	?	?	0	10	6	C	0	0	5	?									0	0	°6	C
Louisiana	1	1	0	0	3	0	0	?	?	0	0	?	?													2	5	6	6
Maine										0	0	5	0													0	0	4	0
Maryland										1	0	4	0	0	0	4	0												
Massachusetts										0	1	4	0													0	0	4	0
Michigan	2	1	0	12	6					0	12	6	0																
Minnesota	4	1	0	0	4					0	0	4	0					0	0	4	0								
Mississippi	2	2	0	3	5	0	0	4	4	0	0	°5	C	0	1	?	0									0	0	4	4
Missouri	9	4	0	0	5	0	0	4	0	0	0	5	0	0	0	4	0												
Montana										1	1	5	0																
Nebraska	2	1	0	0	4													6	0	6	0								
Nevada *																													
New Hampshire										0	0	3	0													0	0	4	0
New Jersey *																													
New Mexico *																													
New York												4																4	
North Carolina	1	1	0	0	4					0	0	4	0													0	0	4	0
North Dakota *																													
Ohio	6	1	9	126	6					1	3	6		0	1	5													
Oklahoma	16	6	0	12	6	0	0	5	5	0	1	5	0	1	0	3	0												
Oregon																										0	0	0	7
Pacific Area																										0	1	°7	C
Pennsylvania										0	0	3	0	0	0	5	0												
Puerto Rico *																													
Rhode Island *																													
South Carolina										0	0	4	0																
South Dakota	1	1	0	0	0													0	0	5	0	0	0	4	0				
Tennessee	5	3	4	33	6	0	0	°6	C	0	0	5	0	0	0	3	0									2	0	5	0
Texas	13	7	0	0	5	0	0	7	6	1	0	?	?	0	0	3	0									0	0	2	5
Utah *																													
Vermont										0	0	2	0													0	0	4	0
U. S. Virgin Is. *																													
Virginia	1	1	0	0	5	0	0	4	0	0	0	4	0																
Washington *																													
West Virginia										0	0	4	0																
Wisconsin	2	1	0	0	4					0	1	4	0					0	0	5	0								
Wyoming																		3	0	5	0								

° Includes crop damage
C Crop damage

* No occurrence of storms or unusual weather phenomena.
‡ Includes heavy sleet storm.
# Freezing drizzle and freezing rain, commonly known as glaze.
Ø For breakdown of "All Others", and for detailed listing of other storms, see the Environmental Data Service, ESSA, monthly publication STORM DATA.

† Storm damages are placed in categories varying from 1 to 9 as follows:
1 Less than $50
2 $50 to $500
3 $500 to $5,000
4 $5,000 to $50,000
5 $50,000 to $500,000
6 $500,000 to $5,000,000
7 $5,000,000 to $50,000,000
8 $50,000,000 to $500,000,000
9 $500,000,000 to $5,000,000,000

GENERAL SUMMARY OF RIVER AND FLOOD CONDITIONS

APRIL 1968

Elmer R. Nelson, Office of Hydrology

The most damaging floods during April occurred in the Red Basin. Flood damage to crops, livestock, and buildings near Natchitoches, La., was estimated at near $1 million. Flooding reported elsewhere was mostly minor.

ST. LAWRENCE DRAINAGE

Lake Erie.--Minor flooding occurred on the St. Joseph River at Montpelier, Ohio, on the 6th and on the Maumee River at Fort Wayne, Ind., on the 4th. This light flooding was due to heavy rains and thunderstorms. No damage was reported from the overflows.

ATLANTIC SLOPE DRAINAGE

Minor flooding occurred in southern Maine and extreme northeastern New Hampshire on the 25th and 26th. The Kennebec River at Augusta, Maine, exceeded flood stage by 1.3 feet on the 26th. The Pemigewasset River at Plymouth, N. H., rose 2.5 feet above its banks on the 25th. The Androscoggin River at Rumford, Maine, reached, but did not exceed flood stage on the 25th. There was some minor flooding at Gulf Island Dam, Maine, on the 25-27th. This flooding was due to heavy rain during the early morning hours of the 24th and 25th. About 4 inches of rain occurred in the Androscoggin and Saco Basins, and 1 to 3 inches over the remainder of New England, except for light amounts in eastern and northern Maine.

Heavy rains (over 3 inches) on the 24th caused minor flooding on the East Branch of the Delaware River on the 25th. No damage resulted from the slight overflow.

EAST GULF OF MEXICO DRAINAGE

The Cahaba River at Centreville, Ala., exceeded flood stage for a few hours on the 5th. The stream rose rapidly due to local rainfall of 4.5 inches late on the 4th. Damages from the minor overflow were negligible.

Heavy rains on the 4th and 5th and again on the 9th and 10th produced minor flooding on the Tombigbee River at Amory, Miss., and at Jackson Lock and Dam, Ala. The East Fork rose to bankfull stage on the 10th. Very little cropland was inundated. No damage was reported.

The Pearl River at Jackson, Miss., was out of its banks from March 24 to April 17 except for a few hours on April 4. There were two crests; the first occurred on March 24 and was 7.5 feet above flood stage. The second crest on April 10 was slightly higher than the first one. Downstream at Bogalusa, La.; the stream was in flood from March 22 to April 24. The crests on March 27 and April 16 averaged about 3 feet above flood stage. This rise was sustained by heavy rain (2 inches) on the 4th and 9th. The Pearl River rose above flood stage at Pearl River, La., on the 15th and continued in flood to the 21st. The crest on the 17th was 0.5 foot above flood stage.

MISSISSIPPI SYSTEM

Upper Mississippi Basin.--With the exception of the reach upstream from Fort Ripley, Minn., the Mississippi River and its tributaries were 2 to 4 feet below the long-term April mean stages. The average stages for April were 4 feet to as much as 8 feet below those for April last year. This year's flow was generally the lowest since 1961 and for some drainages, the lowest since 1959.

Heavy rains (over 2 inches) during the night of the 22d caused light flooding on the Whitebreast River at Dallas, Iowa, on the 23d and on Cedar Creek at Bussey, Iowa, on the 23d and 24th. Sharp rises were reported on small streams feeding into the Des Moines River below the city of Des Moines, Iowa. No damage resulted from the minor flooding.

Moderate to locally heavy rains during the first few days of April caused minor flooding on the Meramec and Big Rivers in Missouri and on the Big Muddy and Sangamon Rivers in Illinois. The Sangamon River at Riverton, Ill., rose above flood stage on the 4th and continued in flood until the 13th. It crested on the 6th, 4.3 feet above flood stage. At Monticello, Ill., the river crested 0.1 foot above flood stage on the 6th and receded within its banks on the 7th. The Big River at Byrnsville, Mo., exceeded flood stage by 1.1 feet on the 5th. The Meramec River at Pacific, Mo., crested 1 foot above flood stage on the 6th. The Big Muddy River at Murphysboro, Ill., was out of its banks from March 21 to April 15. There were two crests; the first occurred on March 26 and was 6.6 feet above flood stage. The second crest occurred on April 8 and was nearly 9 feet above flood stage. Additional heavy rain on the 19th produced flooding for the second time on the Big Muddy River at Murphysboro. It crested on the 26th, 6.7 feet above flood stage. It continued in flood into May. The extent of flooding was limited to farmland immediately adjacent to the rivers. No significant damage resulted from the flooding.

Missouri Basin.--Minor flooding occurred in the lower Kansas River Basin on the 23d. Local flash flooding occurred in the vicinity of Richland, Kans., in the Wakarusa Basin (lower Kansas River Drainage) on the evening of the 22d. Near Lawrence, Kans., the Wakarusa River exceeded flood stage by 2.3 feet on the 23d. Minor flooding occurred on Stranger Creek at Easton and Tonganoxie, Kans., on the 23d. Damages from the overflows were negligible.

General heavy rain on the evening of the 22d caused flooding at most points along the Grand River in Missouri between the 21st and 28th. Flooding also occurred on the Chariton River at Chariton, Iowa, between the 17th and 26th from the frequent precipitation beginning on the 13th. Minor flooding occurred on the Blackwater River at Valley City, Mo., on the 23d. No flood damages were reported.

Ohio Basin.--The Red River at Clay City, Ky., exceeded flood stage by 0.3 foot on the 6th. Damage, if any, was minor.

General rain during the first 4 days of April, ranging from 2.5 to 3.5 inches, caused Brashears Creek at Taylorsville, Ky., to exceed flood stage by 5 feet on the 5th. The Rolling Fork at Boston, Ky., rose 1.5 feet above flood stage on the 6th and receded within its banks on the 7th. Some flash flooding resulted on tributary streams with brief flooding of roadways in parks in the Louisville, Ky., metropolitan area. Since vegetation and farmwork were at a rather early stage of development, very little damage resulted due to the brief flooding of some rural lowlands.

The Green River at Calhoun, Ky., rose above flood stage on March 23 and crested on March 30, 3.7 feet above flood stage. Heavy rains, averaging nearly 3 inches during the first 5 days of April, reversed the falling trend. The Green River rose nearly 5 feet above flood stage at Calhoun on April 11 and receded within its banks on the 19th. In the reach above, flooding extended to Munfordville, Ky., between the 4th and 13th. The Barren River at Bowling Green, Ky., exceeded

flood stage by 4 feet on the 6th.

Heavy rain on the 3d-4th caused minor flooding on the Wabash and White Rivers in Indiana between the 4th and 15th. More than 2 inches of rainfall occurred over the Tippecanoe and Eel River tributaries in the upper Wabash Basin. Although low bottom lands were overflowed, no residential areas were threatened and no damage was reported. Heavy rains on the 18th and 20th in southern Illinois caused the Little Wabash River, the Skillet Fork River, and the Saline River to exceed flood stage between the 18th and 23d.

The Red River rose 9.5 feet above flood stage at Port Royal, Tenn., on the 5th. The Cumberland River at Clarksville, Tenn., near the mouth of the Red, crested 0.1 foot below flood stage. This rise was due to heavy showers on the 4th. Rainfall amounts averaged near 4 inches over the upper Cumberland Basin and 5 to 7 inches in the Port Royal-Clarksville area. Damage was confined to Montgomery County, Tenn., and limited to farmland. Crop damage was estimated at about $5,000.

The main stem of the Ohio River was in flood in the beginning of the month in the reach from Cypress, Ind., to Fords Ferry, Ky. It receded within its banks at all points, except at Shawneetown, Ill., and Fords Ferry, Ky., by April 2. Heavy rains during the first 5 days of April caused another rise to above flood stage in the reach from Newburgh, Ind., to Cairo, Ill., on the 5-7th. It receded within its banks between the 11th and 15th. Crests on the 9-10th ranged from 2.5 to 1.5 feet above flood stage except 6 to 7.5 feet above at Shawneetown, Ill., and Fords Ferry, Ky.

White Basin.--The Black River at Pocahontas, Ark., continued in light flood from March 22 to April 1. At Black Rock, Ark., flooding continued from March 20 to April 14. There were three crests at Black Rock; the highest occurred on March 22 and was 8.5 feet above flood stage. The crests on April 1 and 4 were 4.5 feet lower than during March.

The Cache River at Patterson, Ark., exceeded flood stage on March 13 and continued in flood the remainder of March, all of April, and into May. The highest crest occurred on March 29 and was 2.3 feet above flood stage.

The White River in the reach at and below Georgetown, Ark., was in flood in the beginning of April. Flooding continued at Des Arc, Ark., until April 9 and at Georgetown, Ark., until April 13. In the reach at and below Clarendon, Ark., flooding continued through April into May. Crests ranged from 1 foot to 2.5 feet above flood stage.

Arkansas Basin.--Bird Creek at Avant, Okla., rose nearly 1 foot above flood stage on the 3d. This rise was due to 1.3 inches of rain on March 31 to April 3. The Poteau River at Panama, Okla., rose 1.1 feet above flood stage on April 1. This minor overflow was due to heavy rains at the end of March. Flooding on Bird Creek and Poteau River was much greater during March than in April, so no additional damages resulted.

Minor flooding occurred on the Petit Jean River at Booneville, Ark., on the 3d and 4th. This rise was due to rainfall on March 31 - April 3. The Fourche La Fave River at Houston, Ark., exceeded flood stage by 0.4 foot on April 23. No damage resulted from the minor flooding.

Red Basin.--Minor flooding occurred on the Blue River at Blue, Okla., on the 1st and moderate flooding on the Kiamichi River at Belzoni, Okla., on the 1st-3d. The Clear Boggy River at Caney, Okla., rose 3.2 feet above flood stage on Mar. 31 and receded within its banks on April 1. Minor flooding occurred on the Little River at Idabel and Horatio, Okla., between the 3d and 8th. The Sulphur River exceeded flood stage by nearly 7 feet at Hagansport, Tex., on the 2d and by 4 feet at Naples, Tex., on the 8th. Flooding continued from March 31 to April 12. The Ouachita River at Camden, Ark., rose 0.5 foot above flood stage on the 7th. It receded within its banks on the 8th. The Red River at Alexandria, La., rose 0.6 foot out of its banks between the 9th and 12th. Flood damage occurred along the Red River near Natchitoches, La., and to the west of the river in Natchitoches Parish. Damages to crops, livestock and buildings were estimated at $910,000. Additional flooding occurred along the Blue River at Blue, Okla., on the 19th-21st. The crest on the 20th was 3 feet above flood stage. The Clear Boggy River at Caney, Okla., rose 1.6 feet above flood stage on the 20th and receded within its banks on the 21st. The Sulphur River rose out of its banks for the second time during April at Hagansport on the 22d and at Naples, Tex., on the 28th. The flooding continued into May. The crests on the 23d and 30th were 0.5 foot to 2.5 feet lower than the earlier ones.

Lower Mississippi Basin.--The St. Francis River at Fisk, Mo., continued in flood from March 21 to April 13. The crests on March 24 and April 7 were 3.8 feet and 3.5 feet above flood stage. At St. Francis, Ark., the river continued out of its banks from March 21 to April 19. The crests on March 27, April 4, and April 8-10 averaged about 2.5 feet above flood stage. Heavy rains on April 16-20 caused the St. Francis River to rise above flood stage at Fisk, Mo., on the 21st and at St. Francis, Ark., on the 24th. It receded within its banks at Fisk on May 1 and at St. Francis on May 5.

West Gulf of Mexico Drainage.--Minor flooding occurred on the Calcasieu River at Hineston, La., on the 10-15th. This flooding was due to heavy rainfall on the 8-9th.

The upper Sabine River in Texas, from Edgewood to Gladewater, exceeded flood stage on March 11-16. It receded within its banks on April 9 -17. There were two crests; the ones on March 13-20 ranged from 2 to 6 feet above flood stage. The crests on April 4 -13 ranged from 2 to 3.5 feet above flood stage. The Sabine River at Logansport, La., exceeded flood stage on April 6 and continued in flood to the 26th. The crest on the 11th was 1.7 feet above flood stage. At Deweyville, Tex., the river continued in flood from the 12th to the 16th. It crested on the 14th, 0.5 foot above flood stage.

Flooding occurred in the Neches Basin in Texas from the 3d to the 22d. The crests ranged from 0.1 foot above flood stage at Beaumont, Tex., to 2.2 feet above flood stage. The Trinity River continued in flood at Trinidad, Tex., from March 23 to April 11 and at Long Lake, Tex., from March 29 to April 11. In the lower portion, flooding continued at Moss Bluff, Tex., from March 14 through April into May. Minor flooding occurred in the upper portion at Rosser, Tex., on the 2d-4th. Except for a brief period from the 6th to the 9th, the San Jacinto River topped the spillway at Lake Houston, Tex., all month, reaching nearly 1 foot above the spillway on the 13th. The Navasota River was out of its banks from the 3d to the 6th and crested on the 4th, 2.3 feet above flood stage on the 4th. The Guadalupe River at Gonzales, Tex., rose 5.2 feet above flood stage on the 10th and receded within its banks on the 11th. Minor flooding occurred downstream at Victoria, Tex., on the 12-14th.

FLOOD STAGE DATA

(All dates in April unless otherwise specified)

River and station	Flood stage	Above flood stages -dates From–	Above flood stages -dates To–	Crest * Stage	Crest * Date
ST. LAWRENCE DRAINAGE	Ft.			Ft.	
Lake Erie					
St. Joseph: Montpelier, Ohio	10	6	6	10.1	6
Maumee: Fort Wayne, Ind.	15	4	4	15.2	4
ATLANTIC SLOPE DRAINAGE					
Kennebec: Augusta, Maine	13	25	26	14.3	26
Pemigewasset: Plymouth, N. H.	11	25	25	13.5	25
East Branch Delaware: Fishs Eddy, N. Y.	11	25	25	11.25	25
EAST GULF OF MEXICO DRAINAGE					
Cahaba: Centreville, Ala.	23	5	5	24.3	5
East Fork Tombigbee: Fulton, Miss.	16	10	10	16.0	10
Tombigbee: Amory, Miss.	20	9	9	20.3	9
Jackson Lock & Dam, Ala.	43	7	11	45.3	9
Pearl: Jackson, Miss.	18	Mar. 24 30	17 May 6	25.5 25.7 22.6	Mar. 27 Apr. 10 May 2
Bogalusa, La.	15	Mar. 22	24	17.8 18.3	Mar. 27 16
Pearl River, La.	12	15	21	12.5	17
MISSISSIPPI SYSTEM					
Upper Mississippi Basin					
Whitebreast: Dallas, Iowa	22	23	23	22.4	23
Cedar Creek: Bussey, Iowa	17	23	24	20.3	24
Sangamon: Riverton, Ill.	13	4	13	17.3	6
Monticello, Ill.	13	6	7	13.1	6
Big: Byrnsville, Mo.	16	5	5	17.1	5
Meramec: Pacific, Mo.	11	6	6	12.0	6
Big Muddy: Murphysboro, Ill.	16	Mar. 21 22	15 1/	22.6 24.9 22.7	Mar. 26 8 26
Missouri Basin					
Wakarusa: Lawrence (nr), Kans.	23	23	23	25.3	23
Stranger Creek: Easton, Kans.	15	23	23	15.75	23
Tonganoxie, Kans.	22	23	23	22.1	23
Grand: Pattonsburg, Mo.	25	23	23	25.55	23
Chillicothe, Mo.	24	23	25	30.4	24
Sumner, Mo.	26	21 23	21 27	26.0 32.7	21 25
Brunswick, Mo.	12	24	28	13.7	27
Chariton: Chariton, Iowa	12	17 20 23	17 20 26	12.3 15.05 19.9	17 20 23
Blackwater: Valley City, Mo.	20	23	23	21.15	23
Ohio Basin					
Red: Clay City, Ky.	19	6	6	19.3	6
Brashears Creek: Taylorsville, Ky.	20	4	5	25.0	5
Rolling Fork: Boston, Ky.	40	6	7	41.45	6
Barren: Bowling Green, Ky.	28	5	6	32.0	6
Green: Munfordville, Ky.	28	5	8	39.9	6
Lock 6, Brownsville, Ky.	18	5	10	26.9	7
Lock 4, Woodbury, Ky.	33	4	13	41.9	7
Lock 3, Rochester, Ky.	39	9	12	39.2	10
Lock 2, Calhoun, Ky.	23	Mar. 23	19	26.7 27.9	Mar. 30 Apr. 11
Eagle Creek: Zionsville, Ind.	7	4	4	9.3	4
Eel: Bowling Green, Ind.	17	4	5	19.4	4
White: Anderson, Ind.	10	4	5	10.5	5
Spencer, Ind.	14	5	8	17.75	6
Elliston, Ind.	18	5	9	23.2	7
Edwardsport, Ind.	15	5	11	19.9	9
Petersburg, Ind.	16	3	12	20.5	10
Skillet Fork: Wayne City, Ill.	15	4 20	6 23	17.6 18.0	5 21
MISSISSIPPI SYSTEM	Ft.			Ft	
Little Wabash: Wilcox, Ill.	16	4 20	9 23	20.2 18.3	6 22
Wabash: Lafayette, Ind.	11	5	8	15.35	6
Covington, Ind.	16	6	9	18.75	7
Montezuma, Ind.	14	5	11	17.5	8
Terre Haute, Ind.	14	7	15	15.2	9
Mt. Carmel, Ill.	17	6	13	18.7	10-11
Saline: Harrisburg, Ill.	13	1 18	8 23	23.2 18.4	5 21
Red: Port Royal, Tenn.	30	4	6	39.5	5
Ohio: Dam 47, Newburg, Ind.	38	6	11	40.7	9
Dam 48, Cypress, Ind.	38	Mar. 25 7	1 11	41.2 39.9	29 9
Mt. Vernon, Ind.	35	Mar. 25 6	2 12	38.3 37.5	Mar. 29 10
Dam 49, Uniontown, Ky.	37	Mar. 25 7	2 13	39.2 39.2	Mar. 30 10
Shawneetown, Ill.	33	Mar. 19	15	39.1 39.0	Mar. 30 10
Dam 50, Fords Ferry, Ky.	34	Mar. 19	15	41.6	10
Dam 52, Brookport, Ill.	37	Mar. 27 5	Mar. 31 12	38.0 38.5	Mar. 28 9
Dam 53, Grand Chain, Ill.	42	Mar. 28 5	Mar. 30 12	42.4 43.5	Mar. 28 9
Cairo, Ill.	40	6	13	41.3	9
White Basin					
Black: Pocahontas, Ark.	17	Mar. 22 22	1 30	19.4 19.1	Mar. 26 26
Black Rock, Ark.	14	Mar. 20	14	22.5 18.8 18.7	Mar. 22 1 4
Cache: Patterson, Ark.	7	Mar. 13	1/	#9.3 9.0 8.6	Mar. 29 10,11,12 24
White: Georgetown, Ark.	21	Mar. 25	13	#22.6	Mar. 28
Des Arc, Ark.	24	Mar. 28	9	24.8	Mar. 30-31
Clarendon, Ark.	26	Mar. 26	1/	28.3	3,4
St. Charles, Ark.	25	1	May 7	26.3	8-10
Arkansas Basin					
Bird Creek: Avant, Okla.	16	3	3	16.9	3
Poteau: Panama, Okla.	24	1	1	25.1	1
Petit Jean: Booneville, Ark.	18	3	4	20.25	3
Fourche La Fave: Houston, Ark.	25	23	23	25.4	23
Red Basin					
Blue: Blue, Okla.	21	1 19	1 21	#21.4 24.0	1 20
Clear Boggy: Caney, Okla.	19	Mar. 31 20	1 21	22.4 20.6	Mar. 31 20
Kiamichi: Belzoni, Okla.	28	1	3	34.4	2
Little: Idabel, Okla.	30	4	5	30.8	4
Horatio, Okla.	27	3	8	28.7	5
Sulphur: Hagansport, Tex.	38	Mar. 31 22	6 May 2	44.8 44.4	2 23
Naples, Tex.	22	5 28	12 May 6	26.1 23.4	8 30
Ouachita: Camden, Ark.	26	7	8	26.5	7
Red: Alexandria, La.	32	9	12	32.6	11
Lower Mississippi Basin					
St. Francis: Fisk, Mo.	20	Mar. 21 21	13 May 1	23.8 23.5 23.6	Mar. 24 7 24
St. Francis, Ark.	18	Mar. 21 4	19 May 5	20.6 20.5 20.3 20.0	Mar. 27 4 8-10 27-29
WEST GULF OF MEXICO DRAINAGE					
Calcasieu: Hineston, La.	12	10	15	14.8	12
Sabine: Edgewood, Tex.	12	Mar. 11	9	14.2 14.2	Mar. 13 4

FLOOD STAGE DATA

(All dates in April unless otherwise specified)

River and station	Flood stage	Above flood stages -dates From—	To—	Crest* Stage	Date
WEST GULF OF MEXICO DRAINAGE	Ft.			Ft.	
Sabine: Mineola, Tex.	14	Mar. 12	12	17.5 17.2	Mar. 14 6
Gladewater, Tex.	26	Mar. 16	17	32.1 29.5	Mar. 20 13
Logansport, La.	25	6	26	26.7	11
Deweyville, Tex.	14	12	16	14.5	14
Neches Alto (nr), Tex.	16	3	22	18.2	14
Rockland, Tex.	22	11	15	23.5	12
Beaumont-Bunn's Bluff,Tex.	5	15	17	5.1	15
Trinity: Rosser, Tex.	26	2	4	26.9	2
Trinidad, Tex.	28	Mar. 23	11	36.6	5

River and station	Flood stage	Above flood stages -dates From—	To—	Crest* Stage	Date
WEST GULF OF MEXICO DRAINAGE	Ft.			Ft.	
Trinity: Long Lake, Tex.	35	Mar. 29	18	40.9	9
Liberty, Tex.	24	5	27	28.6	14
Moss Bluff, Tex.	4	Mar. 14	1/	7.15 8.3	Mar. 27-28 15-16
San Jacinto: Lake Huston, Tex.	44.5	Mar. 12 9	6 1/	44.9 45.45	Mar. 15 13
Navasota: Easterly (nr), Tex.	14	3	6	16.3	4
Guadalupe: Gonzales, Tex.	21	10	11	26.2	10
Victoria, Tex.	21	12	14	21.6	13

* Provisional
\# Highest stage observed
1/ Continued at end of month

RAWINSONDE DATA

Average monthly values

ALBANY, N. Y. 1008 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	86	4.9	.2	22	1.1
1000	30	148			22	1.0
950	30	570	5.7	-3.7	28	2.4
900	30	1,010	4.2	-4.7	29	4.6
850	30	1,474	2.2	-8.1	29	6.0
800	30	1,962	.0	-11.0	29	7.2
750	30	2,479	-2.3	-13.3	28	8.6
700	30	3,023	-5.2	-16.5	28	9.0
650	30	3,598	-8.5	-20.4	27	10.6
600	30	4,219	-12.0	-24.8	27	12.1
550	30	4,876	-16.2	-29.3	27	13.2
500	30	5,591	-21.0	-34.4	27	13.7
450	30	6,360	-26.3	-39.5	27	16.0
400	30	7,205	-31.8	-44.5	27	18.2
350	30	8,136	-38.4	-48.0	27	19.7
300	30	9,179	-45.7		27	21.5
250	30	10,374	-52.7		28	21.1
200	30	11,799	-56.1		28	20.5
175	30	12,652	-54.1		28	18.6
150	30	13,642	-53.7		28	17.6
125	30	14,812	-54.2		28	15.1
100	30	16,237	-56.1		28	12.7
80	30	17,653	-56.7		28	9.7
70	30	18,499	-56.8		28	7.8
60	30	19,477	-56.9		28	6.3
50	29	20,633	-56.1		29	4.8
40	29	22,055	-55.3		30	3.4
30	25	23,896	-54.5		28	4.4
25	25	25,067	-53.3		29	4.9
20	23	26,506	-52.2		28	7.2
15	17	28,368	-50.7		28	12.0
10						
7						
5						

ALBUQUERQUE, N. MEX. 837 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	1,619	5.7	-5.1	14	1.5
1000	30	135				
950	30	562				
900	30	1,017				
850	30	1,493				
800	30	1,990	5.6	-7.8	23	2.5
750	30	2,513	2.1	-9.6	26	4.7
700	30	3,068	-1.8	-11.6	26	6.2
650	30	3,645	-5.9	-15.3	26	8.5
600	30	4,276	-10.3	-20.8	26	11.3
550	30	4,932	-14.8	-25.6	25	14.5
500	30	5,657	-19.4	-31.8	25	17.1
450	30	6,423	-25.0	-37.6	25	19.9
400	30	7,278	-31.1	-43.3	25	21.4
350	30	8,211	-38.2	-48.8	25	23.9
300	30	9,256	-45.3		25	27.6
250	30	10,453	-53.0		25	30.1
200	30	11,873	-57.5		25	31.5
175	30	12,716	-57.2		25	26.7
150	30	13,692	-57.1		25	23.6
125	30	14,840	-59.4		25	22.8
100	30	16,232	-60.4		26	18.1
80	30	17,622	-60.0		25	11.0
70	30	18,454	-60.4		24	8.1
60	30	19,416	-59.3		24	5.6
50	30	20,564	-56.7		26	2.6
40	30	21,984	-54.8		22	.6
30	30	23,833	-52.7		28	3.0
25	28	25,014	-51.6		29	4.7
20	27	26,467	-49.3		29	7.0
15	23	28,370	-46.1		28	11.4
10	13	31,080	-40.8		28	18.8
7						
5						

AMARILLO, TEXAS 890 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	1,095	6.0	-1.5	26	1.8
1000	30	128				
950	30	554				
900	30	1,015				
850	30	1,476	7.6	-3.1	25	4.8
800	30	1,975	6.5	-6.2	26	6.2
750	30	2,505	3.6	-9.2	26	7.4
700	30	3,060	.4	-12.5	25	8.4
650	30	3,647	-3.6	-16.8	25	9.5
600	30	4,278	-8.2	-20.9	25	11.2
550	30	4,940	-12.9	-25.6	25	13.3
500	30	5,669	-17.9	-31.0	25	16.4
450	30	6,443	-23.3	-36.2	25	20.5
400	30	7,302	-29.3	-42.1	25	23.4
350	30	8,243	-36.3	-47.4	25	27.2
300	30	9,295	-44.1		25	31.1
250	30	10,497	-52.2		25	35.4
200	30	11,919	-58.7		25	36.1
175	29	12,756	-59.0		25	34.1
150	29	13,726	-58.1		25	29.8
125	29	14,872	-59.2		25	25.8
100	29	16,268	-60.2		25	19.8
80	29	17,657	-60.9		24	13.3
70	27	18,486	-60.8		24	7.9
60	26	19,452	-59.0		24	3.9
50	24	20,600	-56.7		25	1.6
40	24	22,023	-54.2		27	.5
30	24	23,875	-52.5		32	3.3
25	24	25,058	-51.0		30	5.1
20	22	26,509	-49.0		28	8.0
15	19	28,414	-45.3		28	11.7
10	8	31,130	-40.7			
7						
5						

* ANCHORAGE, ALASKA 1003 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	45	.3	-5.4	26	.7
1000	30	67			28	.8
950	30	481	-1.4	-9.3	13	.3
900	30	906	-4.2	-11.2	14	2.2
850	30	1,354	-7.5	-12.8	14	3.9
800	30	1,823	-10.5	-15.3	15	5.1
750	30	2,316	-13.5	-19.0	16	5.6
700	30	2,838	-16.9	-23.4	17	5.8
650	30	3,389	-20.5	-27.3	18	5.7
600	30	3,979	-24.2	-32.5	19	6.1
550	30	4,608	-28.0	-36.8	19	6.1
500	30	5,287	-32.2	-40.6	20	7.1
450	30	6,022	-37.2	-44.1	21	7.1
400	30	6,828	-42.9	-47.3	22	7.6
350	30	7,715	-49.2		23	8.7
300	30	8,714	-54.4		24	10.0
250	30	9,877	-54.9		25	11.5
200	30	11,313	-51.9		24	13.6
175	29	12,181	-51.3		25	14.1
150	29	13,183	-50.7		25	14.7
125	29	14,371	-50.6		25	14.9
100	29	15,826	-50.1		25	15.7
80	29	17,286	-49.5		26	15.5
70	29	18,160	-49.6		26	14.9
60	29	19,169	-49.7		26	13.5
50	29	20,361	-49.9		26	13.0
40	28	21,821	-49.8		26	11.5
30	25	23,716	-49.6		27	9.2
25	24	24,921	-49.2		29	7.1
20	23	26,384	-48.7		30	5.2
15	20	28,336	-46.3		03	5.9
10	15	31,029	-45.3		03	13.6
7	6	33,654	-40.2			
5						

* ANNETTE, ALASKA 1011 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	37	3.6	.6	16	1.9
1000	30	124	3.5	-.2	16	2.1
950	30	537	.4	-2.3	17	4.4
900	30	971	-2.5	-4.8	19	5.8
850	30	1,423	-5.4	-8.1	20	6.7
800	30	1,897	-8.0	-12.3	21	7.3
750	30	2,394	-10.8	-16.8	23	7.4
700	30	2,924	-13.9	-20.5	24	8.2
650	30	3,480	-17.3	-24.7	24	9.0
600	30	4,060	-20.9	-28.6	25	11.0
550	30	4,714	-25.1	-32.0	25	12.3
500	30	5,404	-30.1	-37.4	26	13.6
450	30	6,142	-35.2	-41.4	26	16.3
400	30	6,959	-40.8	-41.9	27	17.9
350	30	7,857	-45.8		28	21.3
300	30	8,873	-50.4		28	23.4
250	30	10,052	-53.8		29	23.1
200	30	11,485	-53.4		28	19.3
175	30	12,347	-52.1		29	18.0
150	30	13,345	-51.9		29	16.1
125	30	14,525	-52.3		29	14.9
100	30	15,968	-52.8		29	12.6
80	30	17,407	-53.0		29	10.0
70	30	18,246	-53.3		29	9.0
60	30	19,258	-53.6		29	7.7
50	30	20,430	-53.8		29	7.2
40	29	21,860	-54.0		32	5.9
30	28	23,706	-54.2		33	5.8
25	28	24,874	-54.2		35	5.7
20	27	26,307	-53.7		01	5.6
15	26	28,158	-52.5		03	6.2
10	22	30,831	-48.9		06	8.7
7	19	33,208	-45.1		07	10.9
5	16	35,483	-40.2			

ATHENS, GEORGIA 989 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	246	11.4	8.3	01	.9
1000	30	154				
950	30	586	13.7	6.3	31	.7
900	30	1,041	12.3	4.0	26	2.6
850	30	1,519	10.2	1.8	26	6.1
800	30	2,021	7.7	-3.3	27	7.5
750	30	2,551	5.1	-8.2	27	9.3
700	30	3,111	2.0	-11.3	27	11.3
650	30	3,702	-1.4	-14.7	28	13.4
600	30	4,340	-5.2	-17.4	28	15.4
550	30	5,008	-9.8	-22.2	28	16.9
500	30	5,747	-14.6	-26.7	28	19.2
450	30	6,528	-20.0	-31.9	28	21.0
400	30	7,401	-26.6	-37.3	28	22.2
350	30	8,352	-33.6	-44.6	28	25.3
300	30	9,415	-41.6	-51.8	28	29.6
250	30	10,628	-50.5		28	33.8
200	30	12,053	-59.1		28	38.0
175	30	12,887	-59.5		28	35.9
150	30	13,851	-60.0		28	31.6
125	30	14,986	-61.6		27	26.8
100	30	16,362	-63.2		27	20.1
80	30	17,728	-64.1		28	13.0
70	30	18,544	-63.9		28	8.2
60	30	19,493	-61.7		29	3.8
50	30	20,630	-58.6		34	1.4
40	29	22,042	-55.5		04	1.6
30	24	23,891	-51.6		29	.4
25	23	25,078	-49.2		26	2.3
20	16	26,549	-47.0		26	5.7
15	10	28,483	-43.1			
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* BARROW, ALASKA 1017 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	28	8	-21.9	-24.3	07	3.7
1000	28	138	-20.0	-23.1	07	5.6
950	28	522	-16.6	-19.3	09	6.5
900	28	925	-15.1	-20.1	09	7.5
850	28	1,358	-15.2	-22.0	09	6.1
800	28	1,814	-16.8	-24.0	10	4.7
750	28	2,292	-19.0	-26.4	11	3.8
700	28	2,808	-21.7	-29.0	12	3.7
650	28	3,343	-25.0	-32.0	14	3.0
600	28	3,927	-28.7	-35.7	16	3.0
550	28	4,539	-32.9	-39.1	18	3.3
500	28	5,209	-37.5	-42.7	19	4.5
450	28	5,923	-42.3	-45.5	20	5.6
400	28	6,716	-47.7		21	6.2
350	28	7,587	-52.4		22	7.5
300	28	8,571	-57.2		22	8.8
250	28	9,716	-58.4		22	8.3
200	28	11,126	-56.0		23	8.3
175	28	11,975	-55.6		23	8.6
150	28	12,957	-55.2		23	9.4
125	28	14,121	-54.8		24	10.4
100	28	15,549	-53.5		24	12.3
80	28	16,988	-52.4		24	13.2
70	28	17,852	-51.8		24	14.7
60	28	18,852	-51.0		25	16.1
50	28	20,039	-50.2		25	16.4
40	27	21,510	-48.9		25	17.2
30	26	23,393	-48.3		25	16.8
25	16	24,685	-45.0		26	14.2
20	13	26,195	-44.8		27	14.9
15	11	28,148	-42.8		26	11.5
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BARTER IS., ALASKA 1015 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	15	-22.0	-25.7	10	.7
1000	30	126	-18.5	-20.6	08	1.5
950	30	516	-15.1	-17.5	09	3.7
900	30	923	-11.6	-17.1	10	4.5
850	30	1,362	-11.6	-19.0	11	3.5
800	30	1,825	-13.5	-21.3	13	2.3
750	30	2,311	-16.2	-23.6	16	1.7
700	30	2,830	-19.3	-26.5	19	1.8
650	30	3,374	-22.9	-29.8	20	2.1
600	30	3,959	-26.7	-33.8	21	2.6
550	30	4,578	-30.9	-38.2	23	3.0
500	30	5,253	-35.6	-43.0	24	4.0
450	30	5,974	-40.5	-45.5	24	4.4
400	30	6,773	-45.9		24	6.9
350	30	7,651	-51.5		25	9.1
300	30	8,639	-56.6		25	10.1
250	30	9,789	-58.0		24	9.2
200	30	11,204	-55.2		24	10.0
175	30	12,058	-54.2		24	10.6
150	30	13,047	-53.8		24	11.6
125	30	14,220	-53.1		25	12.4
100	30	15,660	-51.9		25	14.6
80	29	17,114	-50.4		25	15.8
70	29	17,985	-49.6		25	14.6
60	29	18,994	-49.1		25	17.3
50	29	20,192	-48.6		25	16.8
40	29	21,660	-48.3		25	16.3
30	29	23,556	-47.6		26	15.0
25	29	24,761	-47.1		26	13.6
20	26	26,270	-45.5		26	12.0
15	23	28,259	-43.0		27	8.2
10	18	31,157	-39.3		36	3.7
7	8	33,899	-34.3			
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BETHEL, ALASKA 1003 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	39	-6.4	-8.1	33	.7
1000	29	58			33	.4
950	29	455	-7.0	-10.1	11	2.2
900	29	879	-8.6	-12.3	16	2.9
850	29	1,321	-10.7	-15.1	17	3.9
800	29	1,785	-13.1	-17.7	19	3.4
750	29	2,273	-15.7	-20.6	19	3.3
700	29	2,792	-18.5	-24.6	20	3.7
650	29	3,335	-21.9	-28.1	21	3.9
600	29	3,926	-25.7	-31.7	21	4.2
550	29	4,545	-29.7	-36.0	21	5.0
500	29	5,225	-34.3	-39.1	22	5.8
450	29	5,948	-38.9	-41.8	23	6.9
400	29	6,755	-44.1		23	9.1
350	29	7,639	-49.5		23	10.1
300	29	8,637	-54.1		24	11.6
250	29	9,803	-54.5		24	12.6
200	29	11,239	-51.9		24	13.6
175	29	12,105	-51.2		24	15.1
150	29	13,107	-50.9		24	15.4
125	29	14,293	-50.7		25	15.6
100	29	15,747	-50.1		24	16.7
80	29	17,206	-49.2		24	17.2
70	29	18,081	-49.1		24	16.0
60	29	19,093	-48.8		25	15.2
50	29	20,290	-49.2		25	14.6
40	28	21,746	-49.3		25	13.9
30	27	23,635	-49.5		25	10.5
25	24	24,849	-49.3		25	8.4
20	23	26,334	-48.4		23	3.5
15	12	28,320	-45.8		09	4.7
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* BISMARCK, N. DAK. 955 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	505	.8	-4.5	35	1.9
1000	30	127				
950	30	543			36	2.3
900	30	980	2.6	-7.3	34	4.8
850	30	1,440	.9	-9.9	34	5.9
800	30	1,925	-1.8	-11.8	33	6.5
750	30	2,432	-4.6	-13.7	32	7.1
700	30	2,976	-7.4	-16.8	31	7.8
650	30	3,546	-10.7	-18.7	30	8.9
600	30	4,163	-14.2	-22.9	29	9.6
550	30	4,813	-18.3	-27.4	28	10.3
500	30	5,524	-23.0	-32.9	28	11.7
450	30	6,280	-28.7	-37.4	28	12.8
400	30	7,121	-35.0	-42.3	27	14.8
350	30	8,040	-41.9	-46.9	26	17.0
300	30	9,068	-49.5		26	17.5
250	30	10,244	-55.8		26	18.5
200	30	11,659	-56.4		26	18.7
175	30	12,510	-54.3		26	17.4
150	30	13,5[illegible]2	-53.0		26	16.2
125	29	14,675	-53.7		26	15.0
100	29	16,110	-53.7		26	13.2
80	29	17,541	-54.3		25	11.2
70	29	18,396	-54.6		25	9.9
60	29	19,383	-54.7		25	9.3
50	29	20,553	-53.7		25	7.5
40	29	21,985	-54.4		26	5.5
30	29	23,827	-54.3		27	5.5
25	29	24,996	-54.0		27	4.1
20	29	26,430	-53.0		25	4.0
15	28	28,265	-51.9		27	5.4
10	22	30,953	-46.3		27	6.3
7	17	33,351	-41.2		27	11.7
5	12	35,644	-36.2			

BOISE, IDAHO 918 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	867	3.1	-5.5	26	.7
1000	29	161				
950	29	581				
900	29	1,024	5.5	-5.1	30	1.8
850	29	1,490	3.8	-7.1	32	4.8
800	29	1,980	.4	-9.8	31	5.5
750	29	2,492	-3.3	-12.5	31	6.7
700	29	3,037	-7.0	-15.4	31	7.5
650	29	3,607	-10.5	-19.3	30	7.4
600	29	4,223	-14.4	-23.7	30	7.9
550	29	4,873	-18.6	-28.7	30	9.5
500	29	5,582	-23.6	-33.5	30	10.2
450	29	6,341	-28.9	-38.5	31	11.7
400	29	7,178	-34.9	-43.8	31	12.8
350	29	8,098	-41.3	-48.2	31	13.7
300	29	9,128	-48.5		31	15.2
250	29	10,309	-54.7		31	15.6
200	29	11,724	-57.8		30	14.6
175	29	12,567	-57.2		30	14.1
150	29	13,545	-56.1		29	12.4
125	29	14,703	-56.3		29	11.5
100	29	16,118	-56.9		28	9.6
80	29	17,529	-57.1		28	7.2
70	29	18,373	-57.0		27	6.8
60	29	19,349	-56.7		27	6.1
50	29	20,508	-55.6		26	5.2
40	29	21,933	-54.8		26	6.2
30	28	23,775	-54.6		26	5.7
25	25	24,943	-54.4		27	6.6
20	21	26,381	-52.9		28	8.7
15	17	28,247	-50.1		28	9.1
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BOOTHVILLE, LA. 1016 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	1	19.3	17.8	14	1.6
1000	30	141	19.2	16.7	15	2.5
950	30	583	17.4	11.0	18	3.4
900	30	1,042	16.0	5.5	20	4.2
850	30	1,527	14.3	1.2	21	5.4
800	30	2,037	11.8	-3.3	23	6.6
750	30	2,576	9.3	-7.0	24	8.0
700	30	3,143	6.2	-10.9	25	9.7
650	30	3,742	2.3	-14.0	26	11.0
600	30	4,388	-2.2	-16.5	26	12.0
550	30	5,068	-6.8	-19.6	26	14.2
500	30	5,811	-12.0	-22.3	26	16.2
450	30	6,607	-17.4	-27.2	27	18.0
400	30	7,482	-23.2	-33.2	27	20.1
350	30	8,446	-30.2	-41.2	27	23.0
300	30	9,525	-38.6	-49.4	27	25.8
250	30	10,751	-48.5		27	28.6
200	30	12,184	-58.7		27	33.7
175	29	13,013	-62.0		27	33.6
150	29	13,964	-63.0		26	31.8
125	29	15,081	-64.6		26	26.4
100	29	16,436	-67.1		26	19.7
80	29	17,774	-68.8		25	11.1
70	29	18,573	-68.0		25	6.6
60	29	19,506	-64.5		22	2.4
50	29	20,631	-60.2		09	1.5
40	29	22,037	-55.6		06	2.9
30	29	23,887	-51.3		08	3.2
25	29	25,078	-48.8		07	4.0
20	29	26,551	-46.3		07	2.5
15	29	28,476	-42.6		05	1.7
10	28	31,226	-39.3		06	.5
7	22	33,693	-36.5		27	1.1
5	10	36,030	-32.8			

* BROWNSVILLE, TEXAS 1012 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	7	20.4	18.6	14	3.1
1000	30	114	20.4	18.6	14	4.2
950	30	556	18.7	15.1	16	9.4
900	30	1,022	18.6	6.7	17	8.6
850	30	1,512	17.5	2.0	19	7.8
800	30	2,028	15.2	-.2	19	7.8
750	30	2,572	12.4	-2.6	21	7.2
700	30	3,148	8.8	-6.4	23	7.0
650	30	3,752	4.4	-8.7	24	6.4
600	30	4,404	-.4	-12.8	26	8.3
550	30	5,086	-5.9	-16.4	26	10.0
500	30	5,834	-11.0	-20.6	26	10.5
450	30	6,633	-16.6	-26.9	26	13.5
400	30	7,512	-22.7	-33.5	26	17.3
350	30	8,478	-29.8	-39.5	25	20.4
300	30	9,559	-38.1	-48.0	25	23.6
250	30	10,757	-48.2		26	27.5
200	30	12,220	-59.3		25	30.6
175	30	13,046	-63.9		25	31.0
150	29	13,986	-65.6		25	29.6
125	29	15,092	-66.6		25	23.9
100	28	16,428	-70.7		24	16.6
80	28	17,746	-72.0		22	9.7
70	28	18,535	-69.9		21	5.7
60	26	19,468	-65.1		16	3.4
50	26	20,592	-59.8		11	2.8
40	26	22,[illegible]1	-55.9		08	5.4
30	25	23,846	-52.3		08	7.2
25	25	25,[illegible]32	-49.7		08	8.6
20	25	26,5[illegible]1	-46.9		09	6.5
15	24	28,420	-43.5		[illegible]	9.7
10	22	31,173	-39.3		09	8.5
7	18	33,618	-37.3		09	4.3
5	7	35,953	-34.5			

BUFFALO, N. Y. 991 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	218	5.6	.9	22	3.2
1000	29	142				
950	29	565	6.7	-3.9	25	6.0
900	29	1,006	4.4	-6.3	26	7.6
850	29	1,469	1.8	-8.6	26	8.2
800	29	1,956	-.6	-12.8	26	9.2
750	29	2,473	-2.9	-16.1	26	10.6
700	29	3,015	-5.6	-19.0	26	12.1
650	29	3,592	-8.1	-23.2	26	14.1
600	29	4,213	-11.5	-26.0	27	14.4
550	29	4,871	-15.5	-29.3	27	16.1
500	29	5,588	-20.3	-34.0	27	16.6
450	29	6,354	-25.9	-39.2	27	16.8
400	29	7,204	-32.1	-44.2	27	18.4
350	29	8,133	-39.1	-48.7	27	20.5
300	29	9,174	-46.0		28	22.5
250	28	10,371	-52.5		28	24.1
200	28	11,796	-55.9		29	22.1
175	28	12,649	-54.4		28	20.1
150	28	13,639	-53.4		28	17.9
125	28	14,809	-54.2		29	14.8
100	27	16,232	-55.6		28	10.9
80	27	17,649	-56.9		28	8.7
70	27	18,494	-56.5		29	6.9
60	27	19,473	-55.9		29	3.6
50	27	20,635	-55.0		29	2.6
40	27	22,060	-55.0		33	1.5
30	27	23,905	-53.5		01	1.7
25	27	25,080	-52.4		31	1.9
20	24	26,516	-50.7		28	4.8
15	17	28,360	-48.9		31	3.5
10	7	31,079	-43.8			
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CAPE HATTERAS, N. C. 1018 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	4	13.[illegible]	10.3	01	2.3
1000	30	150	13.6	6.7	01	2.[illegible]
950	30	583	12.5	4.6	34	3.[illegible]
900	30	1,035	10.1	.6	32	3.8
850	30	1,509	7.7	-3.0	31	5.[illegible]
800	30	2,[illegible]7	5.7	-5.9	31	6.4
750	30	2,[illegible]13	3.3	-9.6	3[illegible]	7.9
700	30	3,090	.7	-14.3	29	10.0
650	30	3,680	-2.6	-18.1	29	11.7
600	30	4,313	-6.1	-21.6	29	14.4
550	30	4,976	-10.4	-24.9	29	15.9
500	30	5,717	-15.2	-28.9	[illegible]	19.2
450	30	6,500	-20.5	-34.3	[illegible]	[illegible]
400	30	7,3[illegible]	-26.5	-40.1	29	22.3
350	30	8,319	-33.9	-46.7	29	25.3
300	30	9,[illegible]	-42.0		29	31.[illegible]
250	30	1[illegible],553	-50.5		[illegible]	36.1
200	28	12,[illegible]19	-58.0		[illegible]	37.5
175	28	12,[illegible]59	-58.2		29	33.4
150	28	13,[illegible]32	-57.2		[illegible]	32.[illegible]
125	28	14,[illegible]	-59.3		[illegible]	25.9
100	[illegible]	16,372	-61.1		[illegible]	[illegible]
80	28	17,754	-[illegible]2.2		[illegible]	[illegible]
70	28	18,579	-[illegible]1.5		[illegible]	[illegible]
60	28	19,536	-60.1		[illegible]	[illegible]
50	28	[illegible]	-57.1		[illegible]	[illegible]
40	28	22,1[illegible]2	-54.5		[illegible]	[illegible]
30	27	23,955	-51.6		27	.9
25	27	25,143	-49.7		[illegible]	[illegible]
20	26	26,610	-47.3		27	[illegible]
15	19	28,510	-44.6		27	9.8
10	9	31,254	-39.2			
7						
5						

See reference note at end of table

RAWINSONDE DATA

Average monthly values

APRIL 1968

* CARIBOU, MAINE 993 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	191	1.7	-1.9	30	1.4
1000	30	131				
950	30	543	.9	-5.2	29	2.9
900	30	978	.1	-7.3	29	4.8
850	30	1,436	-1.3	-8.5	30	6.8
800	30	1,918	-2.9	-9.4	29	7.4
750	30	2,425	-5.3	-12.8	28	8.8
700	30	2,967	-8.0	-16.3	28	9.7
650	30	3,536	-10.7	-20.2	28	10.2
600	30	4,152	-14.5	-24.9	28	11.5
550	30	4,803	-18.4	-29.4	28	13.5
500	30	[illegible],513	-23.0	-33.9	28	14.5
450	30	6,270	-28.3	-38.9	27	13.9
400	30	7,112	-34.2	-44.7	27	15.3
350	30	8,034	-40.5	-48.9	27	16.7
300	30	9,069	-47.3		27	16.5
250	30	10,259	-52.6		26	15.9
200	29	11,686	-54.2		26	15.3
175	29	12,545	-52.6		26	14.8
150	29	13,541	-52.4		26	11.6
125	29	14,718	-52.8		26	11.0
100	29	16,154	-54.0		26	8.8
80	29	17,583	-55.2		28	7.6
70	29	18,434	-55.2		28	5.5
60	29	19,420	-54.9		28	4.6
50	29	20,586	-54.8		29	3.3
40	29	22,013	-54.4		30	2.4
30	29	23,857	-54.1		27	1.5
25	29	25,027	-53.7		26	1.2
20	29	26,463	-52.8		28	1.8
15	29	28,325	-51.1		28	4.6
10	28	30,983	-46.8		27	7.8
7	24	33,374	-40.4		26	17.5
5	6	35,657	-34.6			
4						

CHARLESTON, S. C. 1017 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	13	13.7	10.6	35	.6
1000	30	152	15.9	11.3	30	.8
950	30	587	15.5	6.9	32	2.3
900	30	1,046	13.6	3.3	31	3.2
850	30	1,526	10.8	.3	30	5.4
800	30	2,029	8.4	-4.4	29	7.2
750	30	2,560	6.0	-9.3	29	8.7
700	30	3,123	3.0	-12.0	29	10.2
650	30	3,716	-.6	-14.4	29	12.1
600	30	4,355	-4.6	-18.0	28	13.7
550	30	5,029	-9.0	-22.2	28	16.1
500	30	5,768	-13.7	-27.8	28	17.3
450	30	6,558	-19.0	-31.4	28	19.4
400	30	7,430	-25.1	-38.0	28	22.1
350	30	8,386	-32.3	-44.8	28	24.8
300	30	9,456	-40.4	-51.9	28	28.6
250	30	10,675	-49.6		28	33.1
200	30	12,103	-58.6		29	35.2
175	30	12,939	-59.8		29	35.1
150	30	13,902	-59.7		28	29.3
125	30	15,039	-61.3		28	24.9
100	30	16,414	-63.8		28	19.7
80	30	17,776	-64.9		28	12.4
70	30	18,591	-64.1		29	7.8
60	30	19,540	-61.7		31	4.7
50	29	20,677	-58.4		33	1.8
40	29	22,090	-54.8		04	1.3
30	29	23,946	-50.8		32	.9
25	28	25,138	-49.1		26	1.0
20	25	26,607	-46.7		27	3.9
15	19	28,529	-42.9		29	6.7
10	10	31,271	-37.8			

CHIHUAHUA, MEXICO 856 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	1,428	11.9	.8	23	3.0
1000	30	105				
950	30	536				
900	30	996				
850	30	1,489	12.1	1.3	24	2.7
800	30	1,997	10.9	-1.4	24	4.9
750	30	2,521	7.9	-4.4	25	7.7
700	30	3,099	4.7	-8.1	25	10.9
650	30	3,691	1.1	-11.9	25	13.7
600	30	4,338	-3.4	-15.9	25	14.9
550	30	5,009	-8.3	-19.8	25	16.0
500	30	5,754	-13.5	-24.7	25	16.7
450	30	6,534	-19.4	-29.7	24	17.6
400	30	7,413	-25.8	-35.8	24	19.8
350	30	8,366	-33.1	-41.7	24	22.5
300	30	9,430	-41.4	-47.3	24	26.6
250	29	10,641	-50.6		24	30.9
200	29	12,062	-60.2		24	35.2
175	29	12,888	-63.1		24	34.8
150	29	13,834	-63.4		24	31.5
125	29	14,953	-64.5		24	28.7
100	29	16,313	-65.5		24	25.5
80	26	17,668	-66.8		24	21.2
70	24	18,477	-65.9		24	14.9
60	24	19,422	-62.9		24	7.1
50	21	20,561	-58.8		24	1.6
40	20	21,972	-55.7		06	2.0
30	18	23,822	-52.5		04	1.2
25	17	25,006	-50.8		05	1.2
20	14	26,464	-48.5			
15	5	28,383	-44.5			

* COLD BAY, ALASKA 1003 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	30	.4	-2.5	23	1.0
1000	29	50			23	1.9
950	29	455	-2.3	-5.2	25	3.4
900	29	[illegible]	-5.3	-6.9	26	3.9
850	29	1,336	-7.6	-9.9	25	4.6
800	29	1,805	-10.0	-13.4	25	5.1
750	29	2,295	-12.6	-17.9	25	6.4
700	29	2,825	-15.3	-21.7	25	7.4
650	29	3,378	-18.4	-26.4	25	8.7
600	28	3,973	-21.9	-29.7	25	9.8
550	28	4,602	-25.7	-33.1	26	11.7
500	28	5,293	-30.4	-38.4	25	13.7
450	28	6,027	-35.4	-42.8	25	14.9
400	28	6,846	-41.3	-46.0	25	15.4
350	28	7,742	-47.0		25	16.6
300	28	8,750	-52.1		25	18.3
250	28	9,928	-52.4		26	19.6
200	28	11,379	-50.6		25	16.3
175	28	12,250	-50.3		25	17.6
150	28	13,257	-50.1		25	15.5
125	28	14,447	-50.4		25	15.2
100	28	15,903	-50.4		24	14.8
80	28	17,359	-50.0		24	12.7
70	28	18,231	-50.3		24	13.0
60	28	19,236	-49.9		24	12.3
50	28	20,427	-50.1		24	11.2
40	27	21,878	-50.7		25	9.3
30	27	23,752	-50.9		25	6.7
25	26	24,930	-51.5		26	5.4
20	25	26,386	-51.7		30	4.7
15	23	28,265	-50.6		01	4.3
10	19	30,950	-47.6		05	8.4
7	14	33,398	-44.8		06	15.5
5	9	35,754	-42.0			
4	7	37,374	-41.3			

COLUMBIA, MO. 986 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	238	8.3	3.6	18	1.7
1000	30	121				
950	30	545	9.5	.5	21	4.6
900	30	995	8.2	-2.2	24	7.4
850	30	1,466	6.2	-5.0	26	8.9
800	30	1,961	3.6	-8.6	26	9.8
750	30	2,479	1.1	-12.3	26	11.5
700	30	3,035	-2.0	-14.9	26	12.9
650	30	3,615	-5.4	-18.8	26	13.8
600	30	4,244	-9.2	-23.5	26	15.6
550	30	4,905	-13.5	-27.3	26	17.3
500	30	5,632	-18.4	-32.9	26	19.3
450	30	6,402	-24.2	-37.3	26	21.1
400	30	7,259	-30.5	-43.1	26	23.6
350	30	8,194	-37.5	-48.0	26	27.0
300	30	9,242	-45.0		26	30.3
250	30	10,440	-52.4		26	34.2
200	30	11,862	-57.9		26	35.0
175	30	12,706	-57.0		26	32.2
150	30	13,685	-55.9		26	28.0
125	30	14,841	-57.4		26	22.9
100	30	16,248	-58.2		26	16.6
80	30	17,647	-59.6		26	13.4
70	30	18,481	-59.5		26	10.2
60	30	19,447	-58.2		26	6.3
50	30	20,599	-56.7		26	3.8
40	30	22,017	-55.5		28	2.8
30	29	23,857	-54.4		29	4.3
25	29	25,027	-53.1		29	5.7
20	26	26,471	-51.4		28	8.2
15	22	28,357	-48.4		27	16.6
10	9	31,029	-44.0			

DAYTON, OHIO 982 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	297	7.1	2.7	19	.4
1000	30	147				
950	30	573	8.2	-.1	23	3.4
900	30	1,016	5.8	-2.3	25	[illegible]
850	30	1,482	4.1	-6.6	26	7.8
800	30	1,974	2.3	-9.6	27	9.5
750	30	2,492	.3	-12.0	27	10.9
700	30	3,044	-2.7	-15.7	27	13.0
650	30	3,624	-6.1	-19.1	27	14.6
600	30	4,251	-9.8	-22.8	27	14.7
550	30	4,914	-14.0	-26.6	27	17.0
500	30	5,634	-18.7	-30.0	27	19.7
450	30	[illegible],404	-24.5	-34.7	27	21.6
400	30	7,258	-30.6	-40.5	27	25.3
350	30	8,193	-37.3	-46.2	27	29.6
300	30	9,240	-45.1		27	35.6
250	30	10,435	-53.2		27	37.5
200	30	11,853	-57.7		28	35.5
175	30	12,696	-57.0		27	29.9
150	30	13,673	-56.5		27	27.2
125	29	14,826	-57.1		27	22.5
100	29	16,235	-58.4		27	18.0
80	28	17,635	-59.0		27	13.9
70	28	18,471	-58.8		27	9.5
60	28	19,439	-58.5		27	[illegible]
50	27	20,591	[illegible]		28	3.3
40	27	22,009	-55.6		30	2.5
30	27	23,848	-54.2		30	3.3
25	27	25,021	-52.7		29	4.2
20	27	26,466	-51.0		27	7.8
15	25	28,353	-47.8		27	13.4
10	17	31,069	-43.0		26	20.6
7						
5						

DEL RIO, TEXAS 978 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	314	16.4	13.3	09	1.8
1000	30	121				
950	30	558	16.6	11.7	13	3.7
900	30	1,020	15.3	[illegible]	17	3.4
850	30	1,504	14.0	3.0	22	2.9
800	30	2,014	12.0	-2.3	24	4.3
750	30	2,548	[illegible]	-5.7	25	6.0
700	30	3,121	5.5	-9.6	25	8.6
650	30	3,718	1.5	-12.6	25	12.0
600	30	4,363	-3.1	[illegible]	24	15.7
550	30	5,036	-8.2	-19.5	24	18.2
500	30	5,781	-13.0	-24.3	24	21.7
450	30	6,568	-18.8	-29.8	25	22.7
400	30	7,444	-25.0	-34.8	25	25.8
350	30	8,402	-31.7	-42.3	25	30.6
300	30	9,473	-40.1	-48.9	24	33.1
250	30	10,692	-49.7		25	38.6
200	30	12,118	-59.7		25	42.3
175	30	12,946	-62.6		25	39.5
150	30	13,896	-62.8		25	35.9
125	29	15,017	-64.8		25	28.7
100	29	16,373	-66.6		24	22.1
80	27	17,722	-67.7		24	12.8
70	27	18,527	-66.5		23	6.3
60	27	19,467	-62.9		22	4.4
50	27	20,602	-58.4		14	2.0
40	27	22,018	-54.9		08	3.2
30	27	23,872	-51.1		08	4.6
25	27	25,063	-49.2		07	5.2
20	27	26,535	-46.1		07	5.2
15	27	28,463	-42.2		06	3.1
10	23	31,224	-38.6		36	.4
7	14	33,695	-35.8			
5	6	36,063	-32.7			

DENVER, COLO. 835 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	1,611	-.1	-5.1	19	1.0
1000	30	141				
950	30	561				
900	30	1,004				
850	30	1,468				
800	30	1,959	3.1	-8.9	29	1.9
750	30	2,480	.3	-11.8	29	3.6
700	30	3,029	-3.3	-14.9	29	5.1
650	30	3,609	-7.4	-18.3	29	6.1
600	30	4,230	-11.0	-22.8	28	8.2
550	30	4,888	-15.7	-28.1	28	8.3
500	30	5,605	-21.1	-33.1	26	8.4
450	30	6,367	-27.1	-38.2	25	9.7
400	30	7,212	-33.8	-44.0	25	12.2
350	30	8,133	-41.1	-49.5	26	13.4
300	29	9,158	-48.2		26	16.1
250	29	10,342	-54.2		25	20.0
200	29	11,760	-56.9		25	20.8
175	29	12,610	-55.0		25	20.1
150	29	13,595	-55.1		25	18.2
125	29	14,757	-55.6		25	16.8
100	29	16,175	-56.5		25	13.3
80	29	17,585	-58.0		25	10.5
70	29	18,426	-57.7		25	9.8
60	29	19,404	-56.0		25	7.0
50	28	20,564	-55.8		25	4.4
40	27	21,994	-54.6		25	4.4
30	26	23,846	-53.0		27	6.9
25	23	25,014	-52.5		27	7.8
20	22	26,461	-50.8		27	9.5
15	18	28,344	-47.7		27	16.3
10	10	31,019	-43.6		27	29.1
7	5	33,416	-41.6			

DODGE CITY, KANS. 922 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	791	6.3	-2.7	26	1.9
1000	30	118				
950	30	545				
900	30	991	7.8	-3.2	28	3.2
850	30	1,462	7.3	-4.9	27	6.5
800	30	1,959	5.7	-8.1	28	8.6
750	30	2,484	[illegible]	-11.9	28	8.4
700	30	3,039	-1.2	-15.4	27	8.7
650	30	3,624	-5.1	-19.6	27	10.1
600	30	4,250	-9.4	-23.6	27	12.1
550	30	4,911	-14.2	-27.5	26	13.7
500	30	5,632	-19.5	-32.6	26	14.6
450	30	6,400	-25.2	-38.3	26	17.4
400	30	7,253	-31.4	-44.0	25	20.1
350	30	8,186	-38.1	-50.0	25	23.7
300	30	9,230	-45.7		25	28.1
250	30	10,424	-53.6		25	31.2
200	30	11,840	-58.0		25	31.7
175	30	12,683	-57.2		25	28.7
150	30	13,658	-57.2		25	25.6
125	30	14,812	-56.9		25	21.7
100	30	16,218	-58.9		25	15.7
80	30	17,614	-59.7		25	11.2
70	30	18,448	[illegible]		24	8.6
60	30	19,416	-57.8		25	5.4
50	29	20,571	-56.1		25	2.8
40	28	21,991	-54.7		28	2.1
30	28	23,835	-53.4		29	4.0
25	27	25,010	-52.2		29	6.2
20	26	26,452	-50.9		[illegible]	9.7
15	23	28,337	-46.7		27	15.7
10	9	31,069	-41.3			

EL PASO, TEXAS 881 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	1,193	10.5	-1.6	29	1.5
1000	30	119				
950	30	553				
900	30	1,014				
850	30	1,491	11.7	-2.0	28	2.3
800	30	1,996	8.6	-4.0	26	5.6
750	30	2,523	4.9	-6.6	25	8.5
700	30	3,086	1.1	-11.1	25	10.4
650	30	3,673	-2.9	-16.0	25	11.2
600	30	4,308	-6.8	-20.6	25	13.8
550	30	4,976	-11.2	-24.7	25	16.1
500	30	5,707	-16.0	-29.7	25	19.5
450	30	6,487	-21.6	-34.6	25	22.4
400	30	7,351	-27.8	-39.9	25	25.9
350	30	8,298	-35.1	-46.2	25	28.7
300	30	9,355	-43.3		25	31.8
250	30	10,561	-51.7		25	37.7
200	30	11,981	-59.5		25	37.8
175	30	12,815	-59.9		25	35.5
150	30	13,778	-60.0		25	30.2
125	30	14,913	-61.3		25	25.7
100	30	16,292	-63.0		25	18.6
80	30	17,664	-63.2		24	11.6
70	30	18,485	-62.5		24	7.9
60	30	19,438	-60.8		24	3.6
50	30	20,581	-57.7		10	1.0
40	30	21,998	-54.7		10	1.5
30	30	23,852	-51.2		08	1.9
25	30	25,041	-49.6		05	1.8
20	28	26,511	-47.0		35	.8
15	22	28,439	-43.6		27	4.6
10	10	31,173	-38.3			

ELY, NEV. 808 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	1,908	-2.8	-7.0	22	1.3
1000	30	176				
950	30	594				
900	30	1,034				
850	30	1,500				
800	30	1,985	-.3	-7.7	22	1.0
750	30	2,499	-1.4	-11.0	32	2.3
700	30	3,049	-5.3	-13.9	31	4.4
650	30	3,622	-9.2	-18.7	31	6.0
600	30	4,242	-13.1	-23.7	31	7.3
550	30	4,897	-16.9	-27.9	31	8.8
500	30	5,611	-21.4	-32.5	30	10.1
450	30	6,373	-27.1	-37.7	30	9.7
400	30	7,220	-33.2	-43.1	30	11.2
350	30	8,145	-40.1	-48.9	30	12.1
300	30	9,181	-47.9		30	13.0
250	30	10,366	-54.5		30	16.7
200	30	11,763	-58.0		31	14.9
175	30	12,625	-57.3		29	14.6
150	30	13,603	-56.2		28	13.3
125	29	14,760	-57.1		27	12.1
100	29	16,170	-58.1		27	10.0
80	28	17,570	-58.3		27	7.8
70	28	18,411	-57.8		26	6.1
60	28	19,383	-57.1		26	6.7
50	28	20,538	-56.7		24	5.7
40	28	21,956	-55.2		25	6.8
30	27	23,8[illegible]	-53.8		26	6.8
25	26	24,975	-52.9		27	8.4
20	25	26,425	-51.3		27	10.4
15	24	28,305	-48.5		28	14.0
10	21	30,992	-45.1		28	23.3
7	10	33,399	-42.7			
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EMPALME, MEXICO 1013 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	12	14.4	5.8	34	.8
1000	30	125	18.4	5.3	34	2.2
950	30	563	18.9	1.8	33	2.7
900	30	1,028	16.7	-1.9	29	2.0
850	30	1,511	13.8	-4.2	23	3.4
800	30	2,019	11.5	-8.7	23	5.5
750	30	2,555	8.7	-11.1	24	7.7
700	30	3,122	5.2	-13.7	25	9.7
650	30	3,721	1.1	-17.1	25	10.1
600	30	4,360	-3.5	-21.0	25	12.0
550	30	5,036	-8.4	-24.7	25	13.9
500	30	5,773	-13.8	-29.0	25	15.0
450	30	6,561	-19.8	-33.4	25	17.4
400	30	7,428	-26.1	-39.3	25	19.7
350	30	8,379	-33.5	-43.9	25	22.9
300	30	9,441	-41.8	-48.2	25	26.5
250	30	10,651	-50.6		25	31.3
200	30	12,069	-59.9		25	35.7
175	30	12,898	-62.4		25	31.7
150	30	13,848	-62.0		25	27.8
125	29	14,973	-63.5		25	22.3
100	28	16,336	-65.4		25	16.6
80	28	17,693	-64.9		24	11.0
70	27	18,506	-64.1		23	5.5
60	26	19,456	-61.5		22	2.7
50	26	20,596	-57.7		11	2.3
40	26	22,012	-55.1		10	3.2
30	23	23,666	-51.6		10	5.3
25	20	25,054	-49.0		08	5.7
20	18	26,526	-46.4		09	6.2
15	14	28,460	-43.8			
10	5	31,212	-39.5			

* FAIRBANKS, ALASKA 991 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	135	-4.3	-13.8	33	1.8
1000	30	64				
950	30	470	-2.8	-12.8	08	.5
900	30	897	-5.3	-14.1	20	1.5
850	30	1,344	-7.9	-15.7	22	3.3
800	30	1,813	-11.2	-17.2	21	4.9
750	30	2,304	-14.3	-19.3	21	5.2
700	30	2,826	-17.4	-22.7	22	5.2
650	30	3,373	-21.2	-26.1	22	5.6
600	30	3,963	-24.9	-30.8	22	5.9
550	30	4,588	-29.1	-35.2	22	6.3
500	30	5,266	-33.9	-39.5	22	7.0
450	30	5,995	-39.2	-42.6	23	7.6
400	30	6,795	-45.1		23	8.4
350	30	7,674	-51.3		23	9.0
300	30	8,663	-56.7		23	10.1
250	30	9,814	-57.6		24	11.7
200	30	11,234	-54.2		24	11.8
175	30	12,093	-53.2		25	12.4
150	30	13,088	-52.6		25	13.5
125	30	14,267	-51.8		25	14.6
100	30	15,716	-51.1		25	15.7
80	29	17,166	[illegible]		25	16.3
70	29	18,037	-50.0		25	16.2
60	28	19,045	-50.0		26	15.8
50	28	20,236	-49.9		26	15.4
40	29	21,696	-49.7		26	14.6
30	27	23,598	-50.0		27	12.6
25	26	24,793	-49.1		27	11.6
20	26	26,258	-48.5		28	9.1
15	24	28,132	-47.7		29	7.7
10	21	30,773	-46.6		29	7.7
7	13	33,333	-41.6			
5	5	35,826	-38.1			

FLINT, MICH. 988 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	234	5.1	-.5	22	2.5
1000	30	130				
950	30	550	6.0	-2.0	24	6.0
900	30	992	4.1	-5.5	26	7.7
850	30	1,455	1.4	-8.4	27	8.6
800	30	1,942	-.5	-11.4	27	9.1
750	30	2,454	-2.8	-14.5	27	10.1
700	30	3,001	-5.5	-18.5	27	11.5
650	30	3,575	-8.2	-21.6	27	13.5
600	30	4,197	-11.7	-24.7	27	15.8
550	30	4,854	-15.9	-29.0	27	17.5
500	30	5,571	-20.6	-33.2	27	18.8
450	30	6,337	-26.0	-39.3	27	20.4
400	30	7,185	-32.1	-44.1	28	21.3
350	30	8,115	-38.9	-46.7	28	23.4
300	30	9,157	-46.2		28	26.2
250	30	10,351	-52.6		28	28.8
200	29	11,781	-56.3		28	27.6
175	29	12,630	-55.5		27	23.8
150	29	13,617	-54.0		27	21.0
125	29	14,784	-55.0		27	18.0
100	28	16,210	-55.9		27	14.3
80	28	17,627	-56.7		26	10.5
70	28	18,472	-56.5		27	8.6
60	27	19,455	-56.4		27	6.8
50	26	20,615	-55.6		28	5.1
40	25	22,042	-54.8		29	3.3
30	23	23,886	-54.3		28	4.1
25	23	25,056	-53.3		28	4.0
20	22	26,498	-52.0		28	6.8
15	18	28,377	-48.9		28	7.2
10	5	31,049	-44.3			

FORT WORTH, TEXAS 994 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	180	13.9	10.2	22	.8
1000	30	131				
950	30	566	14.6	6.7	21	4.1
900	30	1,022	13.3	3.8	23	4.8
850	30	1,502	11.7	-.6	23	5.8
800	30	2,007	9.6	-4.4	24	6.5
750	30	2,538	6.1	-8.1	25	8.4
700	30	3,102	2.3	-10.8	25	10.5
650	30	3,692	-1.7	-14.4	26	12.2
600	30	4,329	-5.8	-19.4	25	14.6
550	30	4,997	-10.1	-23.6	25	17.1
500	30	5,734	-15.0	-28.2	25	19.5
450	30	6,516	-20.1	-32.8	25	23.4
400	30	7,387	-25.9	-38.1	25	28.7
350	30	8,340	-33.3	-44.4	25	31.1
300	30	9,405	-41.6	-47.6	25	34.8
250	29	10,616	-50.9		25	38.5
200	29	12,035	-60.5		26	40.0
175	29	12,864	-61.2		26	37.4
150	29	13,823	-60.6		25	34.9
125	29	14,957	-61.6		25	28.5
100	29	16,332	-63.1		25	21.2
80	29	17,700	-64.5		25	12.9
70	29	18,515	-64.0		24	8.8
60	28	19,466	-60.7		24	5.2
50	27	20,607	-58.0		26	.3
40	27	22,024	-54.9		07	.9
30	27	23,879	-51.2		36	1.8
25	26	25,066	-50.0		33	2.0
20	25	26,530	-47.8		30	3.3
15	22	28,453	-44.1		28	6.2
10	14	31,185	-39.4			

See reference note at end of table

RAWINSONDE DATA

Average monthly values

GLASGOW, MONT. 933 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	696	.0	-5.7	04	1.0
1000	30	133				
950	30	550				
900	30	985	3.2	-7.1	28	1.8
850	30	1,447	1.3	-9.2	30	4.4
800	30	1,933	-2.1	-11.7	31	5.4
750	30	2,442	-5.4	-14.2	30	6.9
700	30	2,981	-8.8	-18.1	30	7.4
650	30	3,549	-12.1	-21.6	30	8.3
600	30	4,160	-16.0	-25.9	29	9.7
550	30	4,807	-20.3	-29.0	28	11.3
500	30	5,509	-25.0	-33.8	28	11.9
450	30	6,258	-30.5	-39.1	28	12.8
400	30	7,094	-36.6	-45.3	28	14.5
350	30	8,006	-43.0		27	15.4
300	30	9,030	-50.0		27	17.3
250	30	10,205	-55.6		28	17.2
200	30	11,622	-55.7		27	16.3
175	30	12,475	-54.6		27	14.9
150	30	13,464	-53.5		27	13.3
125	30	14,637	-53.8		27	11.9
100	30	16,068	-54.1		27	11.1
80	30	17,499	-54.3		27	10.1
70	30	18,354	-54.3		27	8.5
60	30	19,341	-54.2		26	6.4
50	30	20,511	-54.1		25	6.5
40	29	21,949	-53.9		26	5.4
30	28	23,802	-54.0		26	4.6
25	27	24,973	-53.6		26	5.2
20	26	26,407	-52.8		27	4.0
15	22	28,286	-51.1		27	4.6
10	16	30,946	-46.2		26	7.4
7	7	33,268	-42.9			
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GRAND JUNCTION, COLO. 851 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	1,474	3.5	-3.7	12	2.2
1000	30	139				
950	30	563				
900	30	1,010				
850	30	1,479			13	3.4
800	30	1,973	3.7	-6.6	15	3.0
750	30	2,491	.3	-9.1	20	3.5
700	30	3,043	-3.7	-11.6	24	5.0
650	30	3,620	-7.9	-15.0	24	6.1
600	30	4,242	-12.0	-19.8	25	7.1
550	30	4,896	-16.7	-24.4	25	7.4
500	30	5,610	-21.7	-29.5	25	8.6
450	30	6,372	-27.7	-35.7	26	8.6
400	30	7,213	-34.0	-42.5	26	10.9
350	30	8,136	-40.4	-47.8	25	12.6
300	30	9,169	-47.9		26	13.0
250	30	10,354	-53.8		26	15.5
200	30	11,776	-56.7		26	15.9
175	30	12,624	-55.9		26	16.4
150	30	13,606	-55.4		26	14.8
125	30	14,766	-56.3		26	14.5
100	30	16,179	-57.7		25	11.9
80	29	17,582	-58.2		24	10.5
70	29	18,422	-57.9		25	9.1
60	28	19,396	-57.1		25	6.8
50	27	20,550	-56.2		25	5.9
40	27	21,972	-54.8		25	4.1
30	25	23,817	-53.4		26	6.5
25	23	24,992	-52.3		28	6.7
20	21	26,441	-50.4		28	9.1
15	17	28,330	-47.8		28	13.2
10	9	31,033	-44.1			
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* GREAT FALLS, MONT. 886 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	1,123	.2	-7.2	24	4.3
1000	30	141				
950	30	559				
900	30	1,000				
850	30	1,458	1.3	-9.2	25	8.3
800	30	1,944	-2.0	-11.1	27	7.0
750	30	2,457	-5.5	-13.7	28	7.1
700	30	2,993	-8.8	-16.7	28	6.7
650	30	3,565	-12.2	-20.6	29	6.9
600	30	4,171	-16.3	-24.3	28	8.4
550	30	4,821	-20.9	-27.8	28	9.4
500	30	5,519	-25.7	-33.3	27	10.8
450	30	6,277	-31.0	-38.0	27	11.6
400	30	7,102	-37.0	-41.8	27	12.4
350	30	8,013	-43.7	-48.3	27	12.8
300	30	9,035	-49.9		28	14.0
250	30	10,213	-55.0		28	13.1
200	29	11,633	-56.2		28	14.4
175	29	12,483	-55.2		28	13.4
150	29	13,470	-54.3		27	12.1
125	29	14,640	-54.2		28	10.5
100	29	16,068	-55.0		27	9.5
80	28	17,495	-54.9		27	8.8
70	27	18,347	-54.7		26	6.8
60	27	19,332	-54.7		26	7.4
50	26	20,496	-54.7		26	6.4
40	26	21,924	-54.6		26	6.9
30	26	23,766	-54.2		26	5.4
25	26	24,937	-53.4		26	4.6
20	26	26,372	-53.5		27	4.1
15	25	28,234	-51.8		27	5.3
10	23	30,891	-46.9		28	6.5
7	20	33,279	-41.6		28	8.8
5	9	35,535	-36.1			

GREEN BAY, WIS. 988 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	210	3.9	.7	21	1.2
1000	30	109				
950	30	527	4.4	-1.9	23	4.5
900	30	966	3.6	-4.1	24	6.8
850	30	1,429	1.6	-7.6	26	6.2
800	30	1,916	-.9	-10.0	26	6.3
750	30	2,427	-3.5	-12.1	26	8.1
700	30	2,973	-6.2	-15.4	27	10.1
650	30	3,543	-9.3	-18.9	27	11.5
600	30	4,164	-12.8	-24.7	27	12.8
550	30	4,812	-17.2	-28.4	27	13.3
500	30	5,530	-22.2	-33.4	27	15.4
450	29	6,291	-27.3	-39.3	27	16.3
400	29	7,138	-33.3	-43.5	27	18.6
350	28	8,064	-39.8	-48.8	27	21.5
300	28	9,103	-46.7		27	24.6
250	28	10,294	-53.1		27	25.0
200	28	11,719	-56.0		26	23.2
175	28	12,572	-54.1		26	19.7
150	28	13,563	-53.4		26	19.9
125	28	14,735	-54.1		26	17.3
100	27	16,167	-55.6		26	13.2
80	27	17,586	-56.3		26	11.1
70	27	18,433	-56.2		27	9.8
60	27	19,415	-56.0		27	7.5
50	27	20,575	-55.4		26	5.5
40	27	22,001	-54.9		28	4.1
30	27	23,838	-54.7		28	3.9
25	26	25,003	-53.9		27	5.1
20	26	26,437	-52.8		27	5.8
15	24	28,296	-50.7		27	7.2
10	12	30,945	-47.3		27	9.8
7						
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GREENSBORO, N. C. 9[illegible]7 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	273	10.7	8.0	22	.1
1000	30	159				
950	30	588	11.8	2.1	32	1.7
900	30	1,039	9.8	-1.1	31	3.8
850	30	1,512	7.7	-3.5	30	5.2
800	30	2,[illegible]10	5.4	-5.0	28	7.4
750	30	2,533	3.0	-8.1	29	8.7
700	30	3,092	.2	-13.2	29	10.9
650	30	3,680	-3.0	-17.2	29	12.5
600	30	4,312	-7.0	-20.7	29	13.6
550	30	4,983	-11.3	-24.5	29	15.5
500	30	5,711	-16.1	-28.8	29	18.1
450	30	6,493	-21.5	-34.2	28	20.0
400	30	7,355	-27.6	-39.8	28	22.0
350	30	8,301	-34.7	-46.1	28	24.9
300	30	9,361	-42.4		28	27.9
250	30	10,569	-51.5		29	32.5
200	30	11,991	-58.5		29	35.5
175	30	12,829	-58.6		29	32.1
150	30	13,800	-58.4		28	27.3
125	30	14,943	-59.9		28	23.3
100	30	16,332	-61.2		28	17.8
80	30	17,713	-62.0		29	11.3
70	30	18,539	-61.6		29	6.8
60	30	19,495	-60.3		30	4.0
50	30	20,637	-58.0		30	2.2
40	29	22,052	-55.4		30	1.4
30	27	23,900	-52.3		28	1.9
25	25	25,063	-50.4		27	4.5
20	24	26,546	-48.2		27	8.5
15	17	28,465	-43.8		27	12.9
10						
7						
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HILO, HAWAII 1013 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	11	20.4	18.4	25	1.8
1000	30	126	21.2	18.6	26	1.7
950	30	570	18.7	16.6	08	1.9
900	30	1,034	15.7	14.1	08	2.7
850	30	1,518	13.0	11.1	09	2.0
800	30	2,027	10.8	5.3	11	1.1
750	30	2,566	8.4	.7	15	1.1
700	30	3,133	5.8	-5.1	19	1.0
650	30	3,733	2.5	-8.8	23	1.1
600	30	4,379	-1.3	-14.1	27	1.9
550	30	5,062	-5.2	-20.6	28	3.9
500	30	5,812	-9.4	-23.9	28	6.4
450	30	6,614	-14.7	-28.9	27	9.2
400	30	7,501	-21.0	-34.8	28	12.2
350	30	8,474	-28.1	-40.1	28	14.7
300	30	9,563	-36.2	-47.2	28	20.8
250	30	10,804	-45.4		28	26.6
200	29	12,255	-56.0		28	30.1
175	29	13,093	-61.8		28	31.2
150	29	14,035	-67.1		28	29.4
125	28	15,126	-70.8		28	20.5
100	26	16,438	-74.1		29	10.8
80	24	17,742	-72.4		33	3.1
70	23	18,532	-68.0		08	2.1
60	23	19,467	-63.8		08	4.0
50	23	20,595	-60.3		09	7.4
40	23	21,997	-56.8		09	9.9
30	21	23,835	-53.4		09	12.2
25	21	25,014	-50.8		09	15.1
20	20	26,474	-47.4		09	17.2
15	14	28,398	-44.2		09	18.3
10	8	31,173	-38.5			
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HUNTINGTON W. VA. 990 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	246	8.0	3.7	24	.4
1000	30	157				
950	30	586	10.1	.1	23	1.9
900	30	1,031	7.6	-1.4	26	4.1
850	30	1,500	5.2	-4.6	27	6.0
800	30	1,994	3.8	-7.9	27	8.1
750	30	2,515	1.4	-10.6	27	10.1
700	30	3,070	-1.3	-13.6	27	11.4
650	30	3,653	-4.7	-16.1	27	12.3
600	30	4,283	-8.7	-20.3	27	14.4
550	30	4,949	-12.6	-24.7	27	16.5
500	30	5,675	-17.3	-29.8	27	19.4
450	30	6,454	-23.0	-34.7	27	21.3
400	30	7,310	-29.2	-40.2	27	24.0
350	30	8,251	-35.9	-46.0	28	27.1
300	30	9,305	-43.8		28	32.1
250	30	10,508	-52.1		28	36.4
200	30	11,931	-57.8		28	36.1
175	30	12,774	-57.2		28	31.2
150	29	13,750	-57.3		27	26.5
125	29	14,904	-57.2		27	21.3
100	29	16,307	-59.1		27	16.9
80	29	17,704	-59.7		28	12.3
70	29	18,538	-59.5		28	8.3
60	29	19,505	-58.4		28	5.0
50	29	20,656	-56.6		28	2.7
40	29	22,076	-54.9		30	2.1
30	28	23,921	-52.8		28	3.7
25	28	25,101	-51.3		28	6.4
20	27	26,556	-49.2		27	9.8
15	24	28,449	-46.5		27	14.8
10	10	31,139	-43.1			
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* INTERNATIONAL FALLS, MINN. 970 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	360	-.6	-4.9	36	1.2
1000	30	115				
950	30	523	1.0	-5.5	01	1.6
900	30	960	.0	-8.1	34	3.7
850	30	1,417	-1.5	-10.1	34	4.5
800	30	1,898	-4.0	-12.1	32	4.9
750	30	2,400	-6.8	-13.2	30	5.4
700	30	2,941	-9.5	-16.1	29	6.8
650	30	3,506	-12.2	-18.9	29	8.6
600	30	4,120	-15.4	-22.8	28	10.5
550	30	4,769	-19.3	-26.5	28	11.8
500	30	5,475	-23.7	-31.2	28	13.0
450	30	6,230	-28.8	-36.5	28	14.5
400	30	7,072	-35.1	-43.0	28	16.2
350	30	7,989	-42.2	-45.7	28	17.4
300	30	9,015	-49.6		28	19.6
250	30	10,191	-55.7		27	21.7
200	30	11,611	-55.1		27	19.5
175	30	12,468	-52.4		27	17.2
150	30	13,466	-52.0		27	17.0
125	30	14,645	-52.6		26	15.1
100	30	16,084	-53.3		26	12.9
80	30	17,519	-53.9		26	11.9
70	30	18,375	-54.2		26	10.2
60	30	19,365	-54.1		26	8.4
50	30	20,535	-54.0		26	6.1
40	30	21,965	-54.3		26	5.0
30	30	23,808	-54.2		26	3.1
25	30	24,978	-53.9		26	3.1
20	29	26,415	-53.3		26	2.6
15	27	28,279	-51.8		25	2.9
10	24	30,927	-47.1		26	2.4
7	18	33,297	-42.3		28	5.8
5	10	35,530	-37.9			

JACKSON, MISS. 1006 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	94	14.6	13.3	14	.7
1000	30	141	15.5	12.9	15	1.3
950	30	579	15.3	9.2	21	3.6
900	30	1,036	13.5	5.8	24	4.9
850	30	1,517	12.1	.7	25	7.0
800	30	2,023	9.7	-2.2	25	8.2
750	30	2,553	6.6	-5.1	26	9.7
700	30	3,120	3.6	-8.5	26	12.1
650	30	3,713	.1	-13.2	26	14.1
600	30	4,356	-3.8	-17.0	26	17.0
550	30	5,026	-8.7	-20.4	26	18.2
500	30	5,770	-13.8	-25.6	26	20.2
450	30	6,557	-19.4	-31.2	26	21.4
400	30	7,429	-25.3	-36.3	26	22.9
350	30	8,385	-32.2	-42.9	26	27.0
300	30	9,456	-40.3	-50.7	27	31.7
250	30	10,674	-49.8		27	36.1
200	30	12,099	-59.8		27	39.5
175	30	12,927	-62.1		27	39.2
150	30	13,881	-61.2		26	34.5
125	30	15,010	-62.8		26	28.2
100	30	16,376	-64.7		26	20.6
80	30	17,732	-66.4		26	12.6
70	30	18,541	-65.0		25	7.8
60	30	19,487	-62.5		25	3.8
50	30	20,621	-58.9		27	1.0
40	30	22,033	-55.4		04	1.1
30	29	23,881	-51.8		35	1.6
25	27	25,066	-49.8		34	2.1
20	27	26,534	-47.1		28	2.6
15	22	28,451	-43.6		29	7.2
10	8	31,164	-41.2			
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JACKSONVILLE, FLA. 1018 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	5	16.4	14.4	27	.7
1000	30	159	17.6	13.4	26	.9
950	30	597	17.0	10.6	26	1.8
900	30	1,059	14.5	6.2	28	2.5
850	30	1,540	12.1	2.6	28	3.9
800	30	2,046	9.6	-2.9	28	6.2
750	30	2,575	7.3	-6.8	28	7.0
700	30	3,144	4.2	-11.7	29	9.5
650	30	3,738	.8	-14.6	29	11.9
600	30	4,382	-3.4	-17.8	28	14.3
550	30	5,055	-8.1	-21.0	29	15.2
500	30	5,798	-12.9	-25.1	29	17.1
450	30	6,5[illegible]2	-18.2	-29.9	29	18.7
400	30	7,463	-24.2	-37.1	28	21.6
350	30	8,424	-31.1	-43.3	28	24.8
300	30	9,498	-39.3	-50.5	28	26.2
250	30	10,721	-48.9		28	33.2
200	30	12,152	-59.0		29	35.3
175	30	12,985	-60.8		28	35.5
150	30	13,942	-61.4		28	32.4
125	30	15,067	-63.6		2[illegible]	28.1
100	30	16,429	-66.2		28	20.0
80	30	17,773	-67.6		28	11.7
70	30	18,578	-66.6		28	5.4
60	30	19,514	-63.7		31	3.0
50	30	20,642	-59.7		05	1.3
40	30	22,[illegible]52	-55.1		07	3.0
30	29	23,906	-50.9		08	3.0
25	28	25,[illegible]93	-49.0		09	3.7
20	28	26,564	-46.6		12	2.2
15	27	28,491	-43.3		30	1.1
10	17	31,244	-38.5		31	1.9
7	11	33,714	-36.0			
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JOHN F. KENNEDY INT. AP NY 1018 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	5	7.9	1.7	30	1.8
1000	30	155	8.2	.7	30	2.6
950	30	582	8.0	-1.1	30	4.2
900	30	1,024	6.4	-4.3	29	4.4
850	30	1,491	4.1	-6.6	29	5.6
800	30	1,983	2.4	-9.9	30	7.0
750	29	2,502	-.1	-12.4	29	7.5
700	29	3,051	-3.4	-14.9	28	8.4
650	29	3,634	-6.7	-19.3	27	10.3
600	29	4,256	-10.6	-23.4	28	11.1
550	29	4,917	-14.7	-28.5	28	13.1
500	29	5,636	-19.3	-32.0	28	15.7
450	29	6,410	-24.6	-37.1	28	18.3
400	29	7,260	-30.6	-41.6	28	19.9
350	29	8,196	-37.4	-47.6	28	24.0
300	29	9,243	-45.1		28	24.1
250	29	10,441	-52.8		29	26.0
200	28	11,867	-56.9		29	24.1
175	28	12,715	-55.0		29	22.4
150	28	13,700	-54.9		29	18.7
125	28	14,863	-55.4		29	15.9
100	28	16,280	-56.8		28	12.4
80	28	17,688	-58.4		29	9.2
70	28	18,527	-58.3		29	7.1
60	28	19,499	-57.5		29	5.9
50	28	20,653	-56.5		29	3.7
40	28	22,073	-55.3		30	2.6
30	28	23,915	-53.5		28	3.8
25	27	25,092	-52.1		28	4.1
20	22	26,539	-50.4		28	7.0
15	12	28,400	-48.6		28	10.1
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JOHNSTON IS., PACIFIC AREA 1014 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	3	24.8	20.7	08	6.3
1000	30	121	23.8	20.1	08	6.7
950	30	568	20.0	17.9	08	6.9
900	30	1,033	17.0	13.2	08	6.2
850	30	1,520	14.4	8.7	08	5.0
800	30	2,031	12.6	.9	08	3.5
750	30	2,573	10.6	-3.8	06	2.4
700	30	3,143	7.4	-6.9	01	1.1
650	30	3,747	3.9	-11.2	31	1.6
600	30	4,396	.4	-15.3	29	2.5
550	30	5,086	-3.3	-18.2	27	4.2
500	30	5,838	-7.6	-22.3	27	6.3
450	30	6,649	-12.9	-27.5	28	8.1
400	30	7,539	-19.4	-32.7	28	10.8
350	30	8,518	-26.3	-38.5	27	14.3
300	30	9,615	-34.7	-45.1	27	18.1
250	30	10,863	-44.8		26	20.4
200	30	12,318	-56.1		27	25.3
175	30	13,155	-62.3		27	26.6
150	30	14,093	-68.6		27	24.0
125	29	15,171	-73.4		28	17.6
100	27	16,465	-77.0		29	8.8
80	25	17,744	-75.1		36	2.6
70	25	18,526	-70.6		07	4.6
60	24	19,451	-65.6		09	6.5
50	24	20,571	-61.5		09	9.4
40	22	21,968	-57.5		09	12.7
30	22	23,803	-53.3		09	16.5
25	22	24,983	-50.7		09	19.3
20	18	26,447	-46.8		09	21.6
15	14	28,386	-42.9		09	22.2
10	8	31,145	-37.7			
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KEY WEST, FLA. 1016 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	27	3	23.3	17.6	11	2.2
1000	27	144	22.1	17.4	11	3.0
950	27	586	19.5	12.9	12	4.1
900	27	1,053	17.0	7.0	11	3.3
850	27	1,539	14.8	1.2	07	1.5
800	27	2,050	12.7	-4.3	03	1.6
750	27	2,585	10.3	-10.4	03	2.0
700	27	3,160	7.0	-13.7	01	2.5
650	27	3,761	3.8	-16.8	34	3.3
600	27	4,411	.1	-20.5	33	4.0
550	27	5,096	-4.1	-24.7	31	6.3
500	27	5,848	-8.6	-28.1	30	9.1
450	27	6,648	-14.4	-33.5	30	11.2
400	27	7,538	-21.2	-38.2	29	12.4
350	27	8,510	-28.6	-44.8	29	14.8
300	27	9,595	-37.2	-51.5	29	17.4
250	27	10,828	-47.2		3[illegible]	20.7
200	27	12,270	-57.5		28	25.5
175	27	13,105	-62.0		28	24.1
150	26	14,048	-64.9		28	21.9
125	26	15,154	-67.5		29	19.3
100	25	16,485	-71.1		28	14.8
80	25	17,798	-72.9		31	5.5
70	25	18,582	-71.5		02	2.5
60	25	19,502	-[illegible]6.3		07	2.9
50	25	20,623	-60.1		07	5.3
40	25	22,[illegible]34	-55.4		0[illegible]	7.[illegible]
30	25	23,[illegible]7	-51.7		09	1[illegible].0
25	25	25,[illegible]78	-49.1		09	9.7
20	25	26,555	-46.1		09	12.7
15	23	28,4[illegible]3	-42.6		09	11.9
10	22	31,25[illegible]	-38.8		09	1[illegible].2
7	9	33,7[illegible]7	-35.2			

KING SALMON, ALASKA 1004 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	15	-2.1	-7.4	12	1.0
1000	30	46			17	.6
950	30	453	-3.7	-7.5	14	3.2
900	30	879	-6.0	-8.9	16	3.7
850	30	1,325	-8.7	-11.4	18	4.1
800	30	1,793	-11.1	-14.4	18	4.5
750	30	2,285	-13.8	-17.4	20	4.8
700	30	2,808	-16.7	-21.0	22	5.1
650	30	3,359	-20.0	-26.0	23	4.9
600	30	3,951	-23.9	-29.9	23	5.2
550	30	4,576	-28.0	-33.9	23	6.7
500	30	5,260	-32.0	-38.5	23	7.8
450	30	5,994	-37.0	-42.9	24	9.2
400	30	6,803	-42.6	-46.2	24	9.8
350	30	7,694	-47.9		24	11.1
300	30	8,700	-52.4		24	11.3
250	30	9,872	-53.5		24	13.4
200	30	11,317	-50.7		24	15.2
175	30	12,188	-50.3		24	16.4
150	30	13,194	-50.1		25	16.0
125	30	14,385	-50.0		25	15.7
100	30	15,843	-49.7		24	16.4
80	30	17,303	-49.7		25	14.3
70	30	18,176	-49.6		25	13.4
60	30	19,186	-49.8		25	12.0
50	30	20,378	-49.6		25	10.9
40	30	21,839	-49.8		26	9.5
30	30	23,715	-50.9		27	8.6
25	29	24,912	-50.6		27	6.7
20	26	26,357	-50.4		29	4.3
15	23	28,263	-48.9		08	6.1
10	13	31,007	-43.7			
7	5	33,254	-42.7			

* KOROR, CAROLINE IS. 1008 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	30	28.0	23.9	06	2.3
1000	30	101	27.1	22.9	06	2.9
950	30	547	23.2	18.6	06	5.9
900	30	1,024	20.2	14.3	06	5.6
850	30	1,516	17.3	10.6	07	5.0
800	30	2,[illegible]33	14.6	6.1	07	4.6
750	30	2,573	12.2	1.0	07	4.2
700	30	3,153	9.7	-4.5	08	2.8
650	30	3,762	6.7	-8.7	09	2.5
600	30	4,418	3.0	-13.4	07	2.9
550	30	5,111	-1.0	-16.7	08	3.5
500	30	5,873	-5.2	-21.4	09	4.0
450	30	6,687	-10.3	-26.2	10	4.4
400	30	7,592	-16.0	-31.7	1[illegible]	4.3
350	30	8,565	-22.8	-37.9	[illegible]	2.6
300	30	9,646	-31.5	-45.3	12	2.4
250	30	10,959	-41.9		15	3.5
200	30	12,431	-54.1		16	5.4
175	30	13,274	-61.0		14	5.7
150	30	14,715	-68.3		15	4.7
125	30	15,288	-75.7		13	3.7
100	30	16,558	-81.6		11	4.3
80	30	17,[illegible]	-77.3		09	2.6
70	30	18,593	-71.8		2[illegible]	1.3
60	30	19,514	-66.3		29	1.5
50	30	20,[illegible]26	-63.4		09	5.5
40	30	22,[illegible]11	-59.5		09	1[illegible].3
30	26	23,[illegible]34	-54.1		[illegible]	26.9
25	21	25,[illegible]14	-51.1		[illegible]	[illegible]3.9
20	18	26,478	-47.2		[illegible]	31.5
15	10	28,419	-41.9			

See reference note at end of table

RAWINSONDE DATA

Average monthly values

APRIL 1968

KOTZEBUE, ALASKA 1010 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	21	5	-13.4	-16.9	10	1.8
1000	21	79	-11.0	-14.3	10	2.8
950	21	474	-10.1	-12.3	11	3.6
900	21	891	-10.9	-13.5	12	3.6
850	21	1,329	-11.8	-14.3	12	4.2
800	21	1,792	-13.9	-17.7	13	4.2
750	21	2,278	-16.7	-20.4	14	4.4
700	21	2,794	-19.9	-24.0	15	4.7
650	21	3,338	-23.6	-28.0	15	4.3
600	21	3,920	-27.4	-33.0	16	5.1
550	21	4,537	-31.7	-37.6	16	5.8
500	21	5,208	-36.3	-42.2	17	5.7
450	21	5,929	-41.3	-44.4	17	6.5
400	21	6,722	-47.1		18	6.8
350	21	7,594	-52.9		18	7.0
300	21	8,577	-57.3		19	8.0
250	21	9,726	-57.7		21	8.6
200	21	11,142	-55.4		22	10.7
175	21	11,995	-54.9		23	11.6
150	21	12,979	-55.0		23	13.7
125	21	14,146	-54.2		24	14.9
100	21	15,581	-52.7		24	17.7
80	21	17,024	-51.7		24	19.8
70	21	17,891	-50.8		24	21.3
60	21	18,897	-50.2		24	23.0
50	21	20,088	-49.8		25	23.9
40	20	21,563	-49.2		25	23.8
30	19	23,431	-49.6		26	23.1
25	19	24,624	-49.6		26	23.6
20	15	26,121	-48.1		26	23.8
15	13	28,016	-46.5			
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KWAJALEIN, MARSHALL IS. 1011 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	4	26.6	24.0	08	4.4
1000	30	98	26.0	23.1	08	5.0
950	30	550	23.0	20.4	08	6.4
900	30	1,021	20.4	17.0	09	6.0
850	30	1,514	18.0	14.2	09	5.2
800	30	2,032	15.6	10.3	09	4.5
750	30	2,579	12.9	7.2	09	3.5
700	30	3,157	9.9	2.5	08	2.8
650	30	3,770	6.1	-1.1	08	2.5
600	30	4,422	2.3	-2.9	08	1.8
550	30	5,121	-1.5	-7.6	06	1.6
500	30	5,875	-5.8	-15.9	05	.8
450	30	6,694	-10.4	-20.1	27	.6
400	30	7,592	-16.1	-29.6	29	1.9
350	30	8,585	-22.9	-35.6	28	3.3
300	30	9,695	-31.4	-44.0	28	4.1
250	30	10,958	-41.7	-51.8	27	6.6
200	30	12,430	-54.2	-62.6	26	7.5
175	30	13,272	-61.1	-70.5	27	8.4
150	30	14,212	-68.6		28	8.1
125	30	15,285	-75.7		30	5.5
100	28	16,550	-82.1		01	2.6
80	27	17,802	-80.0		07	3.4
70	24	18,569	-74.8		08	1.5
60	24	19,477	-68.9		06	1.0
50	24	20,577	-65.6		07	4.5
40	24	21,949	-61.4		09	13.6
30	24	23,750	-57.2		09	24.0
25	24	24,912	-54.0		09	28.3
20	24	26,356	-49.7		09	29.9
15	24	28,263	-44.0		09	33.9
10	24	31,018	-38.3		09	33.6
7	21	33,496	-34.0		10	16.6

LAKE CHARLES, LA. 1015 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	5	18.1	16.5	12	1.0
1000	30	135	18.6	15.3	14	2.1
950	30	571	16.4	11.9	17	4.2
900	30	1,034	14.8	7.7	20	5.1
850	30	1,516	13.0	4.0	22	6.7
800	30	2,024	10.7	-1.0	23	7.9
750	30	2,555	8.4	-6.3	23	9.0
700	30	3,127	5.2	-8.6	24	10.6
650	30	3,723	1.7	-12.2	25	12.5
600	30	4,370	-2.8	-16.3	25	14.2
550	30	5,044	-7.4	-18.8	25	16.3
500	30	5,790	-12.4	-23.9	26	17.7
450	30	6,583	-17.9	-28.6	26	20.6
400	30	7,459	-23.9	-34.0	26	22.2
350	30	8,420	-31.1	-41.5	26	26.0
300	30	9,494	-39.3	-48.8	26	29.6
250	30	10,717	-49.2		26	33.3
200	30	12,145	-59.7		26	37.3
175	30	12,973	-62.4		26	37.4
150	30	13,924	-62.6		26	33.1
125	30	15,047	-63.7		25	27.7
100	30	16,407	-66.4		25	20.4
80	30	17,755	-66.9		25	12.8
70	30	18,561	-66.1		24	7.3
60	29	19,502	-63.0		22	3.4
50	29	20,635	-58.9		11	.8
40	29	22,049	-54.8		07	2.6
30	29	23,904	-51.2		07	3.4
25	29	25,095	-48.8		08	2.3
20	25	26,563	-46.2		07	1.7
15	20	28,479	-42.5		01	2.5
10	8	31,262	-38.1			
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LANDER, WYO. 827 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	1,696	-.5	-7.4	18	1.2
1000	30	149				
950	30	567				
900	30	1,011				
850	30	1,474				
800	30	1,961	.7	-10.3	17	1.1
750	30	2,474	-2.1	-12.7	28	1.6
700	30	3,022	-5.8	-15.3	29	4.1
650	30	3,592	-9.7	-19.2	30	5.3
600	30	4,213	-13.3	-22.6	29	5.6
550	30	4,864	-17.7	-27.9	28	7.7
500	30	5,577	-23.0	-31.9	28	9.2
450	30	6,331	-28.6	-36.4	26	10.5
400	30	7,175	-35.2	-41.9	25	10.6
350	30	8,092	-42.3	-48.6	26	11.2
300	30	9,119	-49.5		27	11.2
250	30	10,294	-55.5		26	13.2
200	30	11,709	-56.9		27	14.2
175	30	12,557	-55.9		26	13.5
150	30	13,540	-55.3		26	12.5
125	30	14,701	-55.9		26	12.3
100	30	16,119	-56.5		26	10.8
80	30	17,534	-56.7		25	9.6
70	30	18,379	-56.7		25	9.0
60	30	19,359	-56.4		25	7.2
50	30	20,517	-55.8		25	6.8
40	30	21,939	-55.3		25	5.6
30	30	23,777	-54.6		26	5.8
25	28	24,952	-53.4		28	6.3
20	21	26,385	-52.5		28	7.0
15	17	28,257	-49.9		27	11.3
10	9	30,885	-46.3			
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LITTLE ROCK, ARK. 1006 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	79	11.8	6.1	27	.5
1000	30	132	12.2	6.0	05	.4
950	30	565	13.2	5.7	22	3.0
900	30	1,019	11.8	3.4	24	5.0
850	30	1,497	10.2	-.3	26	7.4
800	30	1,999	7.7	-4.1	26	7.7
750	30	2,523	4.9	-7.9	26	9.3
700	30	3,089	2.0	-11.0	26	11.2
650	30	3,681	-1.9	-14.9	26	13.3
600	30	4,315	-6.0	-18.6	26	15.5
550	30	4,987	-10.3	-23.0	26	17.6
500	30	5,719	-15.5	-28.3	26	19.8
450	30	6,498	-20.7	-31.5	25	23.3
400	30	7,369	-26.7	-37.3	26	26.6
350	30	8,319	-33.8	-44.0	25	30.4
300	30	9,382	-41.9		26	35.1
250	30	10,594	-50.8		26	40.0
200	30	12,017	-59.4		27	42.2
175	28	12,852	-60.1		27	38.8
150	28	13,817	-59.0		26	35.4
125	28	14,956	-60.8		26	28.2
100	28	16,339	-62.2		26	20.6
80	28	17,713	-63.4		26	15.1
70	28	18,534	-62.6		25	8.8
60	28	19,489	-60.3		27	4.4
50	28	20,630	-58.2		27	1.2
40	28	22,041	-55.8		28	.8
30	27	23,884	-52.7		33	2.2
25	24	25,061	-50.8		30	3.8
20	24	26,519	-48.8		28	6.4
15	22	28,424	-45.1		28	9.8
10	13	31,122	-40.6			
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MCGRATH, ALASKA 995 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	103	-4.3	-9.9	33	.9
1000	29	58				
950	29	461	-3.3	-10.7	13	1.0
900	29	890	-5.6	-12.1	16	2.2
850	29	1,336	-8.3	-13.8	18	3.2
800	29	1,804	-11.1	-16.9	20	4.6
750	29	2,290	-14.2	-19.7	19	5.0
700	29	2,816	-17.6	-23.0	19	5.4
650	29	3,360	-20.8	-26.0	19	5.4
600	29	3,954	-24.6	-30.2	19	5.8
550	29	4,573	-28.8	-34.6	19	6.5
500	29	5,257	-33.3	-38.0	20	7.3
450	29	5,983	-38.3	-42.1	21	8.7
400	29	6,790	-43.8	-45.5	21	9.4
350	29	7,675	-50.1		22	10.0
300	29	8,669	-55.1		22	11.0
250	29	9,828	-55.9		23	12.5
200	29	11,260	-52.7		24	12.1
175	29	12,123	-51.9		24	12.8
150	29	13,122	-51.5		25	14.3
125	29	14,307	-50.8		25	15.1
100	29	15,763	-49.7		25	15.7
80	28	17,235	-48.8		25	16.8
70	28	18,113	-48.6		24	16.2
60	28	19,128	-48.4		25	15.7
50	28	20,327	-48.4		25	14.6
40	27	21,806	-48.8		26	12.2
30	27	23,695	-48.4		27	9.3
25	25	24,690	-48.6		28	9.7
20	19	26,433	-46.3		32	2.5
15	7	28,421	-45.2			
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* MAJURO, MARSHALL IS. 1011 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	3	28.6	24.8	09	3.3
1000	30	98	26.8	21.7	09	3.8
950	30	544	22.9	18.3	10	5.0
900	30	1,020	20.3	14.7	10	4.9
850	30	1,513	17.9	11.1	10	4.5
800	30	2,031	15.4	7.8	11	3.9
750	30	2,579	12.7	4.2	11	3.1
700	30	3,154	9.7	.2	12	2.2
650	30	3,764	6.2	-2.6	13	1.7
600	30	4,419	2.5	-5.6	10	.7
550	30	5,111	-1.0	-10.0	34	.4
500	30	5,876	-5.2	-14.9	24	.8
450	30	6,692	-9.9	-20.6	28	1.1
400	30	7,599	-15.1	-28.2	25	2.0
350	30	8,596	-21.9	-35.7	24	3.2
300	30	9,714	-30.1	-43.7	26	4.9
250	30	10,986	-40.3	-51.9	26	5.7
200	30	12,469	-52.8		26	7.5
175	30	13,318	-59.9		27	8.1
150	30	14,265	-67.3		27	7.5
125	30	15,345	-74.7		28	5.7
100	30	16,621	-81.2		31	3.3
80	30	17,877	-78.6		02	1.9
70	30	18,646	-73.2		31	.8
60	27	19,562	-66.3		20	.8
50	21	20,672	-63.6		10	2.8
40	20	22,053	-59.9		09	14.3
30	16	23,862	-55.5		09	26.3
25	12	25,038	-51.0		09	28.6
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* MARCUS IS., N. PACIFIC 1015 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	9	25.0	19.5	11	3.1
1000	30	141	22.0	14.4	12	5.3
950	30	584	17.7	10.1	12	5.6
900	30	1,046	15.1	7.4	13	4.7
850	30	1,527	12.4	2.5	16	2.8
800	30	2,036	12.3	-4.4	20	1.9
750	30	2,581	10.1	-8.3	24	2.9
700	30	3,147	7.4	-11.1	26	4.1
650	30	3,755	4.1	-14.7	26	5.5
600	30	4,400	.5	-17.9	27	7.3
550	30	5,090	-3.3	-22.6	27	9.2
500	30	5,842	-8.2	-26.7	27	10.2
450	30	6,651	-13.4	-31.0	27	13.1
400	30	7,540	-19.6	-36.2	27	14.6
350	30	8,518	-26.7	-42.4	28	18.2
300	30	9,613	-34.6	-49.4	28	22.4
250	30	10,862	-43.9		27	27.4
200	29	12,323	-54.7		28	33.6
175	28	13,167	-59.9		28	33.8
150	28	14,118	-65.1		28	29.1
125	28	15,214	-70.4		28	22.1
100	28	16,523	-74.6		28	12.6
80	28	17,823	-73.0		29	2.3
70	28	18,612	-69.2		09	3.0
60	28	19,543	-64.6		09	7.3
50	28	20,669	-60.3		09	9.3
40	27	22,077	-55.4		09	10.4
30	24	23,924	-51.1		09	11.5
25	19	25,112	-48.4		10	13.0
20	10	26,615	-44.9			
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* MEDFORD, OREG. 975 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	401	3.7	-.4	30	.7
1000	30	194				
950	30	616	5.5	-1.0	31	1.6
900	30	1,055	3.9	-3.3	33	1.2
850	30	1,518	1.5	-6.5	33	.7
800	30	2,005	-.7	-12.3	31	2.5
750	30	2,516	-2.7	-15.5	32	5.4
700	30	3,064	-5.0	-17.3	32	7.8
650	30	3,638	-8.4	-21.1	31	9.2
600	30	4,262	-11.8	-24.9	31	11.4
550	30	4,920	-15.6	-28.7	31	13.3
500	30	5,638	-20.3	-33.1	31	14.8
450	30	6,405	-26.0	-37.1	30	16.5
400	30	7,253	-32.3	-42.6	31	18.1
350	30	8,182	-39.3	-47.3	31	19.9
300	30	9,220	-47.4		31	20.5
250	30	10,403	-55.8		31	22.1
200	30	11,803	-61.0		31	21.7
175	30	12,634	-59.9		30	19.0
150	29	13,602	-58.4		30	17.1
125	29	14,751	-58.0		30	13.7
100	29	16,152	-58.6		30	11.4
80	29	17,556	-58.5		29	8.0
70	28	18,395	-57.8		30	7.2
60	28	19,368	-57.1		30	6.1
50	28	20,523	-56.6		29	5.8
40	28	21,941	-55.8		28	5.3
30	26	23,780	-54.6		27	6.5
25	25	24,951	-53.8		28	7.4
20	25	26,390	-52.5		27	9.6
15	25	28,256	-50.8		28	14.7
10	17	30,932	-47.3		27	20.8
7	9	33,295	-43.5			

MERIDA, MEXICO 1015 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	11	20.5	19.5	11	3.9
1000	30	141	21.9	20.0	12	7.2
950	30	589	21.0	14.2	14	10.4
900	30	1,056	20.3	8.0	13	8.6
850	30	1,547	18.1	3.6	12	6.0
800	30	2,063	14.8	.3	11	3.3
750	30	2,600	11.9	-5.6	11	2.5
700	30	3,181	9.3	-11.0	09	2.4
650	30	3,784	5.6	-14.4	06	2.3
600	30	4,440	1.5	-18.5	03	1.7
550	30	5,127	-2.7	-22.9	35	1.8
500	30	5,886	-7.2	-26.9	32	2.5
450	30	6,694	-13.1	-31.3	29	3.3
400	30	7,587	-19.8	-36.9	27	4.4
350	30	8,564	-27.0	-42.8	27	6.6
300	30	9,657	-35.7	-49.5	26	9.4
250	30	10,898	-45.3		26	12.2
200	30	12,350	-56.4		26	16.7
175	29	13,185	-61.7		25	16.7
150	29	14,129	-65.7		25	14.4
125	29	15,229	-68.6		25	12.4
100	29	16,553	-72.6		23	8.0
80	29	17,854	-74.4		17	4.4
70	29	18,634	-71.9		12	4.7
60	29	19,555	-65.6		10	6.6
50	29	20,681	-59.0		09	7.7
40	29	22,098	-54.3		08	9.5
30	27	23,955	-50.3		08	13.5
25	26	25,151	-47.3		08	14.1
20	23	26,635	-44.7		09	16.1
15	13	28,570	-39.8		09	13.8
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MIAMI, FLA. 1017 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	4	21.2	18.2	08	.5
1000	30	152	21.5	17.7	13	1.1
950	30	597	19.0	14.0	14	2.0
900	30	1,0[illegible]	16.3	10.2	11	1.5
850	30	1,545	14.3	3.5	02	1.6
800	30	2,056	12.2	-2.5	02	1.9
750	30	2,594	9.8	-6.9	35	3.1
700	30	3,165	6.9	-9.8	33	3.9
650	30	3,770	3.5	-14.3	33	5.9
600	30	4,416	-.2	-18.3	32	7.5
550	30	5,100	-4.7	-21.4	31	9.0
500	30	5,852	-9.3	-25.1	30	10.4
450	30	6,653	-14.7	-30.5	30	13.0
400	30	7,542	-21.0	-35.9	30	15.1
350	30	8,515	-28.4	-42.4	29	17.2
300	30	9,5[illegible]1	-37.1	-49.6	29	19.1
250	30	10,836	-46.9		30	22.7
200	30	12,282	-57.1		29	27.0
175	30	13,119	-60.8		28	27.2
150	30	14,071	-63.3		28	25.4
125	29	15,183	-66.1		28	23.1
100	29	16,525	-69.6		29	16.1
80	29	17,646	-71.2		30	7.7
70	29	18,637	-69.7		34	3.9
60	29	19,566	-65.3		06	4.4
50	28	20,[illegible]7	-60.1		07	5.4
40	28	22,[illegible]99	-54.8		09	7.4
30	27	23,959	-50.2		09	9.2
25	23	25,144	-48.6		1[illegible]	10.5
20	22	26,622	-45.5		09	10.3
15	13	28,544	-42.0		09	11.0
10	11	31,302	-37.9			
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MIDLAND, TEXAS 915 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	674	10.4	4.8	20	1.2
1000	30	124				
950	30	553				
900	30	1,012	12.5	2.9	21	2.1
850	30	1,492	12.3	-1.5	25	5.3
800	30	1,998	10.0	-4.2	26	7.3
750	30	2,524	6.5	-7.9	26	9.1
700	30	3,094	2.8	-11.3	25	10.8
650	30	3,687	-1.3	-14.5	25	12.6
600	30	4,324	-5.5	-19.1	25	14.7
550	30	4,996	-10.0	-23.3	25	19.0
500	30	5,730	-14.9	-28.4	25	20.5
450	30	6,510	-20.4	-32.5	25	23.8
400	30	7,380	-26.4	-37.8	25	27.2
350	30	8,332	-33.8	-44.5	25	29.5
300	30	9,394	-42.1		25	35.4
250	30	10,6[illegible]3	-51.3		25	40.0
200	30	12,021	-60.3		25	41.3
175	30	12,851	-60.7		25	38.3
150	30	13,811	-60.7		25	33.6
125	30	14,941	-62.6		25	28.9
100	30	16,311	-63.7		25	21.2
80	30	17,679	-64.9		24	11.8
70	30	18,493	-64.3		23	6.2
60	28	19,438	-61.0		21	2.1
50	27	20,581	-57.8		26	.2
40	27	21,995	-55.3		07	1.7
30	26	23,848	-51.4		05	1.7
25	24	25,040	-49.4		02	1.2
20	23	26,508	-47.2		33	1.4
15	22	28,424	-44.0		29	4.9
10	14	31,147	-40.4		25	8.1
7	5	33,643	-36.2			

MONTERREY, MEXICO 967 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	21	423	17.6	14.9	36	1.3
1000	21	138				
950	21	579	18.1	14.5	03	1.6
900	21	1,042	16.9	12.1	02	1.3
850	21	1,529	14.9	8.1	14	.8
800	21	2,042	13.7	2.7	22	3.3
750	21	2,585	11.2	-2.4	23	5.6
700	21	3,158	7.9	-6.8	24	6.9
650	21	3,762	3.4	-9.7	24	7.9
600	21	4,410	-1.4	-13.3	24	10.7
550	21	5,096	-6.4	-16.8	24	13.2
500	21	5,838	-11.8	-21.7	25	15.2
450	21	6,633	-17.4	-27.5	25	17.0
400	21	7,515	-22.8	-34.1	24	19.2
350	21	8,480	-30.4	-40.3	24	22.0
300	21	9,557	-38.8	-49.6	24	25.2
250	21	10,783	-49.1		24	28.2
200	21	12,211	-60.2		25	29.3
175	21	13,037	-63.8		24	28.7
150	21	13,978	-64.9		24	27.5
125	21	15,087	-66.6		24	21.7
100	21	16,429	-69.3		23	15.7
80	20	17,757	-70.1		22	8.4
70	20	18,553	-68.1		21	4.9
60	20	19,488	-63.6		17	3.1
50	20	20,622	-58.3		09	3.6
40	19	22,038	-54.7		07	6.1
30	19	23,893	-50.9		08	6.7
25	18	25,084	-49.0		08	6.0
20	17	26,559	-45.5		08	8.0
15	13	28,490	-42.3		07	11.4
10	9	31,243	-38.9			
7						

MONTGOMERY, ALA. 1011 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	61	14.2	12.0	21	.3
1000	30	155	15.1	11.6	22	.5
950	30	593	15.4	7.6	23	1.8
900	30	1,049	13.8	4.4	25	4.0
850	30	1,530	11.7	1.2	25	5.7
800	30	2,035	9.7	-4.2	25	7.1
750	30	2,568	7.1	-8.0	26	8.9
700	30	3,133	4.1	-10.2	26	11.6
650	30	3,731	.5	-13.2	27	13.1
600	30	4,370	-3.8	-16.3	27	14.5
550	30	5,047	-8.4	-20.5	27	16.0
500	30	5,785	-13.3	-25.2	27	18.1
450	30	6,576	-18.9	-30.8	27	18.8
400	30	7,447	-24.9	-36.1	27	21.0
350	30	8,405	-31.9	-43.5	27	25.1
300	30	9,476	-40.0	-50.9	27	28.8
250	30	10,696	-49.5		27	32.6
200	30	12,124	-59.5		27	36.3
175	30	12,955	-61.4		27	35.8
150	30	13,913	-60.8		27	31.4
125	30	15,043	-62.5		27	25.4
100	29	16,409	-64.5		27	20.0
80	29	17,766	-66.4		27	13.1
70	29	18,575	-65.2		27	8.7
60	29	19,522	-62.2		26	4.2
50	29	20,655	-59.5		27	1.3
40	29	22,065	-55.3		08	.8
30	29	23,915	-51.6		34	.7
25	29	25,104	-49.1		25	1.4
20	28	26,578	-46.2		25	3.2
15	27	28,503	-42.5		28	5.2
10	19	31,269	-38.6		27	8.3
7	9	33,687	-37.6			

* NANTUCKET, MASS. 1017 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	14	6.4	3.8	36	1.4
1000	30	154	6.8	.8	33	1.1
950	30	573	6.6	-2.1	31	3.6
900	30	1,019	5.0	-3.8	32	4.8
850	30	1,484	3.1	-5.9	31	5.0
800	30	1,974	.7	-9.6	29	5.4
750	30	2,489	-1.3	-12.3	29	6.5
700	30	3,038	-4.0	-16.2	28	7.8
650	30	3,615	-7.1	-21.7	28	9.2
600	30	4,240	-10.5	-24.9	29	10.8
550	30	4,899	-14.8	-28.5	28	11.5
500	30	5,619	-19.6	-32.7	28	13.3
450	30	6,390	-24.7	-37.5	27	14.4
400	30	7,240	-31.3	-43.0	27	14.8
350	30	8,171	-38.3	-48.6	27	16.9
300	29	9,218	-46.2		27	19.6
250	29	10,409	-53.6		26	21.5
200	28	11,832	-56.4		28	20.9
175	28	12,681	-55.5		28	19.3
150	27	13,662	-54.7		28	17.6
125	27	14,826	-55.4		28	14.2
100	27	16,244	-56.6		28	12.6
80	27	17,654	-58.0		28	9.3
70	27	18,494	-58.0		29	7.7
60	27	19,468	-57.0		29	5.4
50	27	20,625	-56.3		29	4.1
40	26	22,042	-55.4		31	3.3
30	26	23,884	-53.7		29	4.1
25	26	25,058	-52.9		27	5.7
20	26	26,500	-51.7		28	8.2
15	24	28,382	-48.6		27	12.5
10	20	31,078	-43.4		27	19.2
7	14	33,489	-38.4		26	25.8

See reference note at end of table

RAWINSONDE DATA

Average monthly values

NASHVILLE, TENN. 997 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	180	10.6	7.5	14	.7
1000	30	154				
950	30	585	11.7	3.9	22	3.1
900	30	1,034	9.6	1.2	25	5.2
850	30	1,507	7.7	-2.4	26	6.6
800	30	2,005	5.8	-6.1	27	7.8
750	30	2,532	3.1	-9.1	26	9.1
700	30	3,088	-.1	-11.9	26	10.9
650	30	3,675	-3.5	-14.1	26	12.6
600	30	4,306	-7.1	-18.0	26	14.8
550	30	4,976	-11.3	-22.2	26	17.3
500	30	5,705	-16.2	-26.0	26	20.5
450	30	6,482	-21.5	-31.5	26	23.0
400	30	7,348	-27.6	-37.4	26	25.6
350	30	8,295	-34.9	-44.0	27	26.8
300	30	9,352	-43.2		27	31.1
250	30	10,555	-52.3		27	36.5
200	30	11,971	-59.5		27	40.1
175	30	12,805	-59.0		27	36.8
150	30	13,774	-58.7		27	31.6
125	30	14,917	-59.7		27	24.9
100	30	16,306	-60.9		27	18.2
80	30	17,686	-62.5		27	12.5
70	30	18,510	-61.6		27	7.4
60	30	19,467	-60.3		27	3.9
50	30	20,609	-57.9		30	1.4
40	30	22,023	-55.7		33	1.6
30	30	23,864	-53.4		31	2.3
25	30	25,041	-51.6		29	4.6
20	29	26,494	-49.2		28	8.0
15	24	28,403	-45.4		27	14.3
10	17	31,118	-40.4		28	25.3
7	7	33,559	-36.9			

* NOME, ALASKA 1007 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	5	-10.3	-15.1	05	2.6
1000	30	59			05	2.9
950	30	462	-9.0	-13.0	10	3.5
900	30	874	-10.4	-13.6	12	2.4
850	30	1,314	-11.6	-15.1	14	2.2
800	30	1,777	-13.7	-18.3	16	1.6
750	30	2,265	-16.4	-21.0	17	2.0
700	30	2,782	-19.5	-24.2	17	3.0
650	30	3,328	-22.7	-28.5	18	3.2
600	30	3,912	-26.6	-32.5	19	3.2
550	30	4,532	-31.0	-36.6	20	3.9
500	30	5,205	-35.8	-40.1	20	4.3
450	30	5,929	-40.6	-43.1	21	5.6
400	30	6,727	-45.6		22	5.8
350	30	7,607	-50.9		22	7.2
300	30	8,601	-54.7		23	8.7
250	30	9,765	-55.3		23	9.7
200	29	11,199	-52.9		23	10.7
175	28	12,069	-52.1		23	11.1
150	28	13,067	-51.7		24	12.8
125	28	14,251	-51.2		24	13.2
100	27	15,709	-49.8		24	15.0
80	27	17,172	-48.9		24	15.4
70	27	18,050	-48.3		24	16.1
60	27	19,067	-47.6		24	16.5
50	26	20,275	-47.2		24	17.0
40	26	21,752	-46.9		25	15.8
30	26	23,658	-47.1		25	13.8
25	26	24,864	-46.9		25	12.4
20	26	26,344	-46.4		25	10.3
15	26	28,257	-45.3		26	8.0
10	20	31,074	-41.8		03	1.4
7	13	33,543	-39.8		03	5.1

NORTH PLATTE, NEBR. 915 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	848	1.5	-3.5	33	2.0
1000	30	120				
950	30	538				
900	30	978	3.8	-4.8	31	3.6
850	30	1,444	4.8	-6.0	30	5.5
800	30	1,937	3.1	-8.2	30	6.5
750	30	2,455	.2	-11.4	30	7.0
700	30	3,007	-3.5	-15.6	29	7.9
650	30	3,588	-6.8	-19.3	28	8.9
600	30	4,211	-11.1	-22.8	28	9.7
550	30	4,871	-15.9	-27.3	27	9.9
500	30	5,585	-21.1	-33.3	27	10.7
450	30	6,349	-27.1	-39.5	27	11.7
400	30	7,193	-33.7	-44.9	27	13.2
350	30	8,117	-40.8	-50.3	26	15.1
300	30	9,150	-47.7		26	17.6
250	30	10,337	-53.9		26	20.4
200	30	11,758	-56.5		25	20.9
175	30	12,608	-55.4		26	19.8
150	30	13,592	-55.1		26	19.0
125	30	14,756	-55.4		26	17.2
100	29	16,173	-56.5		25	13.2
80	29	17,588	-57.0		25	10.8
70	29	18,433	-57.0		25	9.2
60	29	19,410	-56.7		25	7.1
50	29	20,570	-55.5		25	5.6
40	29	21,995	-54.8		26	5.6
30	28	23,841	-54.1		27	6.1
25	27	25,019	-52.8		27	6.5
20	24	26,464	-51.5		27	9.5
15	20	28,341	-49.1		28	12.8
10	9	31,035	-43.7			

OAKLAND, CALIF. 1017 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	6	10.1	7.0	25	.8
1000	30	149	10.2	5.4	28	.9
950	30	580	10.7	-.8	35	3.3
900	30	1,027	10.5	-7.3	36	5.7
850	30	1,501	8.0	-9.6	34	4.8
800	30	1,999	5.2	-12.9	33	5.5
750	30	2,522	2.2	-14.8	32	6.1
700	30	3,078	-.9	-18.1	32	7.1
650	30	3,662	-4.5	-21.7	32	8.3
600	30	4,292	-8.7	-24.8	32	10.4
550	30	4,955	-13.2	-28.4	32	11.3
500	30	5,681	-18.2	-32.5	32	11.8
450	30	6,453	-24.0	-37.7	32	13.1
400	30	7,309	-30.6	-43.8	32	15.5
350	30	8,243	-38.0	-49.1	32	16.0
300	30	9,287	-46.2		32	17.6
250	29	10,469	-55.4		32	18.8
200	29	11,867	-61.4		31	18.4
175	29	12,697	-59.8		30	17.7
150	28	13,660	-59.1		30	16.5
125	28	14,803	-59.1		30	13.8
100	28	16,199	-59.9		29	10.7
80	28	17,596	-58.8		29	7.8
70	28	18,434	-58.6		29	6.4
60	28	19,403	-57.7		28	5.3
50	28	20,557	-56.4		27	4.5
40	27	21,980	-54.7		26	5.3
30	25	23,826	-53.1		27	5.9
25	25	25,005	-51.4		27	6.8
20	23	26,467	-49.8		28	9.1
15	22	28,354	-47.6		27	14.1
10	13	31,042	-43.9			

OMAHA, NEBR. 965 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	4[illegible]3	6.1	1.2	23	1.4
1000	30	1[illegible]5				
950	30	5[illegible]5	7.2	-.6	24	2.2
900	30	972	6.3	-2.7	24	5.9
850	30	1,440	4.9	-4.8	27	7.0
800	30	1,932	2.2	-7.2	27	7.5
750	30	2,449	-.5	-10.9	27	8.2
700	30	2,999	-3.9	-14.3	27	8.7
650	30	3,577	-7.4	-19.0	27	10.1
600	30	4,200	-11.7	-24.5	27	11.7
550	30	4,856	-16.2	-28.3	27	12.8
500	30	5,573	-21.2	-33.9	27	13.7
450	30	6,337	-26.4	-39.2	27	15.6
400	30	7,186	-32.6	-45.0	27	18.5
350	30	8,112	-39.5	-48.3	26	21.1
300	30	9,150	-46.9		26	23.6
250	30	10,339	-53.1		26	25.3
200	30	11,764	-56.2		26	26.9
175	30	12,612	-55.8		26	25.5
150	30	13,596	-54.6		26	23.4
125	30	14,763	-55.0		26	18.7
100	30	16,142	-56.5		26	14.4
80	29	17,592	-57.6		26	11.8
70	29	18,434	-57.3		26	10.2
60	28	19,409	-56.7		26	6.5
50	27	20,567	-55.7		26	5.2
40	27	21,990	-55.1		27	5.0
30	26	23,830	-54.6		28	6.3
25	25	25,003	-53.5		28	7.2
20	24	26,437	-52.3		28	9.4
15	18	28,308	-50.1		28	13.1

† PAGO PAGO, AMERICAN SAMOA 1010 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	5	27.7	23.9	09	.9
1000	30	95	26.6	21.3	07	.6
950	30	542	22.8	17.5	04	.7
900	30	1,016	19.8	14.3	35	1.0
850	30	1,507	17.3	10.4	33	2.0
800	30	2,023	14.8	6.7	32	2.6
750	30	2,564	12.2	2.6	31	3.0
700	30	3,144	9.1	-1.0	31	3.3
650	30	3,748	5.6	-5.0	30	3.5
600	30	4,405	2.1	-8.7	30	4.3
550	29	5,096	-1.6	-12.9	29	3.2
500	29	5,859	-5.7	-17.8	[illegible]	3.4
450	29	6,670	-10.5	-23.6	[illegible]	3.9
400	29	7,576	-16.3	-29.6	27	4.1
350	29	8,568	-23.3	-36.8	27	5.4
300	29	9,678	-31.8	-45.1	25	7.4
250	29	10,941	-42.0		25	9.0
200	29	12,414	-54.1		24	10.1
175	29	13,258	-60.9		24	12.7
150	29	14,201	-67.5		23	12.4
125	29	15,282	-73.9		23	8.4
100	29	16,567	-79.3		24	4.1
80	27	17,836	-74.9		12	2.4
70	23	18,621	-69.3		09	4.2
60	19	19,551	-65.3		09	6.8
50	16	20,668	-61.5		09	8.2
40	14	22,071	-56.8		09	11.9
30	13	23,912	-52.5		09	17.8
25	13	25,099	-49.0		09	22.0
20	10	26,575	-45.1			
15	5	28,503	-41.3			
10	5	31,290	-35.3			
7						
5						

* PEORIA, ILL. 991 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	200	6.9	2.9	19	2.0
1000	30	124				
950	30	545	8.2	.2	22	4.4
900	30	993	6.7	-3.4	24	7.5
850	30	1,460	4.5	-6.4	25	8.1
800	30	1,952	1.8	-10.0	25	9.1
750	30	2,471	-.8	-13.8	26	10.3
700	30	3,019	-3.5	-16.8	26	11.4
650	30	3,595	-6.9	-20.3	26	13.0
600	30	4,221	-10.8	-25.2	26	14.9
550	30	4,879	-15.0	-29.5	26	16.9
500	30	5,599	-19.7	-33.6	26	18.5
450	30	6,365	-25.2	-37.8	26	20.6
400	30	7,218	-31.5	-44.2	26	23.0
350	30	8,150	-38.1	-49.4	26	26.0
300	30	9,195	-45.4		26	28.8
250	30	10,390	-53.2		26	31.7
200	30	11,809	-57.4		27	31.7
175	30	12,657	-55.4		27	27.8
150	30	13,640	-55.3		27	23.7
125	30	14,802	-56.4		27	20.3
100	30	16,213	-57.7		26	15.5
80	30	17,618	-58.7		26	11.1
70	30	18,456	-58.5		26	8.5
60	30	19,427	-57.9		26	6.6
50	30	20,579	-56.5		26	4.6
40	30	21,997	-55.7		28	3.8
30	30	23,834	-54.6		28	3.9
25	30	25,003	-53.6		28	5.5
20	30	26,441	-52.7		27	7.4
15	27	28,313	-49.5		28	12.2
10	20	31,008	-44.0		27	19.0
7	16	33,419	-38.6		27	26.5
5	5	35,806	-34.8			

* PITTSBURGH, PA. 975 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	359	6.2	.5	23	1.2
1000	30	151				
950	30	577	7.9	-1.5	24	2.7
900	30	1,018	5.7	-4.7	27	6.0
850	30	1,483	3.0	-7.4	28	6.9
800	30	1,973	1.4	-10.4	27	8.8
750	30	2,493	-.7	-13.4	27	10.4
700	30	3,039	-3.2	-16.1	27	11.6
650	30	3,620	-6.6	-21.3	27	12.6
600	30	4,244	-10.1	-24.5	27	14.6
550	30	4,905	-14.5	-28.3	27	16.0
500	30	5,624	-19.4	-32.6	28	18.1
450	30	6,395	-24.8	-36.9	28	21.2
400	30	7,246	-30.6	-41.9	27	23.9
350	30	8,181	-37.6	-47.0	27	26.8
300	30	9,227	-45.0		27	30.1
250	30	10,424	-52.8		27	33.0
200	30	11,845	-57.0		28	31.3
175	30	12,690	-56.4		28	25.9
150	30	13,672	-55.3		28	23.6
125	30	14,832	-56.5		28	19.1
100	30	16,243	-57.8		27	14.2
80	30	17,648	-58.3		28	10.1
70	30	18,487	-58.3		28	8.4
60	30	19,457	-57.7		29	5.9
50	30	20,610	-56.4		29	4.2
40	30	22,029	-55.7		29	4.2
30	30	23,866	-54.3		28	5.7
25	30	25,038	-52.9		27	7.4
20	30	26,483	-51.1		28	7.4
15	29	28,361	-48.5		28	8.1
10	25	31,035	-44.3		28	16.7
7	22	33,458	-39.0		27	25.0
5	13	35,791	-34.3			

• PONAPE, CAROLINE IS. 1005 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	39	28.4	23.9	06	2.7
1000	30	79	28.0	22.9	07	2.9
950	30	527	23.9	17.8	10	4.1
900	30	1,005	20.8	14.6	12	4.3
850	30	1,498	18.4	10.3	13	4.0
800	30	2,017	16.1	5.7	13	3.6
750	30	2,560	13.3	2.5	15	3.2
700	30	3,142	10.2	.0	15	3.4
650	30	3,752	7.1	-4.3	14	2.7
600	30	4,411	3.6	-8.8	11	3.0
550	30	5,108	-.1	-13.2	10	3.5
500	30	5,871	-4.5	-18.3	10	3.9
450	30	6,692	-9.3	-24.0	10	4.0
400	30	7,597	-14.8	-29.8	09	4.1
350	30	8,595	-21.8	-36.9	11	3.0
300	29	9,711	-30.1	-45.1	13	3.1
250	29	10,982	-40.4	-53.2	13	2.6
200	29	12,464	-52.8		14	1.6
175	29	13,312	-59.9		07	.6
150	29	14,259	-67.0		01	1.9
125	29	15,338	-74.6		02	2.9
100	29	16,612	-81.3		06	4.4
80	29	17,872	-77.6		06	4.6
70	28	18,650	-71.3		13	1.3
60	27	19,574	-66.3		17	1.4
50	21	20,686	-62.5		09	4.3
40	18	22,077	-58.6		10	15.0
30	16	23,905	-53.5		09	26.7
25	12	25,084	-50.4		09	29.0
20	11	26,556	-46.1		09	29.0
15	6	28,485	-42.6			

PORTLAND, MAINE 1015 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	20	4.6	-.8	28	.6
1000	30	142	5.2	-2.5	32	1.3
950	30	562	5.0	-3.4	30	3.1
900	30	1,002	3.6	-4.4	30	3.6
850	30	1,464	1.5	-6.3	29	4.3
800	30	1,951	-.6	-9.9	29	6.1
750	30	2,462	-2.8	-13.4	28	7.7
700	30	3,011	-5.2	-16.4	29	8.8
650	30	3,582	-8.6	-21.5	28	10.7
600	30	4,206	-12.3	-25.4	28	11.8
550	30	4,861	-16.2	-29.5	28	13.1
500	30	5,578	-21.1	-34.2	27	14.3
450	30	6,338	-26.7	-39.9	27	15.9
400	30	7,189	-32.5	-45.0	27	15.2
350	30	8,117	-39.4	-47.2	26	17.1
300	30	9,155	-47.1		27	13.5
250	30	10,342	-53.8		28	15.5
200	30	11,764	-55.6		28	15.3
175	30	12,618	-53.9		28	15.3
150	30	13,607	-53.8		28	14.5
125	30	14,778	-54.1		28	12.5
100	30	16,203	-55.8		28	10.9
80	30	17,621	-56.7		29	7.5
70	30	18,466	-56.9		29	6.0
60	30	19,445	-56.2		29	4.7
50	30	20,6[illegible]6	-55.6		29	3.5
40	30	22,029	-55.0		29	2.7
30	30	23,869	-54.1		29	3.7
25	30	25,040	-53.1		28	3.7
20	29	26,480	-51.9		27	6.7
15	26	28,357	-49.3		27	9.4
10	20	31,050	-43.0		27	17.0
7	16	33,467	-38.2		27	27.0
5	12	35,816	-33.6			

• QUILLAYUTE, WASH. 1015 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	58	4.6	3.9	06	.2
1000	30	176	4.8	3.1	21	.5
950	30	593	3.2	.7	25	3.8
900	30	1,030	.4	-2.4	26	5.1
850	30	1,487	-1.9	-5.7	26	5.7
800	30	1,967	-4.2	-10.6	27	7.1
750	30	2,473	-7.1	-14.7	27	8.3
700	30	3,009	-9.9	-17.7	28	9.6
650	30	3,575	-12.6	-21.3	28	12.0
600	30	4,185	-15.9	-24.4	28	13.7
550	30	4,834	-19.9	-27.5	28	15.2
500	30	5,538	-24.3	-32.6	29	17.0
450	30	6,295	-29.3	-36.3	29	19.1
400	30	7,130	-35.1	-40.9	29	21.2
350	30	8,048	-41.3	-44.5	30	23.4
300	30	9,078	-48.3		29	25.6
250	30	10,260	-54.9		30	25.3
200	30	11,672	-57.9		29	22.8
175	30	12,514	-57.1		29	19.3
150	29	13,492	-55.6		29	16.9
125	29	14,656	-54.9		29	14.9
100	29	16,079	-55.7		29	11.0
80	29	17,497	-56.4		29	8.9
70	29	18,344	-56.1		30	7.9
60	29	19,324	-55.6		30	7.1
50	29	20,487	-55.4		31	6.6
40	28	21,913	-55.7		30	6.2
30	27	23,744	-55.1		30	5.2
25	26	24,911	-54.9		30	4.8
20	24	26,337	-54.6		30	4.8
15	23	28,183	-53.3		29	6.5
10	16	30,808	-49.9		30	5.4
7	9	33,218	-43.4			
5						
4						

RAPID CITY, S. DAK. 903 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	966	1.3	-5.2	33	2.6
1000	29	135				
950	29	556				
900	29	992			32	3.0
850	29	1,455	3.1	-7.8	33	6.6
800	29	1,945	.4	-10.3	33	6.5
750	29	2,455	-2.7	-12.3	31	6.5
700	29	3,004	-6.2	-14.9	31	7.1
650	29	3,570	-9.4	-19.1	29	7.4
600	29	4,194	-13.3	-23.0	28	9.0
550	29	4,846	-17.7	-26.9	28	10.5
500	29	5,558	-22.6	-32.8	28	11.3
450	29	6,319	-28.6	-38.1	27	12.6
400	29	7,156	-34.9	-43.8	27	12.1
350	29	8,073	-42.4	-49.1	26	12.3
300	29	9,098	-49.8		26	13.6
250	29	10,273	-55.7		26	15.8
200	28	11,692	-56.7		26	16.1
175	28	12,540	-55.5		26	15.7
150	28	13,524	-55.0		26	14.9
125	28	14,688	-55.2		26	14.8
100	28	16,111	-55.9		25	12.5
80	28	17,530	-55.9		25	11.1
70	28	18,379	-56.1		25	9.0
60	28	19,359	-56.1		25	7.1
50	27	20,519	-55.3		26	5.7
40	26	21,941	-55.1		25	5.6
30	25	23,782	-54.5		27	4.7
25	24	24,949	-54.2		28	5.4
20	22	26,392	-52.6		28	4.9
15	18	28,256	-49.6		27	8.6
10	6	30,963	-43.6			

ST CLOUD, MINN. 974 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	316	3.3	-1.6	05	.4
1000	30	99				
950	30	516	4.3	-3.8	27	.6
900	30	956	3.3	-5.1	29	3.9
850	30	1,418	2.1	-6.6	31	4.5
800	30	1,906	-.1	-8.5	29	5.4
750	30	2,419	-2.9	-11.2	28	6.4
700	30	2,966	-6.0	-13.9	28	7.8
650	30	3,538	-9.4	-17.0	28	8.9
600	30	4,158	-13.3	-20.6	28	9.8
550	30	4,808	-17.3	-26.9	28	11.2
500	30	5,524	-22.2	-31.7	28	12.5
450	30	6,281	-28.0	-37.3	28	13.8
400	30	7,126	-34.5	-43.1	29	14.2
350	30	8,046	-41.5	-48.7	28	14.9
300	30	9,076	-49.0		27	15.4
250	30	10,256	-54.8		27	18.6
200	30	11,677	-55.6		27	19.8
175	30	12,531	-53.9		27	17.9
150	30	13,524	-53.4		26	16.8
125	30	14,698	-53.8		26	15.0
100	30	16,128	-54.6		26	12.8
80	30	17,554	-55.4		26	10.8
70	30	18,403	-55.9		26	9.0
60	30	19,387	-55.4		26	7.3
50	30	20,550	-55.2		26	6.1
40	30	21,976	-54.8		26	4.9
30	28	23,819	-54.7		26	4.7
25	26	24,987	-54.6		27	4.7
20	24	26,422	-53.7		27	4.2
15	19	28,256	-51.9		27	8.8
10	6	30,960	-46.5			

* ST PAUL IS., ALASKA 1006 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	10	-3.8	-5.1	36	3.1
1000	30	51			34	3.9
950	30	454	-5.5	-6.8	33	1.8
900	30	879	-7.2	-9.0	26	2.3
850	30	1,323	-9.2	-12.1	28	3.0
800	30	1,791	-11.3	-15.0	28	2.8
750	30	2,282	-14.1	-18.7	27	3.0
700	30	2,805	-17.0	-22.5	27	3.9
650	30	3,353	-20.3	-26.1	26	4.8
600	30	3,946	-24.1	-30.4	27	5.5
550	30	4,571	-28.1	-34.8	26	6.3
500	30	5,254	-32.8	-39.3	26	7.8
450	30	5,985	-37.7	-43.1	26	8.7
400	30	6,792	-42.7	-45.0	26	10.5
350	30	7,683	-47.9		25	9.7
300	30	8,649	-52.6		25	10.5
250	30	9,863	-52.9		25	13.8
200	30	11,312	-50.5		25	14.9
175	30	12,184	-50.1		25	14.7
150	30	13,191	-50.1		25	15.2
125	30	14,361	-50.0		25	15.1
100	30	15,841	-49.6		25	15.3
80	29	17,302	-48.9		25	15.[illegible]
70	29	18,179	-48.6		25	15.2
60	29	19,192	-48.4		25	12.9
50	29	2[illegible],392	-48.6		25	12.7
40	29	21,859	-48.5		25	12.1
30	29	23,750	-49.1		25	9.5
25	29	24,945	-49.4		27	8.8
20	29	26,407	-49.2		26	6.3
15	29	28,296	-48.2		3[illegible]	4.[illegible]
10	26	30,979	-45.9		04	4.2
7	22	33,382	-42.3		06	6.3
5	17	35,780	-38.5			
4	9	37,344	-37.4			

SALEM, OREG. 1016 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	[illegible]1	3.9	2.1	19	.9
1000	30	192	5.6	2.6	23	1.1
950	30	6[illegible]9	4.3	.3	26	2.3
900	30	1,050	1.7	-2.9	27	2.8
850	30	1,5[illegible]9	-.4	-7.2	27	4.[illegible]
800	30	1,992	-2.6	-11.4	28	5.5
750	30	2,498	-4.8	-13.9	29	7.1
700	30	3,043	-7.3	-16.7	29	9.1
650	30	3,610	-10.3	-19.4	29	10.5
600	30	4,229	-14.0	-23.4	29	11.6
550	30	4,877	-18.1	-29.0	30	13.2
500	30	5,590	-22.5	-32.6	30	15.8
450	30	6,349	-27.5	-37.6	30	18.2
400	30	7,194	-33.5	-42.4	30	21.4
350	30	8,118	-40.1	-47.5	30	22.5
300	30	9,153	-47.5		30	22.3
250	30	10,337	-55.1		31	23.1
200	30	11,744	-59.3		30	22.7
175	30	12,5[illegible]	-59.2		30	2[illegible].7
150	29	13,553	-57.1		30	18.2
125	29	14,708	-56.9		30	13.9
100	29	16,119	-57.2		29	1[illegible].7
80	29	17,530	-57.4		29	[illegible]
70	29	18,373	-57.3		3[illegible]	7.0
60	29	19,350	-55.9		2[illegible]	[illegible].3
50	29	20,5[illegible]	-56.5		30	4.8
40	29	21,926	-55.8		29	4.6
30	29	23,760	-55.1		28	4.3
25	29	24,926	-54.3		2[illegible]	5.3
20	29	26,359	-53.5		29	7.2
15	23	28,240	-51.2		27	[illegible]
10	12	30,[illegible]5	-46.[illegible]			

See reference note at end of table

RAWINSONDE DATA

Average monthly values

APRIL 1968

SALT LAKE CITY, UTAH 871 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	1,288	3.4	-2.3	16	1.4
1000	30	151				
950	30	575				
900	30	1,019				
850	30	1,467	4.8	-4.4	16	1.5
800	30	1,979	2.0	-7.6	24	1.6
750	30	2,496	-1.7	-10.2	28	3.0
700	30	3,042	-5.6	-12.9	29	4.9
650	30	3,619	-9.7	-16.3	29	6.1
600	30	4,232	-14.0	-21.7	28	6.5
550	30	4,886	-18.1	-26.5	28	6.9
500	30	5,593	-23.0	-31.8	27	7.5
450	30	6,353	-28.4	-38.1	27	8.5
400	30	7,190	-34.5	-43.5	27	9.5
350	30	8,111	-41.2	-48.2	27	10.6
300	30	9,141	-48.5		28	11.7
250	30	10,323	-54.6		28	13.8
200	30	11,740	-57.1		28	12.7
175	30	12,586	-56.2		28	12.9
150	29	13,568	-55.9		27	11.7
125	29	14,726	-56.4		27	11.9
100	29	16,139	-57.3		26	10.6
80	29	17,548	-57.8		26	8.3
70	29	18,391	-57.0		25	7.6
60	29	19,366	-56.7		25	6.9
50	28	20,525	-56.1		25	5.7
40	28	21,947	-55.3		25	5.0
30	27	23,787	-54.5		26	7.0
25	26	24,957	-53.8		27	7.5
20	24	26,395	-51.9		28	9.6
15	21	28,265	-49.6		28	13.1
10	8	30,960	-45.6			
7						
5						
4						

SAN DIEGO, CALIF. 1001 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	124	11.8	8.3	17	.3
1000	30	133			11	.1
950	30	560	12.1	4.3	32	.7
900	30	1,016	11.4	-1.3	32	1.3
850	30	1,492	9.4	-5.6	33	2.3
800	30	1,992	6.8	-10.0	30	3.4
750	30	2,518	3.5	-14.4	29	4.9
700	30	3,077	.6	-17.0	30	6.1
650	30	3,665	-3.0	-20.2	30	8.0
600	30	4,298	-6.9	-24.5	30	9.3
550	30	4,966	-11.5	-27.8	30	11.1
500	30	5,696	-16.7	-31.9	30	12.2
450	30	6,474	-22.6	-37.1	29	13.9
400	30	7,333	-29.1	-42.8	29	14.9
350	30	8,274	-36.3	-48.7	28	15.8
300	30	9,326	-44.2		28	16.4
250	30	10,525	-52.8		28	19.0
200	30	11,940	-59.7		27	20.5
175	30	12,773	-60.0		27	20.4
150	30	13,738	-59.0		27	19.5
125	30	14,879	-60.2		27	16.7
100	30	16,266	-61.5		26	14.0
80	30	17,650	-60.7		26	10.1
70	30	18,482	-59.8		25	7.7
60	30	19,446	-58.9		25	4.7
50	30	20,593	-57.2		24	1.9
40	30	22,012	-54.8		20	.4
30	30	23,863	-52.2		08	.4
25	29	25,047	-50.4		32	.6
20	29	26,510	-48.1		29	2.3
15	23	28,415	-45.0		28	4.0
10	13	31,139	-41.7		27	9.7
7	7	33,534	-40.6			
5						
4						

SAN JUAN, P. R. 1016 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	6	23.4	19.4	08	1.5
1000	30	145	22.3	17.3	07	3.8
950	30	588	18.8	14.6	06	4.5
900	30	1,052	15.2	10.1	06	4.1
850	30	1,534	12.5	5.2	06	3.1
800	30	2,041	10.0	-.4	06	1.7
750	30	2,577	8.9	-7.4	04	.4
700	30	3,146	7.2	-12.3	29	1.6
650	30	3,747	5.1	-17.2	30	3.1
600	30	4,402	1.6	-20.6	30	4.0
550	30	5,091	-2.6	-24.1	30	5.6
500	30	5,847	-7.5	-28.0	29	7.4
450	30	6,653	-13.2	-32.8	30	8.4
400	30	7,545	-19.6	-37.9	30	10.4
350	30	8,523	-26.7	-43.6	29	13.3
300	30	9,618	-34.6	-50.2	28	17.6
250	30	10,866	-44.2		28	20.3
200	30	12,326	-55.5		27	22.8
175	30	13,165	-61.6		27	22.9
150	29	14,106	-67.0		27	21.0
125	29	15,196	-71.0		28	16.4
100	29	16,504	-74.7		30	10.4
80	29	17,797	-74.6		34	5.8
70	29	18,578	-71.7		01	4.6
60	29	19,500	-65.4		05	5.0
50	29	20,625	-60.0		08	7.4
40	28	22,029	-55.6		08	10.2
30	25	23,884	-51.7		09	13.8
25	22	25,071	-49.4		09	15.8
20	22	26,544	-45.9		09	18.5
15	20	28,480	-41.4		09	18.1
10	15	31,263	-36.5		09	16.1
7	6	33,749	-32.6			
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* SAULT STE MARIE, MICH. 987 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	221	1.7	-1.3	12	1.0
1000	30	116				
950	30	529	2.4	-2.4	21	3.2
900	30	967	1.5	-4.3	25	5.4
850	30	1,426	-.5	-7.8	26	6.6
800	30	1,909	-2.7	-10.9	26	6.7
750	30	2,417	-5.0	-13.6	27	8.0
700	30	2,958	-7.9	-15.7	27	8.6
650	30	3,527	-11.0	-19.0	27	10.2
600	30	4,142	-14.1	-23.0	28	11.4
550	30	4,790	-18.3	-27.3	27	12.4
500	30	5,501	-22.9	-33.3	27	13.0
450	30	6,258	-28.1	-38.2	27	13.2
400	30	7,099	-34.2	-42.4	28	15.6
350	30	8,020	-40.7	-45.2	27	17.0
300	30	9,055	-47.1		27	20.3
250	30	10,245	-52.5		27	21.0
200	30	11,679	-53.8		26	21.8
175	30	12,540	-52.2		27	18.6
150	30	13,538	-51.9		26	16.7
125	30	14,717	-52.7		27	14.7
100	30	16,156	-53.5		26	12.5
80	30	17,587	-54.8		26	9.8
70	30	18,439	-54.8		27	8.5
60	29	19,428	-55.0		27	6.4
50	29	20,594	-54.7		27	5.7
40	28	22,021	-54.3		27	4.7
30	28	23,862	-54.5		27	3.6
25	28	25,031	-54.0		27	3.4
20	28	26,467	-53.0		27	2.7
15	28	28,330	-51.2		26	3.2
10	25	30,985	-48.3		27	7.3
7	18	33,384	-40.9		27	9.8
5	8	35,699	-36.4			
4						

* SHEMYA, ALASKA 1009 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	38	.3	-2.3	30	3.1
1000	29	114	-.5	-3.4	30	4.2
950	29	520	-3.6	-6.0	30	6.1
900	29	947	-6.9	-8.5	30	6.2
850	29	1,391	-9.8	-12.7	30	6.5
800	29	1,857	-12.0	-17.9	30	6.9
750	29	2,350	-14.3	-22.6	29	8.0
700	29	2,869	-17.0	-26.8	30	8.6
650	29	3,423	-20.1	-30.2	30	10.0
600	29	4,011	-23.6	-32.9	29	11.8
550	29	4,641	-27.6	-37.3	29	13.6
500	29	5,322	-31.8	-42.2	29	15.0
450	29	6,056	-36.7	-45.8	29	18.5
400	29	6,867	-41.7	-47.5	28	21.6
350	29	7,762	-46.8		28	25.5
300	29	8,772	-51.5		28	25.8
250	29	9,949	-53.5		28	24.7
200	29	11,390	-51.5		28	21.0
175	29	12,258	-51.3		28	20.6
150	29	13,258	-51.5		27	19.0
125	29	14,441	-51.8		27	18.6
100	29	15,886	-52.0		27	18.2
80	29	17,334	-51.4		26	15.0
70	29	18,201	-51.1		26	14.9
60	29	19,206	-50.6		26	13.7
50	29	20,397	-50.0		26	11.8
40	28	21,858	-48.9		25	11.3
30	28	23,751	-48.3		25	9.0
25	28	24,953	-48.2		26	8.0
20	28	26,423	-48.2		28	6.6
15	27	28,314	-48.2		30	9.7
10	26	31,009	-46.1		33	6.5
7	24	33,374	-43.9		36	8.1
5	15	35,706	-41.6		04	11.9
4	5	37,246	-41.4			

* SHREVEPORT, LA. 1006 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	79	14.9	12.3	16	1.1
1000	30	133	15.5	11.1	16	1.0
950	30	572	14.5	8.4	20	4.1
900	30	1,025	13.0	4.5	22	6.0
850	30	1,504	10.9	1.2	24	6.3
800	30	2,009	8.9	-5.2	25	6.7
750	30	2,541	6.2	-9.5	26	8.6
700	30	3,103	3.0	-12.0	26	10.8
650	30	3,700	-.6	-16.1	26	13.9
600	30	4,335	-5.0	-18.8	26	16.7
550	30	5,007	-9.7	-22.0	25	18.0
500	30	5,743	-14.4	-27.1	25	20.3
450	30	6,529	-19.9	-32.0	25	22.7
400	30	7,399	-25.9	-38.0	25	25.0
350	30	8,354	-32.9	-44.0	26	29.3
300	30	9,421	-41.0	-49.2	26	33.5
250	30	10,635	-50.7		26	37.2
200	30	12,055	-60.6		26	40.0
175	30	12,881	-62.2		26	39.1
150	30	13,835	-61.2		26	34.3
125	30	14,964	-62.4		26	29.7
100	30	16,332	-64.7		25	23.3
80	30	17,690	-65.9		25	14.3
70	30	18,502	-64.9		25	9.7
60	30	19,449	-61.5		25	3.9
50	30	20,599	-58.4		23	.7
40	30	22,002	-55.3		33	.8
30	30	23,851	-52.0		29	2.1
25	30	25,037	-50.0		32	2.2
20	30	26,501	-47.8		29	2.7
15	27	28,411	-44.5		28	6.4
10	27	31,153	-40.1		28	10.6
7	17	33,577	-37.6		25	12.2
5						

SPOKANE, WASH. 933 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	717	1.5	-3.8	19	2.6
1000	30	152				
950	30	571				
900	30	1,009	4.0	-5.5	23	4.5
850	30	1,472	1.5	-8.4	26	4.5
800	30	1,957	-2.2	-10.9	26	5.4
750	30	2,463	-6.1	-12.9	26	6.8
700	30	3,003	-9.6	-16.3	26	8.0
650	30	3,568	-13.1	-21.4	27	9.2
600	30	4,177	-16.8	-25.6	28	9.8
550	30	4,823	-20.7	-30.1	28	11.1
500	30	5,524	-25.5	-34.4	28	11.2
450	30	6,275	-30.9	-38.9	29	12.3
400	30	7,107	-36.3	-43.1	29	15.0
350	30	8,022	-42.3	-47.5	30	17.0
300	30	9,049	-49.0		30	19.1
250	30	10,229	-54.6		30	19.7
200	30	11,649	-56.4		29	17.1
175	30	12,497	-55.7		29	16.6
150	30	13,482	-54.2		29	14.0
125	30	14,652	-54.5		28	12.0
100	30	16,079	-55.3		29	10.0
80	30	17,503	-55.3		28	8.0
70	30	18,354	-55.1		28	7.1
60	30	19,337	-55.3		28	6.3
50	30	20,500	-55.1		27	5.0
40	30	21,926	-54.8		27	4.9
30	30	23,766	-54.9		27	4.8
25	30	24,933	-54.3		27	4.3
20	26	26,388	-53.2		28	4.9
15	22	28,247	-51.4		28	6.3
10	14	30,891	-47.5			
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* SWAN ISLAND, W. I. 1014 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	10	24.7	20.2	08	3.6
1000	30	127	23.9	19.5	09	4.8
950	30	580	20.3	16.8	10	6.3
900	30	1,040	18.0	10.0	10	6.9
850	30	1,528	15.9	3.9	10	7.6
800	30	2,041	13.1	.5	10	7.6
750	30	2,586	11.2	-5.9	09	6.2
700	30	3,156	8.6	-9.9	08	5.4
650	30	3,768	6.2	-15.4	07	4.6
600	30	4,418	2.8	-18.6	05	3.5
550	30	5,108	-1.4	-21.9	04	3.1
500	30	5,869	-6.3	-26.0	04	3.0
450	30	6,680	-12.0	-30.1	36	2.1
400	30	7,576	-18.3	-35.1	31	2.8
350	30	8,558	-25.6	-41.5	30	4.1
300	30	9,657	-34.1	-48.2	28	7.7
250	30	10,906	-44.6		26	10.8
200	30	12,363	-56.1		25	14.5
175	30	13,200	-62.0		25	14.4
150	30	14,140	-67.6		25	12.4
125	30	15,226	-71.5		26	7.7
100	30	16,532	-75.2		16	1.4
80	30	17,820	-76.3		09	6.4
70	30	18,591	-74.6		09	7.5
60	30	19,499	-69.3		09	7.5
50	30	20,610	-61.8		08	8.5
40	30	22,008	-56.8		09	11.5
30	30	23,848	-53.0		09	16.0
25	30	25,028	-50.9		09	19.6
20	29	26,491	-47.6		09	22.2
15	29	28,407	-43.8		09	21.2
10	26	31,162	-38.1		09	18.3
7	17	33,610	-35.5		08	17.4
5	6	36,000	-29.8			

TAMPA, FLA. 1017 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	8	18.7	16.7	08	.8
1000	30	156	19.2	15.9	11	1.4
950	30	598	18.6	11.3	17	1.3
900	30	1,060	16.2	7.9	22	1.9
850	30	1,545	13.8	3.6	25	2.4
800	30	2,055	11.6	-1.7	27	3.7
750	30	2,592	9.2	-5.4	29	4.6
700	30	3,162	6.2	-10.1	29	6.3
650	30	3,764	2.5	-12.9	29	8.3
600	30	4,409	-1.8	-15.3	29	9.9
550	30	5,091	-6.1	-19.3	29	11.3
500	30	5,838	-10.7	-24.9	29	13.3
450	30	6,642	-16.2	-30.0	29	15.7
400	30	7,519	-22.2	-35.4	28	17.6
350	30	8,487	-29.4	-41.9	28	20.3
300	30	9,570	-37.9	-49.8	28	23.2
250	30	10,802	-47.5		28	26.7
200	30	12,243	-58.0		28	30.2
175	30	13,079	-61.1		28	30.0
150	30	14,032	-62.6		28	29.1
125	30	15,153	-64.7		28	24.1
100	30	16,506	-67.7		28	18.1
80	29	17,840	-70.1		28	9.7
70	29	18,634	-69.1		30	4.3
60	29	19,564	-64.7		01	1.9
50	28	20,688	-59.9		06	4.3
40	28	22,100	-54.4		08	5.8
30	27	23,962	-50.3		09	6.6
25	25	25,158	-48.1		09	5.9
20	23	26,635	-45.4		10	6.2
15	18	28,570	-41.3		08	7.6
10	10	31,321	-37.6			
7						
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TOPEKA, KANS. 982 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	269	6.7	3.1	22	1.5
1000	30	119				
950	30	547	9.3	.6	22	3.4
900	30	992	7.9	-1.5	24	6.3
850	30	1,462	6.1	-4.2	26	7.8
800	30	1,958	3.9	-6.9	27	8.2
750	30	2,478	1.3	-10.7	27	10.0
700	30	3,032	-1.9	-15.2	27	11.9
650	30	3,616	-5.8	-19.3	27	12.6
600	30	4,241	-10.0	-23.3	26	14.6
550	30	4,901	-14.4	-27.3	26	16.0
500	30	5,622	-19.3	-33.3	26	17.8
450	30	6,392	-25.1	-37.9	26	19.2
400	30	7,243	-31.4	-43.5	26	21.8
350	30	8,176	-38.3	-49.0	26	22.6
300	30	9,220	-45.5		26	26.0
250	30	10,417	-52.8		26	30.6
200	30	11,840	-57.3		26	29.1
175	29	12,685	-56.5		26	27.5
150	29	13,666	-55.8		26	26.1
125	29	14,825	-56.8		26	21.4
100	29	16,231	-58.2		26	15.6
80	29	17,633	-59.1		25	11.2
70	29	18,470	-59.0		25	9.0
60	29	19,440	-57.8		26	5.7
50	29	20,593	-56.6		26	3.9
40	29	22,013	-55.2		27	3.3
30	27	23,853	-54.1		28	5.2
25	27	25,025	-53.1		28	6.4
20	26	26,476	-50.5		28	8.2
15	21	28,358	-47.7		28	13.5
10	12	31,075	-42.1			
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* TRUK, CAROLINE IS. 1010 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	2	27.8	24.2	04	1.6
1000	30	87	26.6	22.4	05	1.9
950	30	533	23.0	18.2	06	2.8
900	30	1,010	20.5	14.0	06	2.7
850	30	1,503	17.9	10.7	06	2.2
800	30	2,021	15.2	6.5	06	2.5
750	30	2,564	12.4	2.8	06	2.4
700	30	3,143	9.7	-1.7	06	2.3
650	30	3,752	6.3	-5.5	07	2.2
600	30	4,409	2.7	-9.5	08	3.2
550	30	5,1[illegible]8	-1.2	-13.4	09	3.1
500	29	5,866	-5.3	-18.6	09	3.4
450	29	6,685	-9.7	-24.6	09	3.9
400	29	7,589	-15.3	-29.7	09	3.8
350	29	8,585	-22.1	-36.4	10	3.4
300	29	9,701	-30.6	-44.7	12	3.7
250	29	10,969	-40.9	-51.1	14	4.1
200	29	12,448	-53.1		12	3.1
175	29	13,295	-60.3		11	2.1
150	29	14,238	-68.0		07	1.3
125	29	15,312	-75.8		04	3.5
100	29	16,579	-81.9		07	5.4
80	28	17,835	-78.1		10	4.7
70	28	18,610	-71.6		13	1.4
60	27	19,532	-66.2		26	.8
50	26	20,650	-62.3		08	5.0
40	22	22,042	-59.3		09	14.5
30	16	23,867	-53.9		09	24.4
25	13	25,043	-51.3		09	30.0
20	8	26,494	-47.0			
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* TUCSON, ARIZ. 924 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	739	11.0	1.6	13	3.3
1000	30	119				
950	30	552				
900	30	1,008	14.1	-.3	16	3.6
850	30	1,488	11.4	-3.3	20	3.1
800	30	1,992	7.8	-6.2	22	3.8
750	30	2,516	3.9	-9.2	23	4.8
700	30	3,077	-.2	-12.8	24	6.4
650	30	3,661	-3.5	-17.2	25	8.8
600	30	4,296	-7.4	-21.7	25	11.8
550	30	4,959	-11.8	-26.0	26	14.5
500	30	5,693	-17.1	-30.7	26	16.4
450	30	6,469	-22.6	-35.9	26	18.4
400	30	7,330	-29.0	-41.2	26	21.6
350	30	8,271	-36.0	-47.1	26	23.4
300	30	9,323	-44.0		26	26.4
250	30	10,523	-52.6		26	29.7
200	30	11,942	-58.5		25	31.1
175	30	12,7[illegible]1	-58.5		26	27.8
150	28	13,749	-58.4		25	24.9
125	28	14,892	-60.2		25	22.0
100	28	16,277	-61.8		25	17.0
80	28	17,660	-61.3		25	10.2
70	28	18,488	-60.8		24	7.5
60	28	19,447	-59.6		23	4.7
50	28	20,595	-56.9		22	1.8
40	28	22,016	-54.6		10	.8
30	28	23,866	-51.8		13	.6
25	28	25,053	-49.7		03	.4
20	28	26,521	-47.5		34	1.4
15	27	28,435	-44.2		29	4.7
10	23	31,186	-39.9		28	6.1
7	19	33,635	-36.6		26	8.9
5	12	36,0[illegible]4	-34.0			
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* VANDENBERG AFB, CALIF. 1006 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	100	8.6	6.8	35	1.1
1000	30	146	9.8	6.6	35	1.6
950	30	578	11.6	.0	01	5.1
900	30	1,026	11.4	-6.3	01	4.8
850	30	1,501	9.1	-11.2	36	4.5
800	30	2,000	6.5	-16.4	35	4.8
750	30	2,523	4.0	-19.7	33	6.0
700	30	3,084	.7	-22.1	33	6.7
650	30	3,669	-2.9	-25.0	32	7.6
600	30	4,304	-7.1	-27.8	32	9.6
550	30	4,968	-11.9	-31.3	32	9.8
500	30	5,699	-17.3	-35.7	32	11.3
450	30	6,473	-23.3	-40.8	32	12.3
400	30	7,330	-30.0	-46.0	32	13.7
350	30	8,266	-37.5	-52.3	32	14.8
300	30	9,311	-45.9		32	15.8
250	30	10,501	-54.8		31	16.3
200	30	11,903	-61.4		30	17.1
175	30	12,731	-61.0		29	17.6
150	30	13,691	-59.9		29	15.4
125	29	14,834	-60.1		28	13.3
100	29	16,222	-61.6		28	10.3
80	29	17,606	-60.9		28	9.0
70	29	18,437	-60.1		28	7.6
60	29	19,401	-58.8		27	5.2
50	29	20,550	-57.1		27	4.0
40	28	21,969	-55.1		26	3.5
30	28	23,814	-52.9		25	2.9
25	28	24,994	-51.4		27	4.4
20	27	26,448	-48.9		28	5.9
15	27	28,349	-46.1		27	7.8
10	27	31,058	-43.6		27	12.5
7	19	33,471	-39.9		26	13.5
5	13	35,767	-37.2		26	21.4
4	7	37,374	-35.3			

VICTORIA, TEXAS 1011 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	33	18.6	16.8	11	1.1
1000	30	126	19.1	15.9	11	1.7
950	30	564	16.8	13.2	16	4.1
900	30	1,027	15.4	10.0	19	6.3
850	30	1,512	14.7	3.8	21	6.6
800	30	2,023	12.5	-.9	22	6.8
750	30	2,563	9.6	-3.4	24	7.8
700	30	3,132	6.2	-7.9	25	9.0
650	30	3,729	2.3	-12.0	25	10.4
600	30	4,377	-2.2	-15.1	25	12.9
550	30	5,057	-7.0	-18.8	25	14.9
500	30	5,799	-12.3	-23.0	25	17.3
450	30	6,594	-17.7	-28.7	25	19.1
400	30	7,469	-23.9	-33.1	26	22.5
350	30	8,430	-31.1	-40.0	26	26.1
300	30	9,505	-39.5	-49.0	26	29.2
250	30	10,728	-49.3		26	33.2
200	30	12,155	-60.0		25	37.4
175	29	12,979	-63.4		25	37.5
150	29	13,924	-64.0		25	32.3
125	29	15,037	-65.2		25	26.4
100	28	16,389	-67.6		25	20.2
80	26	17,726	-68.4		24	11.7
70	25	18,527	-67.2		24	7.1
60	25	19,464	-63.5		20	3.4
50	25	20,596	-58.9		14	1.5
40	24	22,010	-55.2		07	4.6
30	24	23,864	-51.3		07	5.6
25	24	25,055	-48.9		07	6.4
20	18	26,524	-46.0		07	5.2
15	13	28,461	-43.1		06	4.3
10	9	31,243	-39.3			
7						
5						
4						

* WAKE IS., PACIFIC AREA 1015 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	5	24.2	21.2	07	7.5
1000	30	137	23.1	20.3	07	8.2
950	30	580	19.6	17.6	08	8.4
900	30	1,048	16.7	14.3	09	7.5
850	30	1,534	14.2	10.4	09	6.0
800	30	2,045	11.9	5.9	09	4.5
750	30	2,581	10.4	-3.1	09	4.1
700	30	3,157	8.2	-10.3	07	3.3
650	30	3,759	5.2	-12.8	07	3.0
600	30	4,415	1.4	-16.8	05	1.9
550	30	5,104	-2.7	-20.9	36	1.3
500	30	5,860	-7.2	-26.1	32	2.2
450	30	6,669	-12.6	-29.9	31	4.1
400	30	7,562	-18.8	-34.7	31	6.5
350	30	8,544	-25.7	-40.7	30	9.8
300	30	9,644	-33.9	-48.1	29	13.4
250	30	10,896	-43.6		29	16.9
200	30	12,361	-54.5		30	19.8
175	30	13,205	-60.0		29	20.0
150	29	14,155	-65.9		29	19.2
125	28	15,243	-72.2		29	15.2
100	28	16,539	-76.9		30	7.9
80	28	17,822	-76.1		36	2.2
70	28	18,598	-72.6		08	4.0
60	26	19,513	-66.0		09	6.8
50	26	20,633	-61.1		09	9.0
40	26	22,034	-57.0		09	11.0
30	25	23,868	-53.6		09	13.7
25	25	25,047	-51.1		09	16.0
20	25	26,509	-47.8		09	17.3
15	24	28,421	-44.1		08	18.4
10	20	31,159	-39.5		09	19.8
7	15	33,598	-37.3		10	13.1
5	9	35,912	-35.3			
4						

See reference note at end of table

RAWINSONDE DATA

Average monthly values

*** WALLOPS IS., VA. NASA — 1020 MB**

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	3	8.6	4.4	06	.6
1000	30	163	10.6	1.9	34	.8
950	30	590	9.8	-1.6	30	2.3
900	30	1,038	7.9	-3.7	31	3.6
850	30	1,508	5.6	-6.4	30	4.6
800	30	2,002	3.3	-8.8	29	6.1
750	30	2,521	1.1	-11.6	29	7.6
700	30	3,076	-1.7	-15.4	28	8.3
650	30	3,640	-4.9	-19.0	28	9.9
600	30	4,249	-8.5	-22.4	29	12.9
550	30	4,955	-12.8	-26.0	29	14.5
500	30	5,680	-17.6	-30.6	28	16.5
450	30	6,455	-22.9	-34.9	28	18.5
400	30	7,315	-28.8	-40.9	28	20.8
350	30	8,258	-36.0	-47.6	26	24.0
300	30	9,312	-44.0		28	26.6
250	30	10,514	-52.3		29	30.0
200	30	11,934	-58.3		29	30.8
175	30	12,776	-57.0		29	27.2
150	30	13,753	-56.7		28	24.7
125	30	14,906	-58.0		28	20.5
100	29	16,309	-59.1		28	16.9
80	28	17,705	-60.4		28	11.6
70	28	18,537	-59.9		28	8.4
60	28	19,501	-58.8		29	6.6
50	28	20,650	-57.2		30	5.7
40	28	22,068	-55.2		29	3.5
30	28	23,913	-52.9		27	4.1
25	28	25,192	-51.6		27	5.8
20	27	26,546	-49.7		27	9.9
15	24	28,443	-46.4		27	14.3
10	23	31,164	-41.9		27	20.1
7	16	33,594	-37.7		28	26.0
5	6	35,649	-35.2			

WASHINGTON DULLES INT. AP — 1009 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	85	6.7	3.7	25	.7
1000	30	157	9.3	2.0	29	.9
950	30	586	9.2	-2.4	28	3.1
900	30	1,029	7.4	-3.4	29	4.5
850	30	1,498	5.3	-4.7	29	5.8
800	30	1,992	3.1	-7.7	29	7.3
750	30	2,514	.9	-10.7	28	8.0
700	30	3,065	-1.8	-14.4	28	8.2
650	30	3,652	-4.9	-18.0	28	9.9
600	30	4,277	-8.8	-22.7	28	12.3
550	30	4,943	-13.2	-26.4	28	14.2
500	30	5,665	-18.1	-30.6	28	16.4
450	30	6,440	-23.6	-35.2	27	19.5
400	30	7,296	-29.7	-41.7	28	22.0
350	30	8,235	-36.6	-48.0	28	24.1
300	30	9,256	-44.4		28	26.8
250	30	10,486	-52.3		28	30.2
200	30	11,908	-57.8		28	29.5
175	30	12,751	-57.1		28	27.5
150	30	13,732	-55.7		28	25.5
125	30	14,589	-57.1		28	20.5
100	30	16,296	-58.3		28	15.3
80	30	17,697	-59.1		28	11.0
70	30	18,532	-59.3		28	8.0
60	30	19,499	-58.5		29	5.5
50	30	20,648	-56.9		30	2.9
40	30	22,066	-55.2		30	3.0
30	30	23,910	-53.4		27	4.7
25	30	25,056	-52.1		27	6.0
20	29	26,538	-50.2		27	8.1
15	27	28,433	-46.7		27	11.6
10	17	31,149	-40.1		27	17.4
7	5	33,611	-35.7			

WINNEMUCCA, NEV. — 871 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	1,312	.0	-8.4	28	.6
1000	30	183				
950	30	604				
900	30	1,048				
850	30	1,506	3.6	-8.4	32	1.6
800	30	1,996	1.0	-10.2	33	3.8
750	30	2,511	-2.7	-12.3	32	4.7
700	30	3,055	-6.3	-15.8	31	5.5
650	30	3,626	-9.8	-19.5	30	6.7
600	30	4,245	-13.6	-23.4	29	8.6
550	30	4,896	-17.5	-29.5	30	10.7
500	30	5,609	-22.0	-34.1	31	11.8
450	30	6,369	-27.2	-38.2	32	13.2
400	30	7,215	-33.3	-43.9	32	15.3
350	30	8,139	-40.0	-48.5	32	17.9
300	30	9,174	-47.8		32	18.5
250	30	10,358	-54.6		31	19.4
200	30	11,768	-59.2		31	17.0
175	30	12,605	-58.2		30	15.7
150	28	13,580	-57.2		29	12.6
125	26	14,735	-57.1		29	11.8
100	26	16,142	-58.1		28	9.4
80	25	17,545	-57.8		28	8.3
70	25	18,366	-57.6		27	6.6
60	24	19,357	-56.9		26	5.7
50	24	20,516	-55.6		25	5.4
40	21	21,943	-55.0		26	7.1
30	17	23,767	-54.0		26	9.1
25	16	24,932	-53.0		27	11.0
20	13	26,371	-51.4		26	12.6
15	9	28,241	-48.9			

WINSLOW, ARIZ. — 849 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	1,492	4.9	-5.4	23	2.3
1000	30	135				
950	30	560				
900	30	1,011				
850	30	1,486			27	2.0
800	30	1,983	5.5	-6.7	25	4.7
750	30	2,502	1.9	-9.2	25	5.5
700	30	3,060	-2.3	-11.7	25	6.2
650	30	3,637	-6.5	-15.2	25	7.9
600	30	4,265	-10.5	-19.8	26	8.8
550	30	4,923	-14.8	-25.1	26	10.5
500	30	5,645	-20.0	-30.2	26	12.2
450	30	6,413	-25.7	-35.8	26	12.7
400	30	7,262	-31.9	-42.0	26	15.2
350	30	8,193	-38.6	-48.4	26	17.9
300	30	9,237	-45.7		26	20.3
250	30	10,432	-52.7		26	22.6
200	30	11,855	-57.3		26	23.0
175	30	12,699	-57.2		26	22.1
150	30	13,675	-57.2		26	19.8
125	30	14,824	-58.9		25	18.7
100	30	16,218	-59.9		25	13.3
80	29	17,611	-59.9		25	10.0
70	29	18,444	-59.9		24	7.9
60	29	19,418	-58.8		24	5.3
50	29	20,557	-57.1		24	3.6
40	29	21,974	-55.2		24	2.0
30	29	23,821	-52.7		26	3.1
25	29	25,001	-51.3		28	4.1
20	23	26,453	-49.6		29	7.6
15	15	28,346	-45.9		28	9.1

YAKUTAT, ALASKA — 1009 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	12	-1.5	-2.5	[illegible]	2.1
1000	30	42			11	3.1
950	30	492	-.6	-4.8	13	5.9
900	30	924	-3.7	-7.0	14	6.9
850	30	1,374	-6.6	-10.7	15	7.2
800	30	1,846	-9.5	-14.1	16	6.1
750	30	2,344	-12.4	-17.4	17	4.8
700	30	2,866	-15.8	-21.7	18	4.5
650	30	3,422	-19.3	-25.0	19	4.7
600	30	4,213	-23.1	-29.0	21	5.1
550	30	4,642	-27.3	-34.2	22	5.3
500	30	5,325	-32.1	-38.7	23	6.2
450	30	6,058	-37.3	-42.5	23	6.8
400	30	6,868	-42.7	-46.5	24	7.8
350	30	7,757	-48.4		26	8.9
300	30	8,762	-52.6		26	12.7
250	30	9,934	-53.9		26	14.7
200	30	11,371	-52.0		26	15.4
175	30	12,238	-51.1		26	15.4
150	30	13,240	-51.0		26	14.7
125	29	14,428	-50.5		26	15.2
100	29	15,884	-50.3		27	15.2
80	29	17,339	-50.6		27	13.9
70	29	18,268	-50.8		27	12.7
60	29	19,212	-50.8		26	11.3
50	29	20,399	-50.9		27	9.9
40	29	21,849	-51.5		27	9.9
30	28	23,724	-51.5		28	6.4
25	26	24,910	-51.4		30	5.0
20	25	26,371	-50.8		31	2.9
15	19	28,218	-49.7		35	4.1
10	12	30,079	-47.4			

YAP, CAROLINE IS. — 1009 MB ♦

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	17	28.6	23.0	06	4.3
1000	30	95	27.4	21.2	06	5.5
950	30	541	22.7	16.5	06	7.8
900	30	1,016	19.6	12.0	06	7.3
850	30	1,5[illegible]7	16.8	8.0	06	5.8
800	30	2,022	14.5	2.4	06	4.5
750	30	2,563	12.4	-3.0	07	3.9
700	30	3,142	9.6	-8.1	09	2.6
650	30	3,751	6.7	-12.2	09	2.8
600	30	4,407	3.3	-16.4	09	3.7
550	30	5,100	-.4	-20.5	08	3.9
500	30	5,664	-4.9	-24.7	08	4.3
450	30	6,679	-10.1	-28.8	08	4.4
400	30	7,585	-16.0	-33.9	08	3.5
350	30	8,578	-22.6	-39.2	08	1.7
300	30	9,691	-31.0	-47.0	13	1.3
250	30	10,957	-41.5		17	3.6
200	30	12,431	-53.7		17	7.0
175	30	13,276	-60.6		17	6.7
150	30	14,219	-67.8		17	4.6
125	30	15,295	-75.3		14	3.2
100	29	16,567	-81.6		11	4.5
80	29	17,821	-78.2		10	5.7
70	28	18,595	-72.0		09	1.8
60	26	19,515	-66.7		05	2.8
50	25	20,629	-62.8		09	7.0
40	22	22,017	-59.0		09	15.8
30	22	23,841	-54.0		09	24.4
25	20	25,021	-50.3		09	27.9
20	14	26,488	-46.7		09	28.6
15	5	28,434	-42.6			

YUCCA FLAT, NEV. — 881 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	1,196	4.9	-7.6	30	1.7
1000	30	140				
950	30	566				
900	30	1,017				
850	30	1,487	8.5	-7.4	34	2.7
800	30	1,985	5.1	-9.9	36	2.2
750	30	2,505	1.3	-12.5	33	2.6
700	30	3,059	-2.8	-15.3	31	2.9
650	30	3,540	-6.7	-18.7	30	4.8
600	30	4,263	-10.8	-22.0	29	5.5
550	30	4,922	-15.4	-26.7	30	7.5
500	30	5,639	-20.1	-30.6	31	9.7
450	30	6,407	-25.8	-36.4	31	11.8
400	30	7,254	-32.0	-42.2	31	14.5
350	30	8,193	-38.9	-47.7	31	15.2
300	30	9,222	-46.5		31	17.1
250	30	10,410	-54.1		30	18.5
200	28	11,834	-59.4		30	18.7
175	28	12,669	-59.3		29	16.6
150	27	13,637	-57.8		28	15.6
125	27	14,784	-58.6		28	13.4
100	27	16,182	-59.7		27	11.4
80	26	17,578	-59.2		26	8.9
70	26	18,417	-58.1		26	7.3
60	26	19,387	-57.4		26	5.9
50	26	20,543	-56.5		25	5.5
40	26	21,964	-55.1		25	5.1
30	26	23,810	-53.4		26	6.4
25	25	24,986	-51.8		26	8.9
20	20	26,447	-50.0		27	10.6
15	8	28,319	-47.3			

YUMA, ARIZ. — 997 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	20	131	13.4	-.7	35	1.2
1000	20	104				
950	20	536	18.2	-.7	31	2.3
900	20	1,002	15.5	-3.4	29	2.2
850	20	1,484	12.0	-5.9	27	2.5
800	20	1,988	8.1	-8.5	29	2.1
750	20	2,509	4.1	-11.1	29	2.6
700	20	3,073	.3	-14.7	28	4.7
650	20	3,655	-3.3	-18.0	28	6.8
600	20	4,293	-7.5	-22.0	27	8.4
550	19	4,947	-12.2	-26.6	27	9.6
500	19	5,681	-17.4	-31.7	28	10.6
450	19	6,449	-23.3	-37.3	28	12.6
400	19	7,313	-29.7	-43.1	27	13.2
350	19	8,251	-36.6	-48.9	27	15.4
300	19	9,301	-44.6		26	17.3
250	17	10,506	-53.0		27	20.1
200	14	11,927	-60.1		28	21.0
175	12	12,768	-60.4		27	20.6
150	10	13,729	-59.7			
125	[illegible]	14,886	-61.8			

Note: All observations scheduled at 1200, G.C.T. Pressures shown under station names are the average monthly station pressures for the month of record, corrected to the height of the floors of the instrument shelters used for rawinsonde purposes. "Number of observations" refers to those of dynamic height only. Although the number of temperature observations at any given pressure surface is usually the same as for height, it is possible for temperature to be missing for one or more pressure surfaces of some observations. Dew Point averages are limited to those observations with temperatures warmer than -40°C. Observations of wind speed and direction are sometimes lost due to limiting angles, i.e., elevation angles less than 6° above the horizon, or any obstruction above the horizon.
The temperature and wind values are based on 15 or more observations at the surface or 5 observations at a standard pressure level for temperature and 10 for wind. Dew Point data are not published for standard pressure surfaces for which less than 5 observations are available. Dew Point data are computed and expressed on the basis of vapor pressure over water. Unless otherwise indicated, they are obtained from carbon hygristors.

These average values for standard pressure surfaces were obtained by rawinsondes; dynamic height (geopotential) in units of .98 dynamic meter, temperature and dew point in degrees Celsius, and resultant winds in tens of degrees and meters per second.

* Rawinsondes at this station were equipped with hypsometers to permit more accurate evaluations of pressure, and consequently height, at pressures lower than 50 mb. These rawinsondes were carried aloft by special high altitude balloons, in an effort to consistently reach higher altitudes.
+ Observations for these stations are scheduled at 0000 G.C.T.
† Dew Point temperatures are based on a minimum of 5 observations. Therefore, due to the lesser number of Dew Point observations at the higher levels comparison with dry-bulb temperatures should be made with care. Dew Point temperatures replaced Relative Humidity January 1967.

SOLAR RADIATION DATA

Solar radiation intensities, tabulated in langleys per minute on a surface normal to the direction of the sun. APRIL 1968

TUCSON, ARIZ.

Date	Sun's zenith distance A.M. 78.7°	75.7°	70.7°	60.0°	*	P.M. 60.0°	70.7°	75.7°	78.7°
Air mass	4.56	3.65	2.74	1.83	*	1.83	2.74	3.65	4.56
Apr.									
1-----	----	----	----	1.22	1.42	1.25	1.08	0.97	0.86
4-----	0.83	0.93	1.07	1.22	1.40	1.20	1.07	.92	.82
5-----	.83	.97	1.08	1.22	1.37	1.20	1.02	.91	.80
6-----	.79	.89	.99	1.18	1.34	1.06	.83	.69	[illegible]
7-----	.74	.87	1.[illegible]	1.19	1.40	1.19	1.00	.86	.74
8-----	.79	.90	1.00	1.17	1.34	1.10	.89	.79	.67
9-----	.61	.80	----	1.12	1.32	----	----	----	----
11----	----	----	----	----	1.31	----	----	----	----
13----	----	----	.88	1.[illegible]	1.31	----	----	----	----
14----	.69	.72	----	1.09	1.21	----	----	----	----
15----	----	----	1.00	1.16	----	----	----	----	----
17----	.83	.93	1.06	1.19	1.34	1.16	1.00	.81	.70
18----	.73	.81	.94	----	----	1.12	.98	.83	.72
19----	.77	.88	1.00	1.13	1.40	1.17	1.[illegible]	.90	.80
20----	.84	.93	1.00	1.20	1.36	1.18	1.00	.86	.72
21----	.72	.82	.97	1.11	1.33	1.10	.87	----	.54
22----	.42	.53	.71	1.02	1.41	1.20	1.[illegible]	.88	.74
23----	.80	.90	1.01	1.16	1.38	1.16	1.00	.88	.79
24----	1.08	1.17	----	----	----	1.08	.85	.69	.49
25----	1.13	1.17	1.22	1.30	1.38	1.10	.89	.72	.58
26----	.60	.77	1.10	.92	1.32	1.11	.91	.74	.60
27----	1.05	1.12	1.20	1.31	1.23	1.36	1.36	1.30	1.30
28----		Inoperative							
29----	.62	.76	.88	1.[illegible]	1.24	----	----	----	----
30----	.71	.82	.94	1.10	1.27	----	[illegible]	.81	.70
Averages	0.77	0.88	1.00	1.14	1.27	1.23	0.98	0.85	0.72

OMAHA, NEBR.

Date	A.M. 78.7°	75.7°	70.7°	60.0°	*	P.M. 60.0°	70.7°	75.7°	78.7°
Air mass	4.78	3.82	2.87	1.91	*	1.91	2.87	3.82	4.78
Apr.									
1-----	HM0.68	HM0.80	HM0.94	----	----	----	----	----	----
5-----	HS .83	HS .90	HS1.00	HS1.11	HS1.34	HS1.14	HS0.94	HS0.84	HS0.70
[illegible]	----	----	----	HM .97	HS1.15	----	----	----	----
9-----	----	----	----	1.18	----	----	----	----	----
10----	HS .80	HS .90	HS1.02	HS1.18	HS1.35	----	----	----	----
11----	HM .72	HM .80	HS .98	HS1.11	HS1.32	HM1.1[illegible]	HM .78	HI .62	HI .53
15----	HS .78	HS .88	HS1.00	HS1.17	HS1.28	HS1.06	----	----	----
16----	----	----	----	----	HM1.20	----	----	----	----
21----	HS .71	HS .80	HS .92	HS1.09	----	----	----	----	----
24----	.80	.92	1.03	1.22	HS1.40	----	----	----	----
28----	HS .62	HS .74	HM .88	----	----	----	----	----	----
29----	----	----	.97	HS1.13	HS1.34	HS1.11	HS .96	HS .81	HS .69
30----	----	----	----	----	----	HS1.12	HS .91	HS .80	HS .67
Averages	0.74	0.82	0.97	1.13	1.30	1.11	0.90	0.79	0.65

MADISON, WIS.

Date	A.M. 78.7°	75.7°	70.7°	60.0°	*	P.M. 60.0°	70.7°	75.7°	78.7°
Air mass	4.69	3.75	2.81	1.88	*	1.88	2.81	3.75	4.69
Apr.									
1-----	S [illegible]	S 0.73	S 0.96	S 1.16	----	----	----	----	----
[illegible]	S .74	S .86	S .99	----	----	----	----	----	----
9-----	S .87	S .97	S 1.10	----	----	----	----	----	----
1[illegible]	M .81	M .92	M 1.06	S 1.21	S 1.48	----	----	----	----
Averages	0.74	0.87	1.0[illegible]	1.19	1.48	----	----	----	----

HS Slight haze S Slight haze - indeterminable
HM Moderate haze M Moderate haze - indeterminable
HI Intense haze * Values corresponding to true solar noon.

ALBUQUERQUE, N. MEX.

Date	A.M. 78.7°	75.7°	70.7°	60.0°	*	P.M. 60.0°	70.7°	75.7°	78.7°
Air mass	4.19	3.35	2.51	1.67	*	1.67	2.51	3.35	4.19
Apr.									
1-----	----	----	----	----	----	----	----	----	0.80
2-----	0.87	0.97	1.10	1.28	----	----	----	----	----
4-----	.81	.92	1.04	1.23	1.41	1.24	----	----	----
5-----	.93	1.01	1.12	1.26	1.44	----	----	----	----
6-----	----	----	----	1.22	----	----	----	----	----
7-----	.93	1.05	1.17	1.32	1.47	----	----	----	----
8-----	.85	.97	1.12	1.25	1.45	1.25	1.07	0.94	.83
9-----	.76	.87	.96	1.17	1.39	1.18	.97	.84	.67
10----	.79	.92	1.04	1.21	1.42	1.19	1.02	.89	.77
12----	----	----	----	----	1.33	----	----	----	----
13----	----	----	----	1.15	1.38	----	----	.83	----
14----	.88	.98	1.02	1.28	1.46	1.21	.87	.69	.56
16----	----	----	----	----	----	1.13	.86	.74	.61
17----	.91	1.02	1.13	1.30	1.47	----	1.01	----	----
18----	----	.91	1.08	1.26	----	----	----	----	----
19----	.80	.91	1.02	----	----	1.14	1.00	.87	.78
20----	.90	1.00	1.12	1.28	1.47	----	----	----	----
24----	.91	1.00	1.14	1.30	1.44	----	----	----	----
25----	----	.86	1.07	1.22	----	----	1.04	.92	.83
26----	.79	.87	.99	1.16	1.28	----	----	----	----
27----	.75	.87	.98	1.20	----	----	----	----	----
28----	----	.70	.86	----	1.35	----	.94	.75	.66
29----	.72	.83	.96	1.19	1.42	1.18	.95	.76	.64
30----	.78	.89	----	1.17	1.39	----	----	----	----
Averages	0.81	0.93	1.05	1.23	1.41	1.19	0.97	0.82	0.72

BLUE HILL OBS., MASS.

Date	A.M. 78.7°	75.7°	70.7°	60.0°	*	P.M. 60.0°	70.7°	75.7°	78.7°
Air mass	4.89	3.92	2.94	1.96	*	1.96	2.94	3.92	4.89
Apr.									
2-----	0.87	0.96	1.08	1.24	1.41	1.13	0.91	0.79	0.67
3-----	----	----	----	----	1.30	1.06	.81	.67	.57
6-----	----	----	1.03	1.21	1.35	1.16	.94	.78	.67
7-----	.77	.87	.98	1.15	1.33	1.03	.82	.65	.53
8-----	.53	.64	.86	1.08	----	----	----	----	----
9-----	----	.79	.90	1.08	----	----	----	----	----
12----	.77	.88	1.00	1.17	1.32	1.05	.79	.65	.55
13----	.54	.65	.76	.93	1.07	.79	.60	.48	.36
14----	.55	.67	.82	.98	1.21	1.06	.89	.82	.67
17----	.79	.91	1.08	1.27	1.45	1.23	1.04	.89	.77
18----	.84	.94	1.06	1.23	1.36	----	----	----	----
19----	.77	.88	1.04	1.18	1.33	1.04	.78	.60	.47
20----	.88	.94	1.01	1.12	----	----	----	----	----
22----	----	----	----	----	----	1.15	.96	.78	.65
23----	.78	.88	.99	1.11	1.32	1.08	.95	.70	.59
26----	.67	.72	.87	1.05	----	----	----	----	----
28----	----	----	----	1.13	1.36	1.07	.78	.54	.43
29----	----	----	.82	1.01	1.33	1.06	.88	.77	.70
Averages	0.73	0.83	0.95	1.12	1.32	1.07	0.86	0.70	0.59

GUAM, M. I.

Date	A.M. 78.7°	75.7°	70.7°	60.0°	*	P.M. 60.0°	70.7°	75.7°	78.7°
Air mass	4.92	3.93	2.95	1.97	*	1.97	2.95	3.93	4.92
Apr.									
16----	S 0.56	S 0.71	S 0.90	S 0.99	----	----	----	----	----
19----	----	----	----	S 1.06	----	----	----	----	----
Averages	0.56	0.71	0.90	1.03	----	----	----	----	----

Langley is the unit used to denote one gram calorie per square centimeter. An explanation of the formula used in computing the air mass values for each station listed above appears in the February 1957 issue, Vol. 8, No. 2, page 63, of this publication.

SOLAR RADIATION DATA

Daily totals and monthly averages of solar radiation (direct and diffuse) received on a horizontal surface, tabulated in langleys.

Station	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
ALBUQUERQUE N.M.	438	524	234	614	631	493	699	684	660	671	459	604	657	696	505	607	646	589	526	718	452	---	507	746	709	624	679	754	748	744		608
AMES IOWA	523	100	167	143	560	458	188	411	433	550	517	275	115	214	573	350	348	259	88	232	530	167	121	634	373	604	400	475	578	623		367
ANNETTE ALASKA	493	306	547	151	163	327	70	59	398	392	539	197	301	507	543	313	193	383	486	481	216	62	159	95	429	91	320	57	356	608		308
APALACHICOLA FLORIDA	359	461	604	541	260	549	554	392	535	538	678	693	619	634	642	703	543	638	621	619	618	627	455	467	725	310	239	606	456	708		547
ARGONNE NAT. LAB.	597	360	49	110	595	617	567	450	591	546	577	565	226	219	682	437	81	145	360	346	555	632	276	249	562	325	602	437	639	652		435
ASTORIA OREGON	---	426	368	146	437	220	344	533	402	247	436	602	318	110	470	567	545	238	452	531	667	447	557	455	152	440	627	654	631	348		427
ATLANTA GEORGIA	573	205	112	306	167	607	217	245	402	65	654	610	477	126	673	653	480	505	514	529	517	271	457	319	695	675	497	241	95	689		419
BARROW ALASKA	249	282	285	318	284	331	277	278	370	412	416	446	393	349	285	299	372	410	427	385	375	484	383	505	480	419	384	545	460	402		377
BETHEL ALASKA	232	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	321	258	503	491	512	369	402	309	221	566	537	498	369		---
BISMARCK N.DAK.	543	92	---	610	542	458	81	614	557	587	541	301	184	610	469	561	378	657	86	439	393	279	704	645	671	519	512	662	678	700		485
BLUE HILL MASS.	198	565	530	152	366	586	562	314	530	504	488	583	534	580	94	320	647	553	597	559	139	493	644	117	533	567	229	631	606	419		455
BOISE IDAHO	---	---	---	---	---	---	---	---	---	---	---	---	---	500	249	526	506	618	615	572	343	640	455	612	538	564	637	640	634	505		---
BOSTON MASSACHUSETTS	205	551	505	170	367	567	532	286	488	490	496	541	510	573	84	325	626	542	586	477	109	435	508	100	544	586	289	648	604	504		442
BROWNSVILLE TEXAS	421	573	640	---	683	336	344	495	300	302	364	393	316	381	406	558	530	470	626	269	543	565	218	565	657	346	494	390	219	517		446
BURLINGTON VERMONT	329	397	512	166	332	554	534	239	36	566	544	530	447	536	404	600	597	600	527	579	558	320	558	114	179	156	143	640	614	461		426
CAPE HATTERAS N.C.	165	613	285	313	378	235	624	535	527	41	539	652	642	586	230	682	649	646	610	475	575	357	637	234	700	680	627	496	524	588		495
CARIBOU MAINE	82	---	607	123	308	619	539	421	304	327	587	596	553	540	267	160	670	272	121	162	518	552	689	385	116	407	207	434	708	681		412
CHARLESTON S.C.	503	612	167	364	430	97	603	578	541	108	666	678	656	613	513	702	664	444	539	587	609	378	298	227	748	728	695	145	156	703		492
CLEVELAND OHIO	599	542	311	276	285	569	561	375	542	255	581	566	512	408	495	585	389	148	543	176	261	585	381	276	93	287	625	684	618	468		433
COLUMBIA MISSOURI	597	178	184	79	503	604	570	637	630	639	618	494	244	560	653	259	524	485	77	415	300	374	198	682	620	503	555	593	686	678		471
DODGE CITY KANSAS	539	510	592	666	635	610	641	605	552	645	618	612	530	696	606	574	630	153	279	702	406	308	727	727	572	540	292	487	720	727		564
E. LANSING MICHIGAN	591	529	216	353	572	600	590	607	622	485	600	569	517	196	---	703	165	164	620	184	184	677	339	343	137	446	620	631	433	570		457
EL CENTRO CALIF. NPF	581	581	577	593	547	590	602	596	595	591	478	585	585	592	599	637	630	526	634	611	627	664	656	635	633	619	618	648	673	655		605
EL PASO TEXAS	532	567	422	678	678	670	690	698	567	480	289	696	604	508	692	631	682	593	765	721	709	762	626	781	767	759	765	754	756	747		653
ELY NEVADA	560	215	315	659	241	613	561	706	690	685	671	548	730	720	488	404	549	471	462	538	375	753	770	529	687	632	754	765	772	766		588
EPPLEY NEWPORT R.I.	190	559	481	132	274	574	546	365	556	511	286	589	530	579	129	---	621	595	585	569	217	467	609	208	601	601	169	645	621	370		454
FAIRBANKS ALASKA	237	244	373	382	400	400	228	204	303	484	461	405	408	440	500	471	512	384	302	546	532	506	542	485	464	309	334	480	438	564		411
FLAMING GORGE UTAH	---	380	301	472	315	356	521	688	707	684	617	413	478	731	518	153	339	409	665	356	529	397	777	357	346	455	433	767	760	741		506
FORT WORTH TEXAS	75	177	541	672	696	668	454	387	157	608	568	133	577	683	705	119	468	274	156	500	210	505	624	757	752	613	596	125	755	737		476
FRESNO CALIFORNIA	151	460	569	524	481	531	596	597	604	611	587	609	615	605	629	628	628	679	614	650	692	690	666	663	668	665	670	662	665	633		601
GAINESVILLE FLORIDA	323	378	374	495	480	405	226	497	449	532	627	656	599	472	447	590	536	538	589	632	641	569	469	505	713	362	464	604	574	629		513
GLASGOW MONTANA	446	224	615	592	384	85	417	369	589	563	472	437	347	502	247	573	514	668	609	489	170	696	646	500	495	453	575	569	617	676		485
GRAND JUNCTION COLO.	299	327	344	567	402	172	318	621	659	654	649	474	597	678	599	281	492	256	327	252	437	290	714	430	546	549	277	720	702	718		478
GREAT FALLS MONTANA	323	314	601	559	277	296	373	550	574	486	521	427	589	355	569	388	664	659	322	551	513	697	514	510	314	216	670	642	655	672		493
GREENSBORO N.C.	521	419	43	200	106	546	481	305	469	103	483	597	571	588	574	659	475	438	539	407	528	368	280	152	668	610	282	405	114	571		417
INDIANAPOLIS INDIANA	600	322	64	318	162	611	542	557	516	487	632	559	427	123	666	507	59	462	397	550	648	636	522	413	648	466	578	603	563	674		477
ITHACA NEW YORK	291	560	428	141	240	608	565	197	571	450	557	583	546	535	193	639	636	527	581	588	461	349	389	110	227	425	415	678	660	97		442
LAKE CHARLES LA.	183	253	281	98	574	624	221	286	128	264	615	505	267	412	666	431	469	288	435	457	310	304	250	672	709	519	304	240	332	658		392
LAKELAND FLORIDA	378	450	474	452	481	418	443	542	494	485	571	677	601	501	457	689	620	627	614	669	625	654	683	616	591	333	524	654	592	498		547
LANDER WYOMING	336	346	15	645	417	---	---	---	642	633	592	479	344	523	634	91	425	679	687	522	355	565	732	426	415	436	411	715	709	717		500
LARAMIE WYOMING	360	353	454	605	555	312	484	492	607	599	607	475	505	534	589	268	545	579	401	570	297	282	673	444	398	376	417	656	660	657		492
LAS VEGAS NEVADA	650	459	671	661	573	681	556	654	703	682	664	605	653	667	694	679	549	481	697	582	548	738	727	721	727	725	735	757	750	737		658
LITTLE ROCK ARKANSAS	521	96	300	552	635	634	153	317	205	580	614	454	239	540	684	614	248	366	289	572	166	117	637	716	703	621	430	441	600	723		459
LOS ANGELES CALIF.	173	534	613*	613	591	643	624	615	649	668	633	566	531	675	348	628	521	714	677	639	670	721	719	689	684	641	349	710	684	630		605*
LOS ANGELES CALIF. U	176	556	593	584	560	628	607	625	666	628	578	465	394	595	362	467	541	696	668	503	645	696	681	649	630	608	386	676	685	616		572
MADISON WISCONSIN	589	383	45	88	639	545	466	156	599	533	530	494	139	154	639	433	113	158	364	225	536	538	162	163	625	448	628	290	607	598		396
MANHATTAN KANSAS	523	49	518	510	552	513	413	557	553	555	556	358	193	596	549	420	219	328	113	571	220	240	565	619	304	332	570	623	623	610		445
MAUNA LOA OBS.HAWAII	507	473	694	556	400	501	425	383	743	305	771	775	641	637	281	216	378	421	319	310	696	533	403	572	315	189	247	296	379	626		466
MEDFORD OREGON	381	322	476	278	468	529	542	557	593	578	426	648	539	561	311	447	623	456	611	580	661	616	252	591	636	713	704	721	700	706		541
MIAMI FLORIDA	505	604	567	585	537	610	605	580	499	616	487	522	516	493	601	677	652	446	567	612	665	546	585	659	451	585	553	554	633	552		569
MIDLAND TEXAS	215	471	584	605	616	597	501	517	123	560	214	442	617	621	600	537	534	271	586	458	603	673	676	686	660	660	647	467	686	679		537
NASHVILLE TENNESSEE	621	168	151	114	239	637	224	78	184	554	657	586	291	271	690	659	415	508	263	453	501	364	450	724	712	603	327	542	314	698		433
NEW YORK N.Y. U	337	577	532	158	377	585	551	265	591	431	570	586	515	567	384	645	610	564	559	604	521	159	334	29	450	607	269	693	545	419		468
NORTH OMAHA NEBRASKA	591	70	407	---	---	579	205	624	581	640	639	339	245	533	659	599	325	260	186	347	579	121	521	740	163	675	575	558	720	717		471
OAK RIDGE TENNESSEE	605	278	118	87	156	619	525	90	144	298	654	614	511	196	678	664	322	436	354	442	623	495	385	639	718	617	151	440	106	665		421

Note.--Langley is the unit used to denote one gram calorie per square centimeter.
Values with an asterisk are interpolated.

U Indicates Urban sites

SOLAR RADIATION DATA

Daily totals and monthly averages of solar radiation (direct and diffuse) received on a horizontal surface, tabulated in langleys. APRIL 1968

Station	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
	Day of month																															
OKLAHOMA CITY OKLA.	166	142	594	652	634	624	629	556	490	647	607	223	524	697	625	407	536	288	258	663	357	493	723	719	677	514	630	350	710	709		528
PAGE ARIZONA	607	461	528	643	409	401	667	681	704	687	679	524	666	713	539	512	488	288	735	426	382	559	759	549	740	722	755	780	775	---		599
PALMER AAES ALASKA	145	196	325	365	247	134	385	481	429	426	262	256	373	414	401	377	479	465	422	431	217	443	490	466	434	213	206	396	411	484		359
PHOENIX ARIZONA	630	466	624	637	619	621	669	661	670	636	521	490	649	661	643	679	680	503	704	678	646	672	---	720	714	705	710	712	702	701		646
PORTLAND MAINE	199	548	556	130	433	604	577	274	495	613	437	593	549	582	98	383	647	488	584	151	133	507	541	59	466	516	250	676	658	555		443
PROSSER WASHINGTON	302	236	431	337	472	433	526	542	571	568	598	464	---	---	543	368	579	369	479	468	562	610	322	547	158	540	648	644	631	398		477
RAPID CITY S.DAK.	508	223	269	649	573	356	302	455	460	588	585	329	283	635	491	244	290	290	392	649	138	407	710	593	555	552	386	676	666	679		464
RENO NEVADA	341	262	531	333	299	579	578	572	570	572	473	383	619	605	383	368	554	631	504	641	589	648	530	645	590	644	652	640	646	568		532
RICHLAND 25 NW WASH.	277	230	428	265	403	434	531	541	571	574	550	546	472	270	452	455	645	382	479	475	651	626	334	570	153	556	657	671	661	440		477
RIVERSIDE CALIFORNIA	183	140	562	548	524	573	574	599	628	609	582	455	546	566	605	386	383	642	657	489	474	693	677	641	627	598	473	670	645	610		545
RUSTON LOUISIANA	196	139	---	264	602	588	110	2	73	450	569	445	399	412	615	571	286	346	455	421	97	201	382	650	651	607	339	245	448	646		387
SAINT CLOUD MINN.	485	383	27	523	590	461	27	430	364	544	620*	482	305	267	569	355	407	525	168	193	584	127	192	487	661	644	208	515	662	646		415*
SALT LAKE CITY	418	83	253	554	109	478	619	598	669	656	632	505	705	663	349	408	517	616	608	177	500	484	726	445	534	359	461	738	732	727		511
SAN ANTONIO TEXAS	82	156	358	647	662	632	406	248	186	411	405	131	496	533	645	220	220	242	263	108	310	209	277	724	702	543	573	257	590	614		395
SANTA MARIA CALIF.	298	630	621	555	591	609	611	607	610	624	582	194	556	527	403	580	650	659	318	641	665	707	702	661	686	685	609	515	698	581		579
SAULT STE MARIE MICH	238	523	294	155	596	565	445	229	310	438	---	561	52	172	630	473	251	305	649	254	190	320	324	152	217	475	693	693	486	710		393
SEATTLE TACOMA WASH.	224	447	360	182	390	188	360	400	546	309	394	372	287	141	406	354	613	191	499	572	419	514	435	365	285	399	619	648	651	397		399
SEATTLE WASH. UNIV.	273	450	302	148	326	213	337	377	488	244	376	362	292	161	271	380	517	135	---	401	462	458	364	365	144	---	557	608	580	136		347
SPOKANE WASHINGTON	160	209	367	278	320	269	340	527	539	518	511	452	496	220	---	490	625	280	351	491	586	551	312	465	502	478	640	651	647	295		433
STATE COLLEGE PENN.	542	572	451	149	278	629	587	222	566	336	635	603	552	559	452	679	648	489	618	522	501	261	297	111	169	589	512	711	520	445		474
STERLING VIRGINA	549	529	233	244	490	591	598	190	531	255	572	642	589	568	353	703	645	611	589	427	526	380	548	58	530	647	153	709	204	431		470
SWAN ISLAND W.I.	630	611	---	633	645	661	637	603	657	650	611	646	502	669	661	679	590	605	661	667	663	665	655	636	483	616	636	611	645	581		628
TAMPA FLORIDA	564	484	549	598	604	568	545	634	571	571	612	677	627	632	373	704	575	614	660	670	645	640	659	658	628	267	486	662	640	438		585
TUCSON ARIZONA	535	---	---	---	---	---	---	---	536	438	499	323	---	---	558	396	---	---	673	666	624	657	670	474	---	611	---	482	---	584		---
WAKE ISLAND PACIFIC	491	630	607	655	641	656	666	644	459	395	381	509	448	642	602	643	589	558	624	602	566	622	626	654	642	650	666	633	613	547		589

Note.--Langley is the unit used to denote one gram calorie per square centimeter.

Values with an asterisk are interpolated.

NET RADIATION

Net radiation in langleys per day (8 a.m. to 8 a.m.) at Palmer, Alaska

APRIL 1968

Date.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
Langleys. . .	-9	22	95	128	5	83	-31	-42	-90	-92	-11	-16	74	170	202	141	158	171	136	197	40	185	211	195	211	39	62	115	155	206		91

The measurement is made with a CSIRO Funk **net exchange radiometer over a plot of** sod. **The value represents the total incoming minus the total outgoing radiation of all wave lengths.**

These data are of an experimental nature and are published as received from the Palmer Exp. Station. **The instrument with which they were measured has not been checked by the Weather Bureau.**

SOLAR ULTRA-VIOLET RADIATION DATA

Daily totals and monthly average (<3900 Å)

Date.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
Langleys. . .	19.39	5.30	7.58	7.36	20.26	17.11	8.45	14.84	17.44	22.42	18.63	12.46	6.71	11.37	24.27	15.71	15.60	13.13	5.09	11.05	23.10	9.10	6.50	27.11	17.44	27.52	18.31	20.36	24.16	25.35		15.80

These data are from an U - V Eppley total ultra violet sensor and Speedomax H (Leeds Northrup) Recorder. It is at the same location (Agronomy Building, Iowa State University, Ames) as the published total solar radiation instrumentation. This instrument has not been checked by the ESSA, Weather Bureau.

TOTAL OZONE DATA

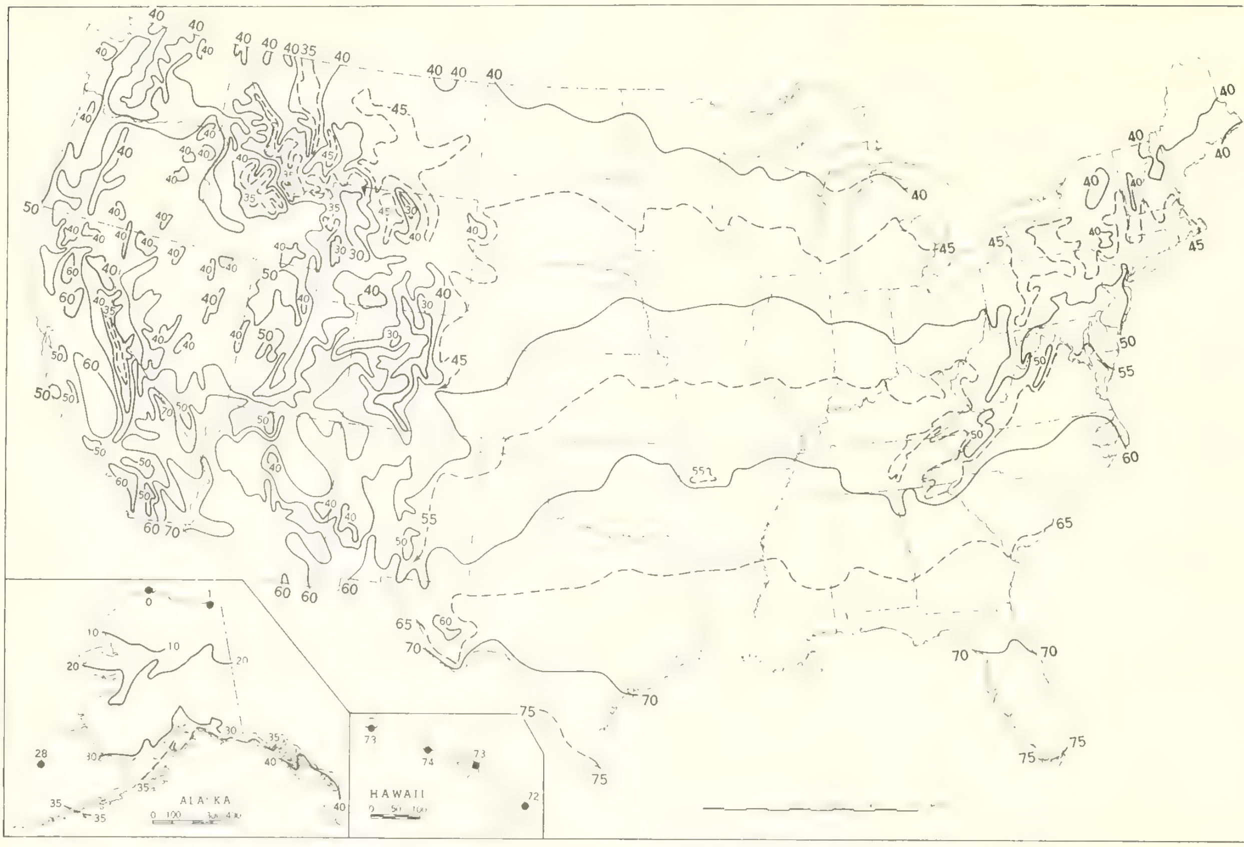
These provisional ozone data are obtained from measurements made with a Dobson ozone spectrophotometer, and are applicable approximately to local apparent noon. The data are presented in the code $\cdot s\Omega\Omega\Omega$ defined in the August 1962 WMO circular entitled "PUBLICATION OF DATA FOR METEOROLOGICAL RESEARCH, WORLD OZONE DATA."

Units Milli-atmo-cms.

Station	Day of month																														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean O_3
															Data will be delayed																	

The spectrophotometer measures the total amount of ozone in the atmosphere [illegible] column of air extending from ground level to the top of the atmosphere in the vicinity of the station. The amount of ozone in this column (coded $\Omega\Omega\Omega$) is expressed in terms of a thickness of a layer of [illegible] standard temperature and pressure [illegible]. 300 milli-atmo-cm ozone implies an ozone layer 0.3[illegible] centimeter thick. The code [illegible] designates [illegible].

Chart 1. A. Normal Daily Average Temperature (°F. 1931-60), April.



B. Temperature Departure from 30 - Year Mean (°F 1931-60), April 1968.

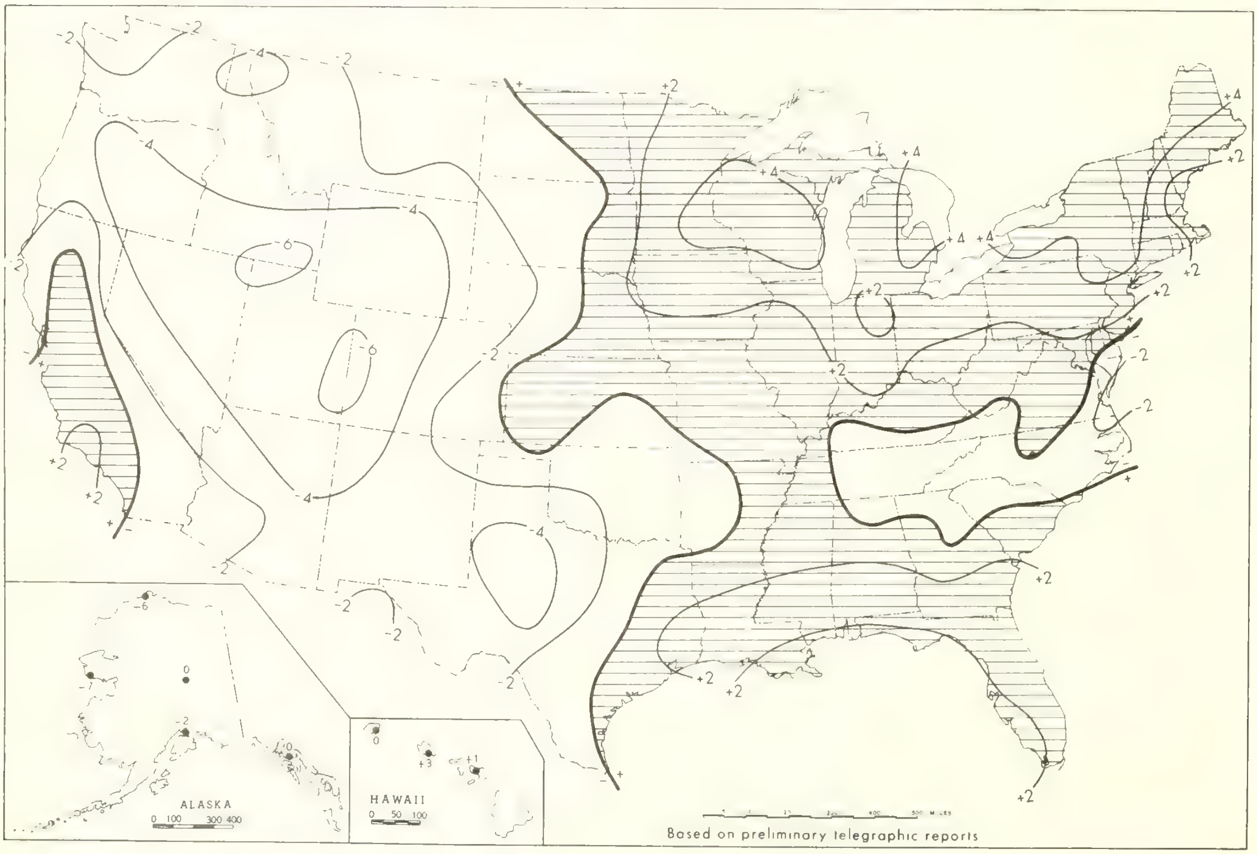


Chart II. Total Precipitation (Inches), April 1968.

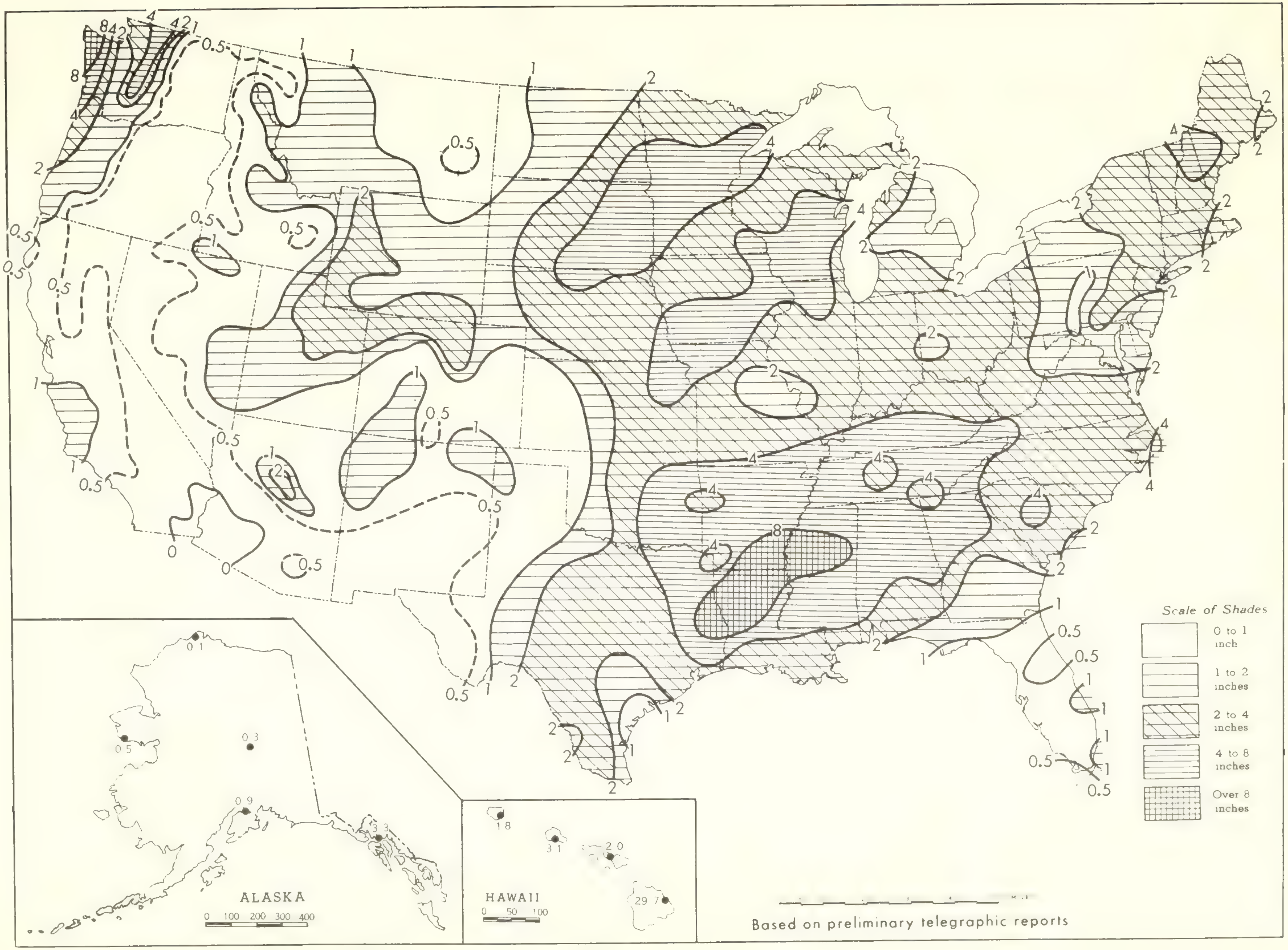
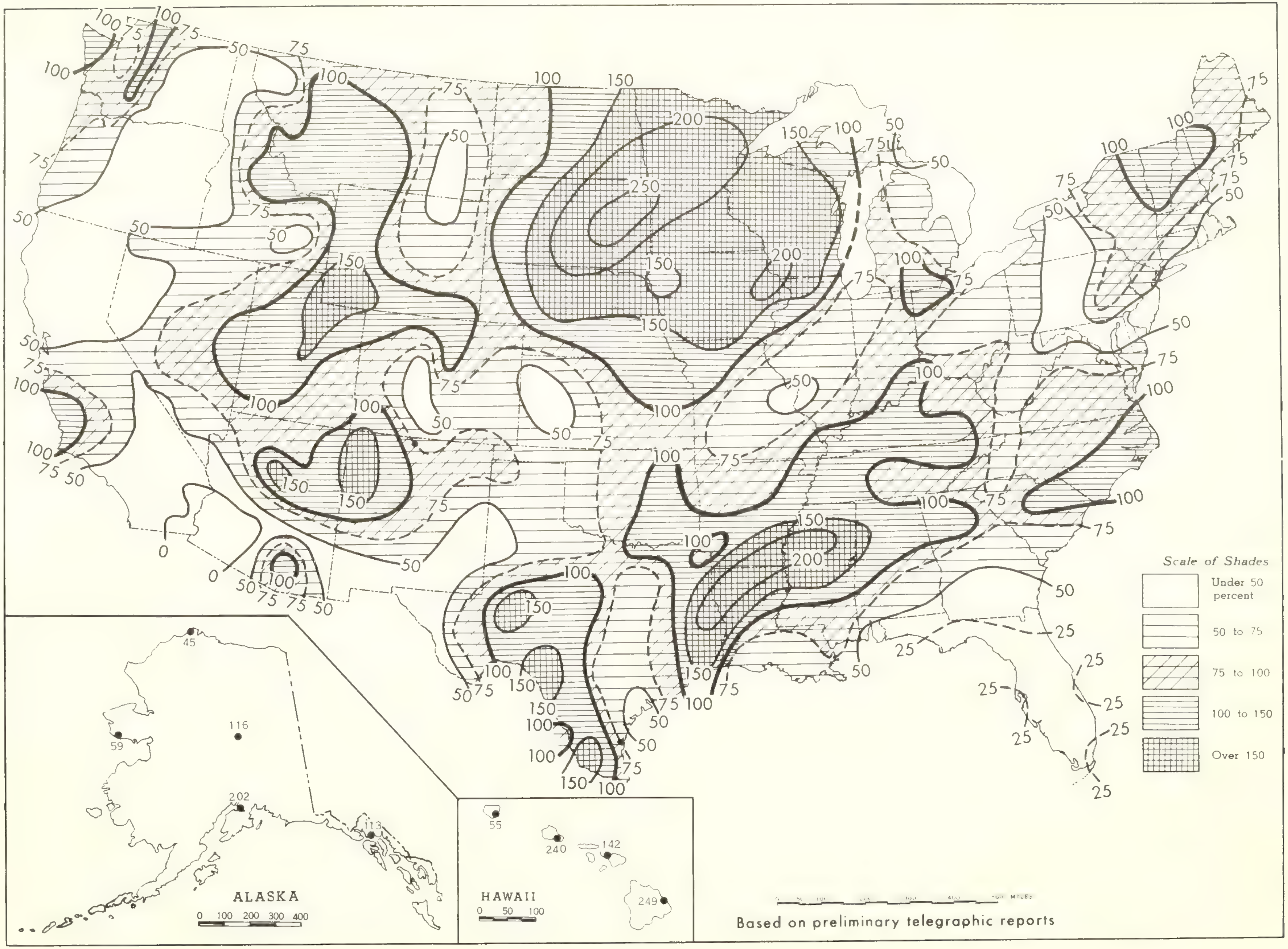
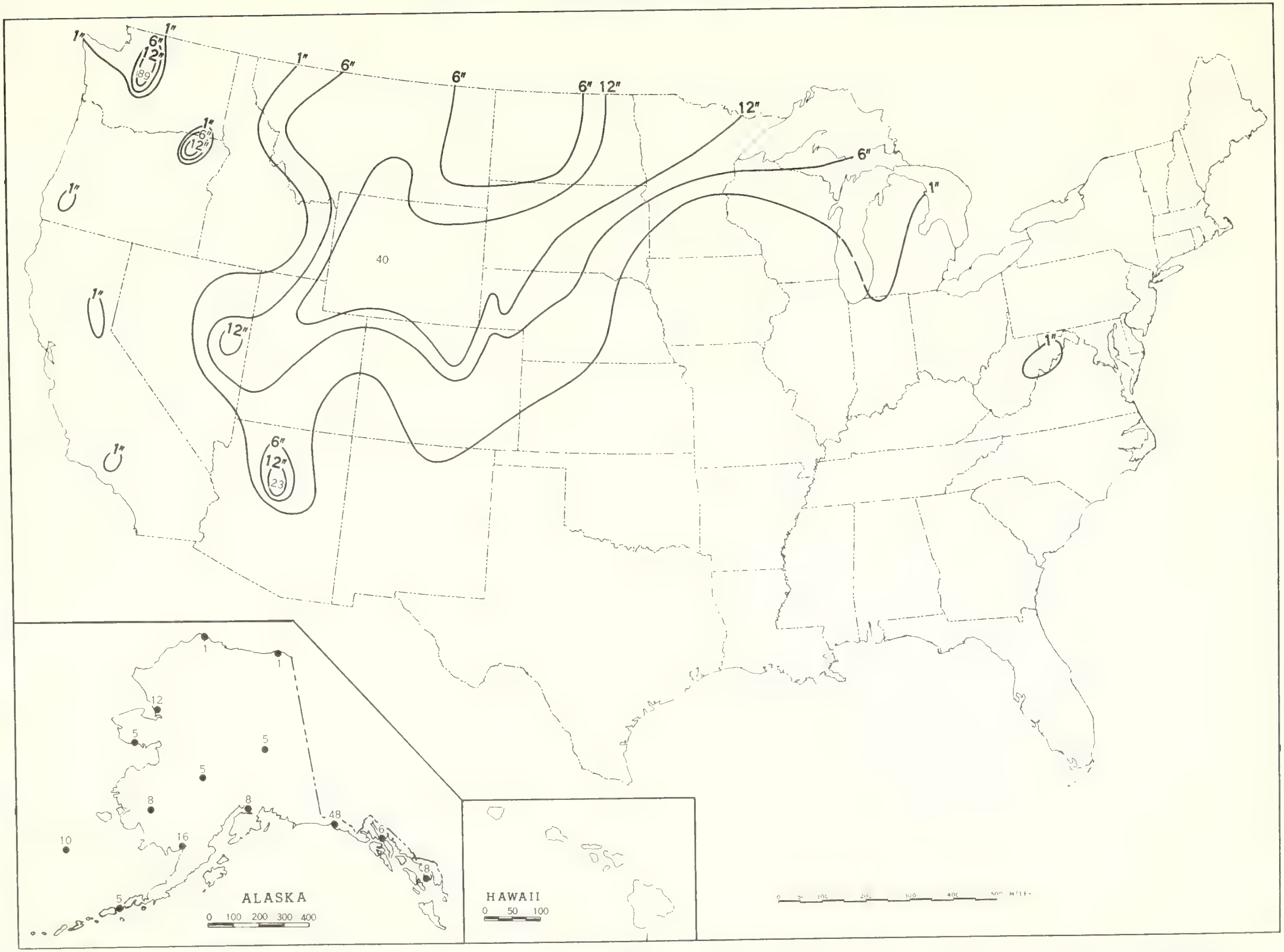


Chart III. Percentage of Normal Precipitation, April 1968.



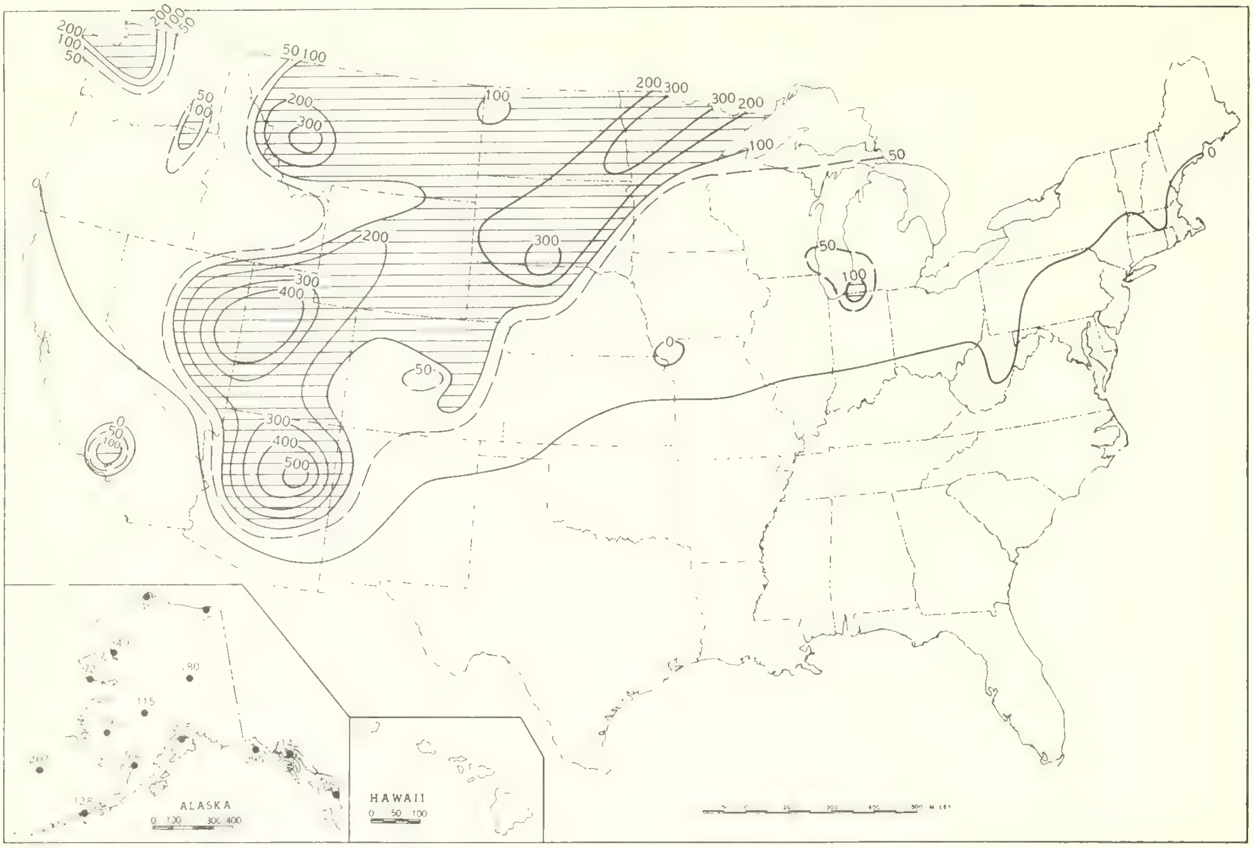
Based on preliminary telegraphic reports

Chart IV. Total Snowfall (Inches), April 1968.

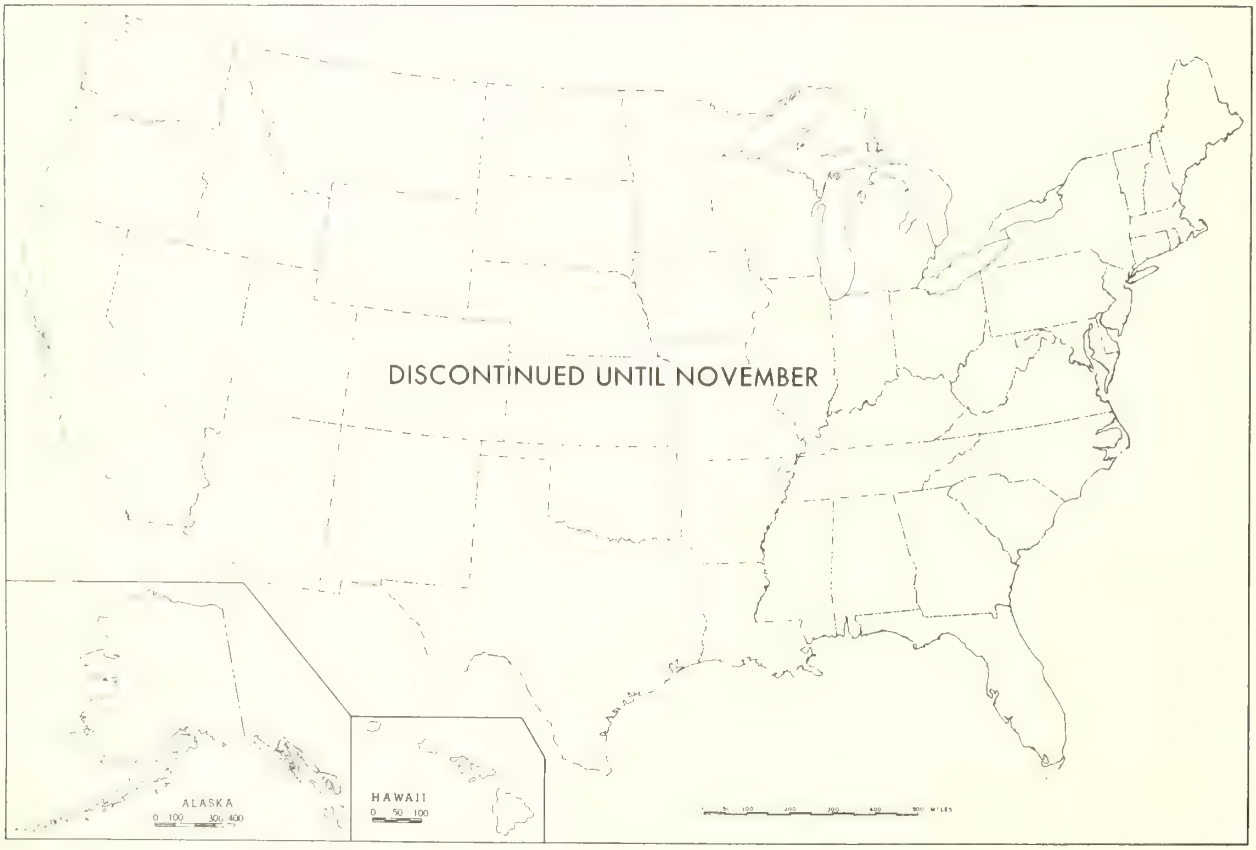


This is the total of unmelted snowfall recorded during the month at Weather Bureau and selected cooperative stations. This Chart and Chart V are published only for the months of November through April, although of course there is some snow at higher elevations, particularly in the far West, earlier and later in the year.

Chart V. A. Percentage of Mean Monthly Snowfall, April 1968.

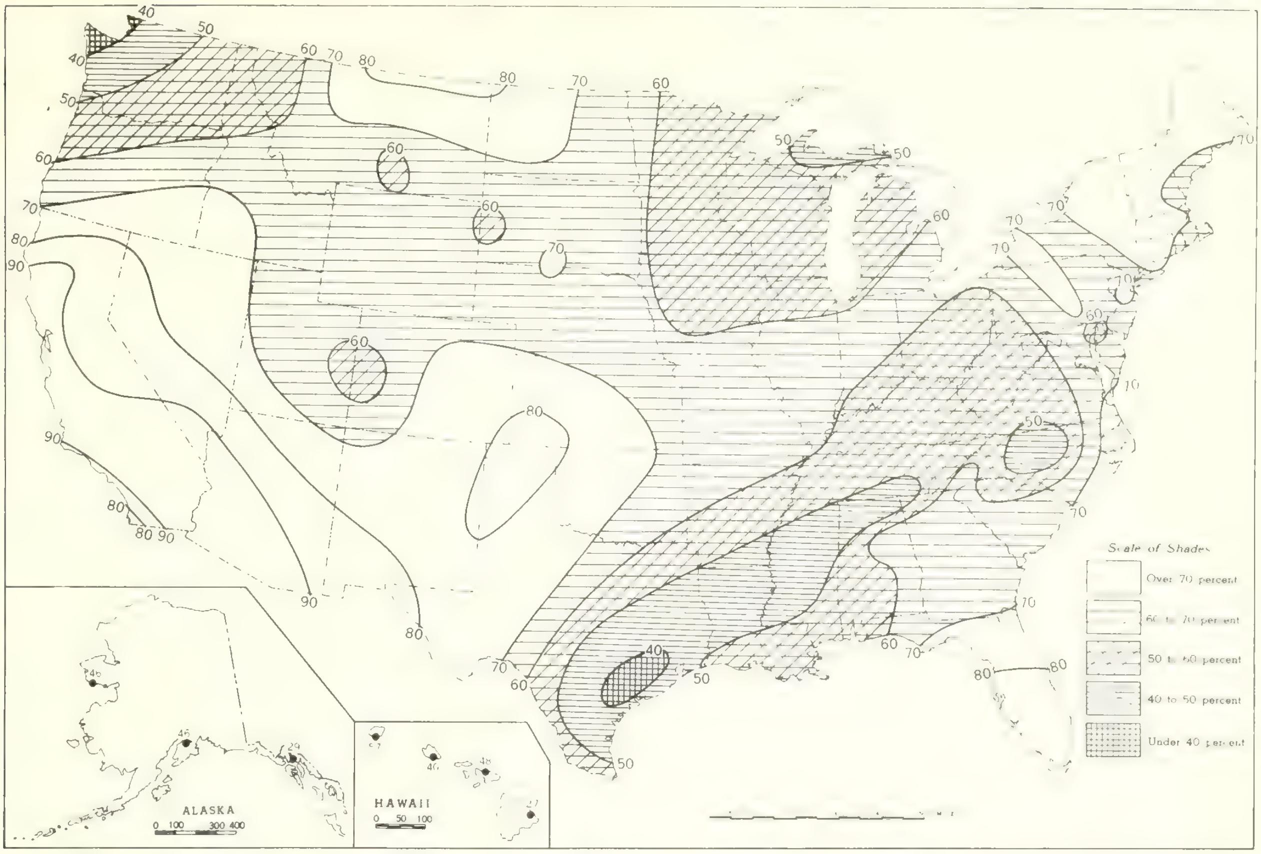


B. Depth of Snow on Ground (Inches), 7:00 a.m. E. S. T., April 1968.

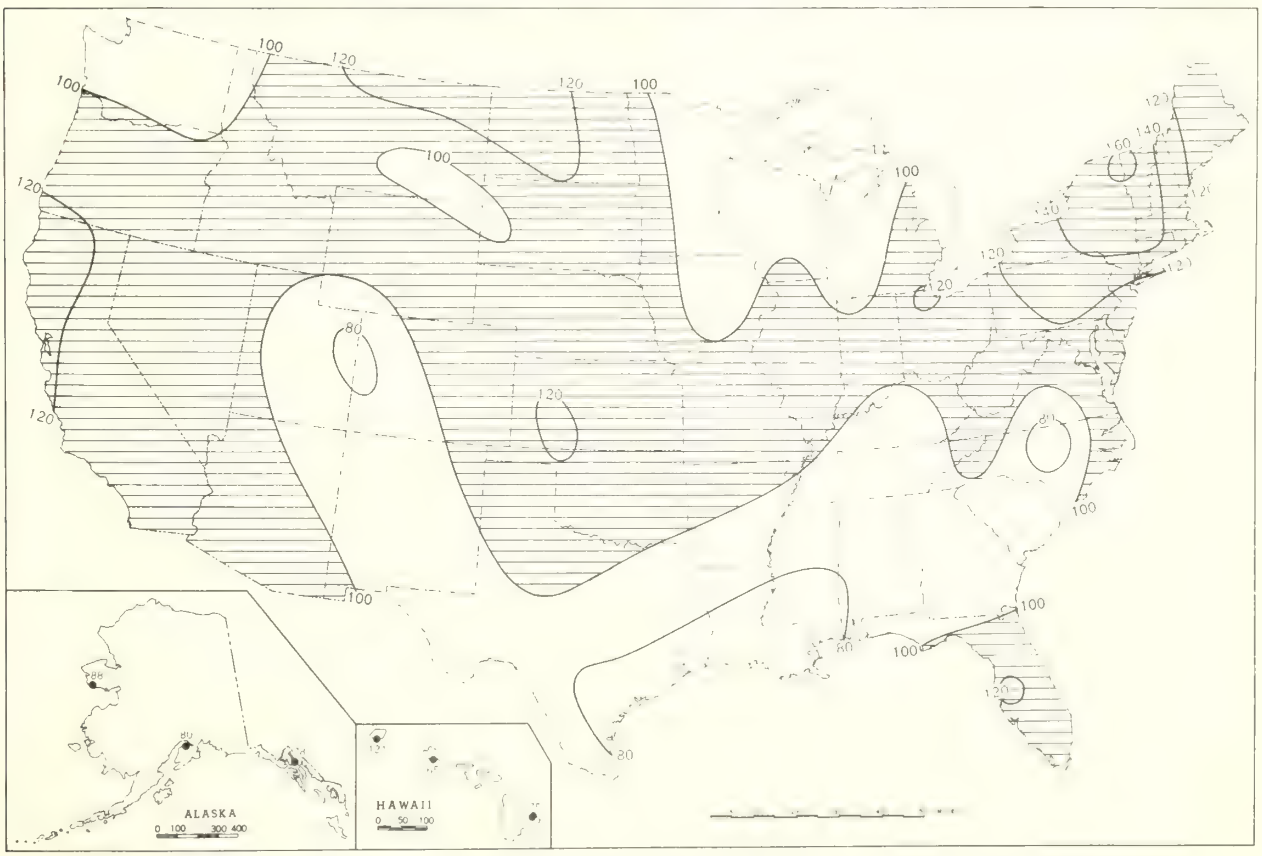


A. Amount of mean monthly snowfall is computed for Weather Bureau stations having at least 10 years of record.
B. Shows depth currently on ground at 7:00 a.m. E.S.T., of the Monday nearest the end of the month.
It is based on reports from Weather Bureau and selected cooperative stations.

Chart VI. A. Percentage of Possible Sunshine, April 1968.

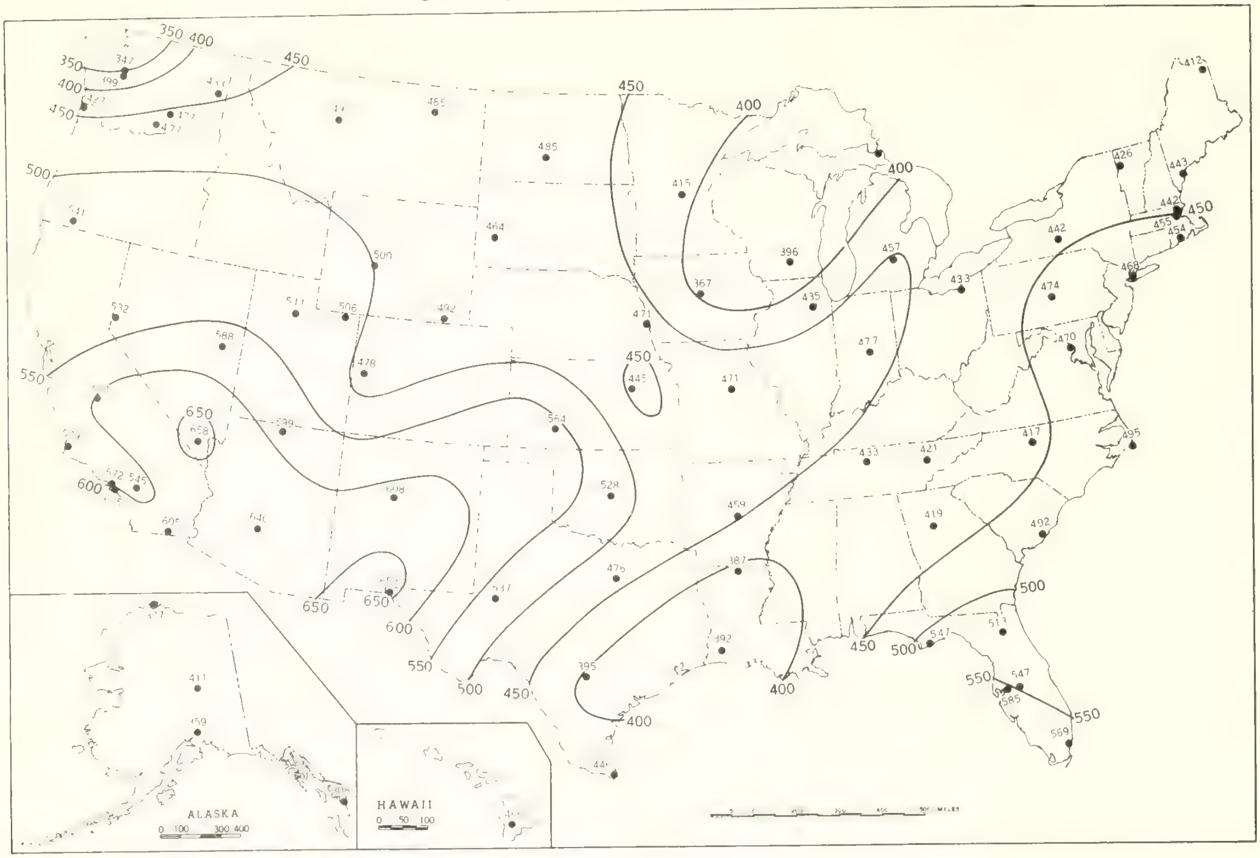


B. Percentage of Mean Monthly Sunshine, April 1968.

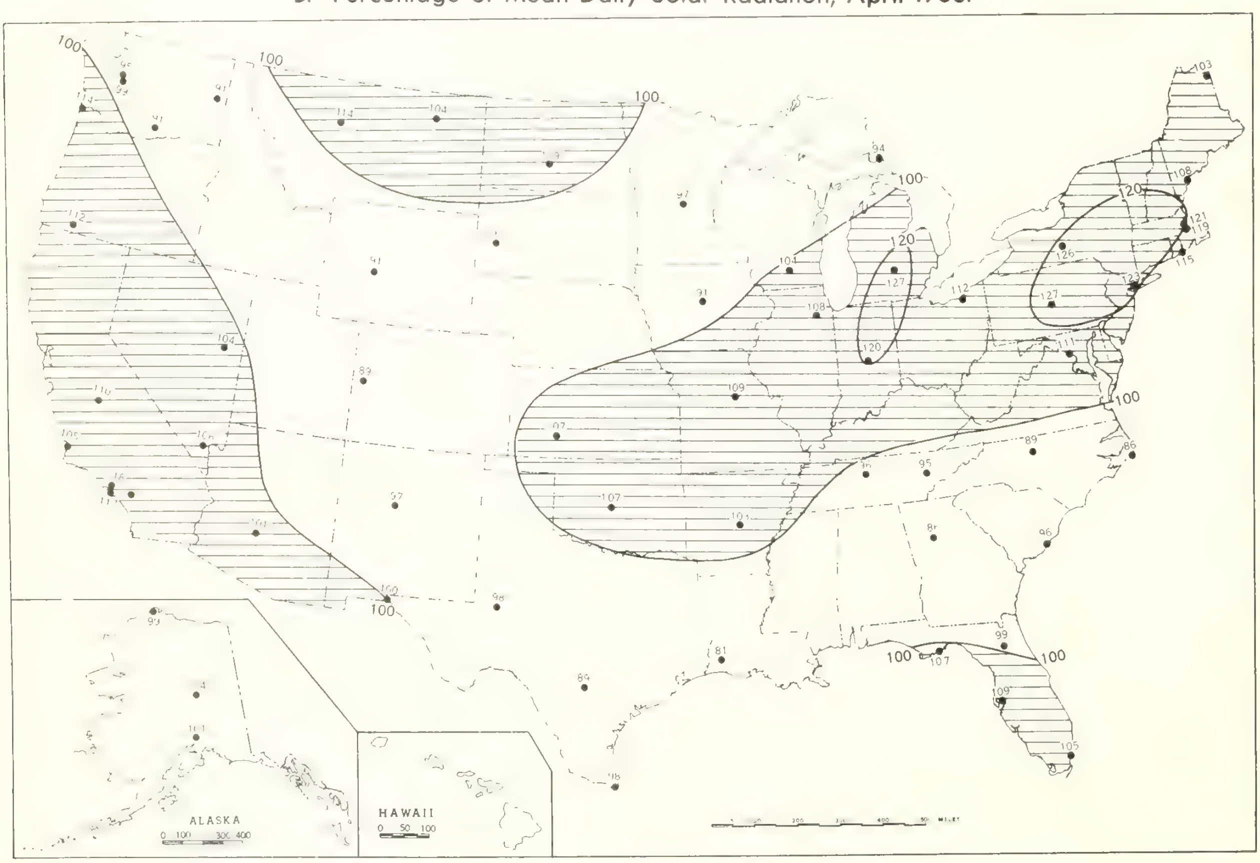


A. Computed from total number of hours of observed sunshine in relation to total number of possible hours of sunshine during month. B. Means are computed for stations having at least 10 years of record.

Chart VII. A. Average Daily Values of Solar Radiation, Langleys, April 1968.

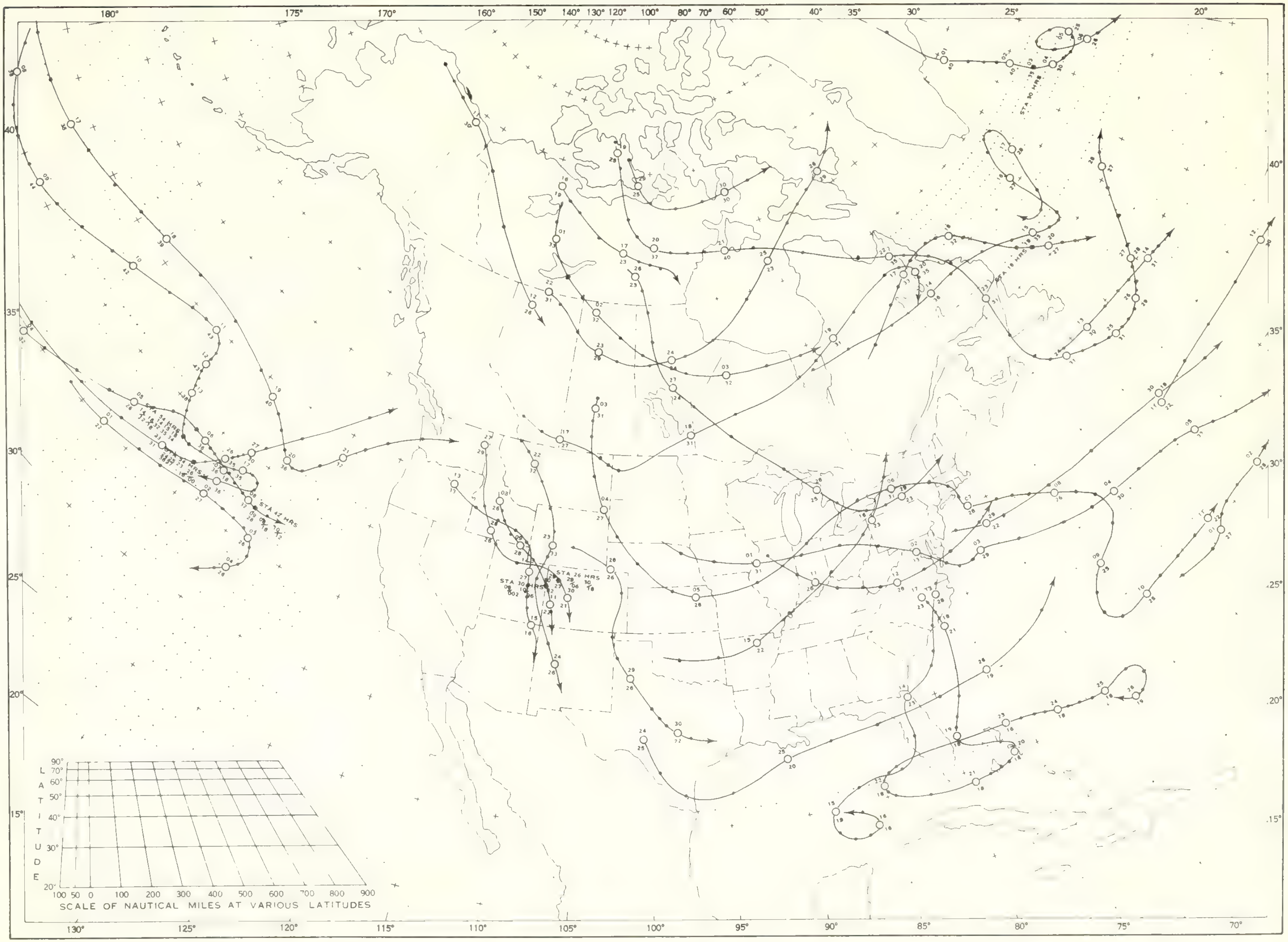


B. Percentage of Mean Daily Solar Radiation, April 1968.



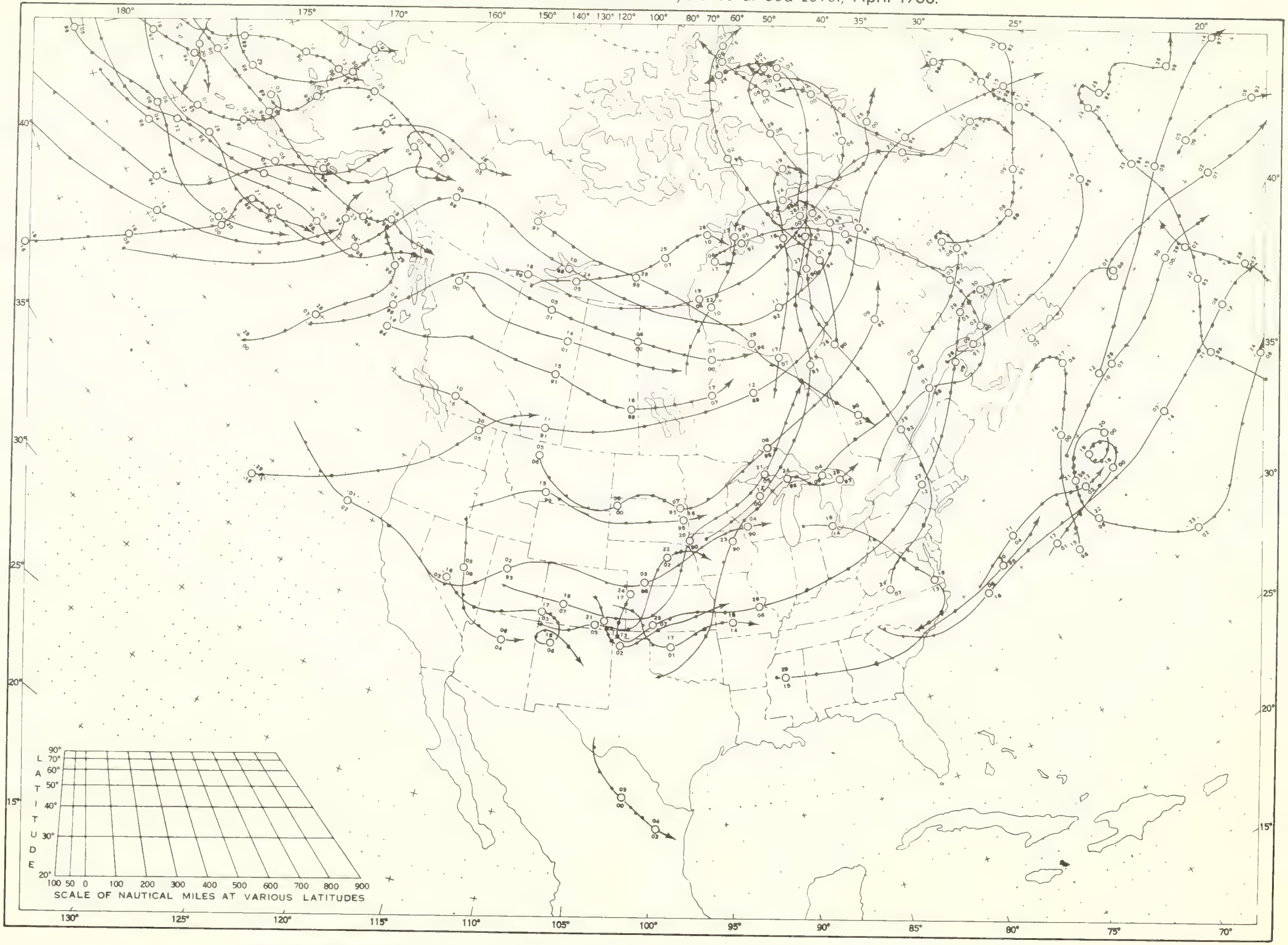
A. Mean daily solar radiation, direct + diffuse, received on a horizontal surface in langleys (1 langley = 1 gm. cal. cm.$^{-2}$) and recorded in International Pyrheliometer Scale of 1956. B. Percentage of the mean based on at least 5 years of record during the period 1950-60, and corrected to the International Pyrheliometer Scale of 1956.

Chart VIII. Tracks of Centers of Anticyclones at Sea Level, April 1968.



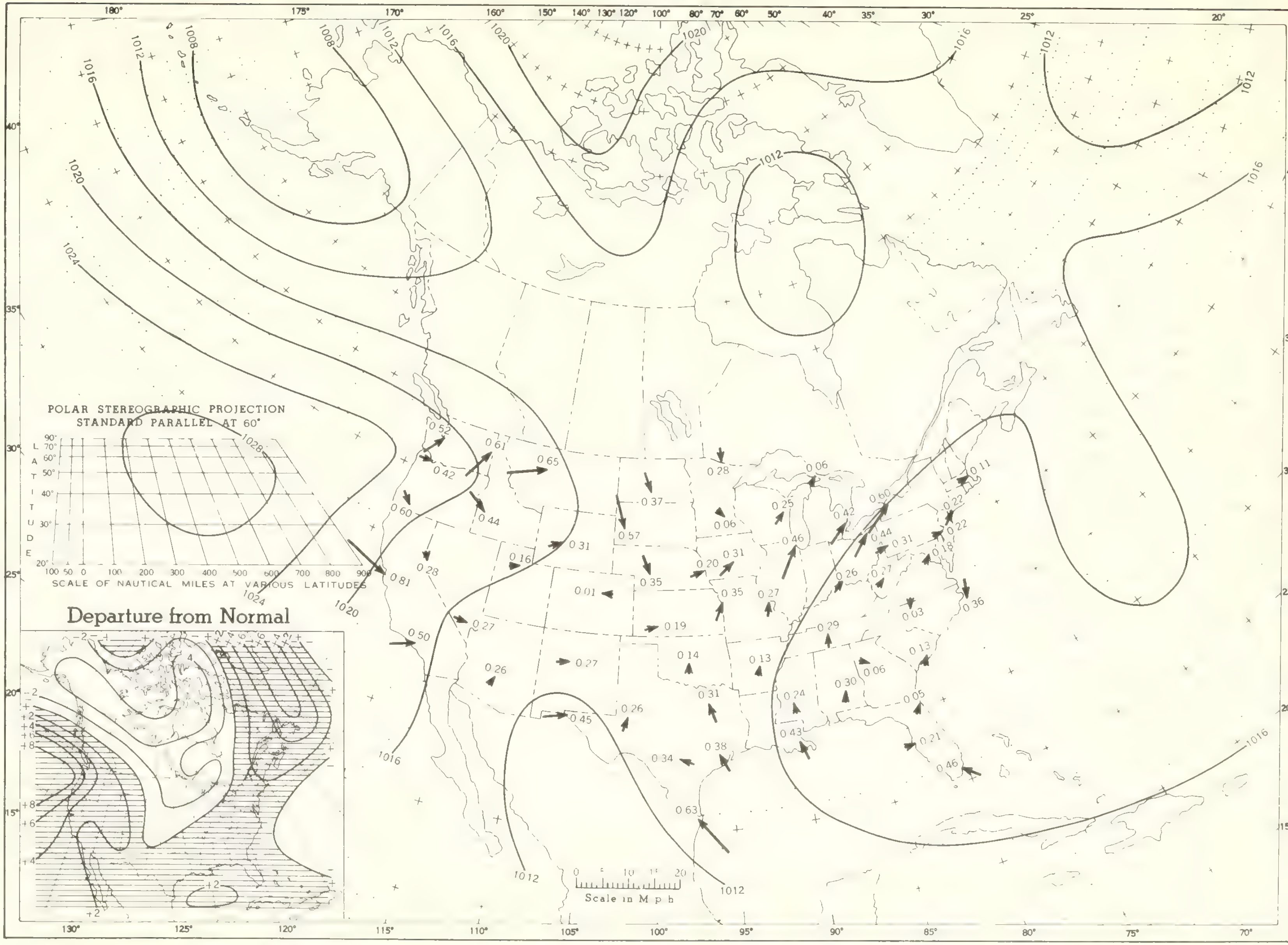
Circle indicates position of center at 7:00 a.m. E.S.T. Figure above circle indicates date, figure below, pressure to nearest millibar. Dots indicate intervening 6-hourly positions. Squares indicate position of stationary center for period shown. Dashed line in track indicates reformation at new position. Only those centers which could be identified for 24 hours or more are included.

Chart IX. Tracks of Centers of Cyclones at Sea Level, April 1968.



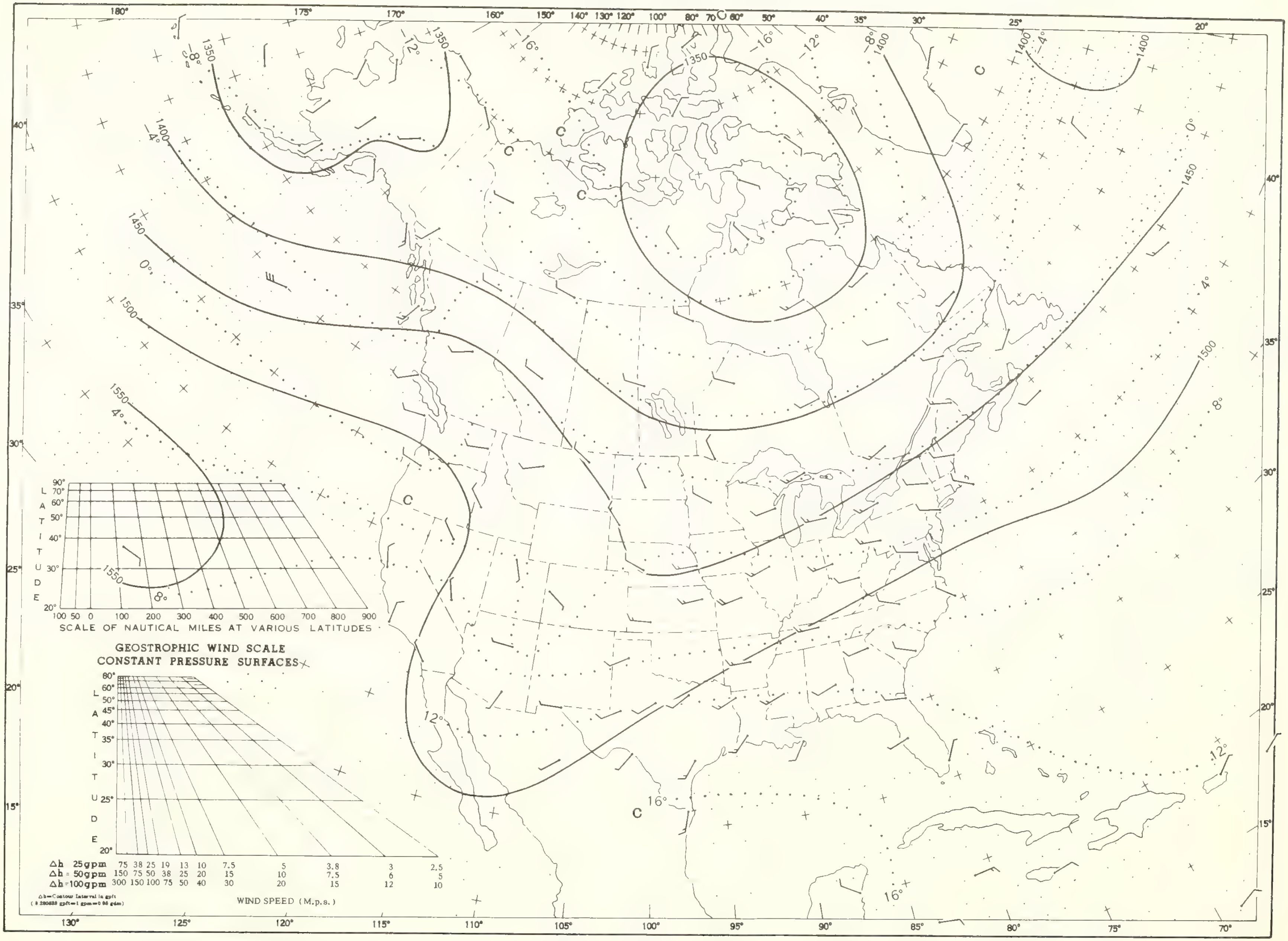
Circle indicates position of center at 7:00 a.m. E.S.T. Figure above circle indicates date, figure below, pressure to nearest millibar. Dots indicate intervening 6-hourly positions. Squares indicate position of stationary center for period shown. Dashed line in track indicates reformation at new position. Only those centers which could be identified for 24 hours or more are included.

Chart X. Average Sea Level Pressure (mb) and Resultant Surface Wind, April 1968. Inset: Departure of Average Pressure (mb) from Normal, April 1968.



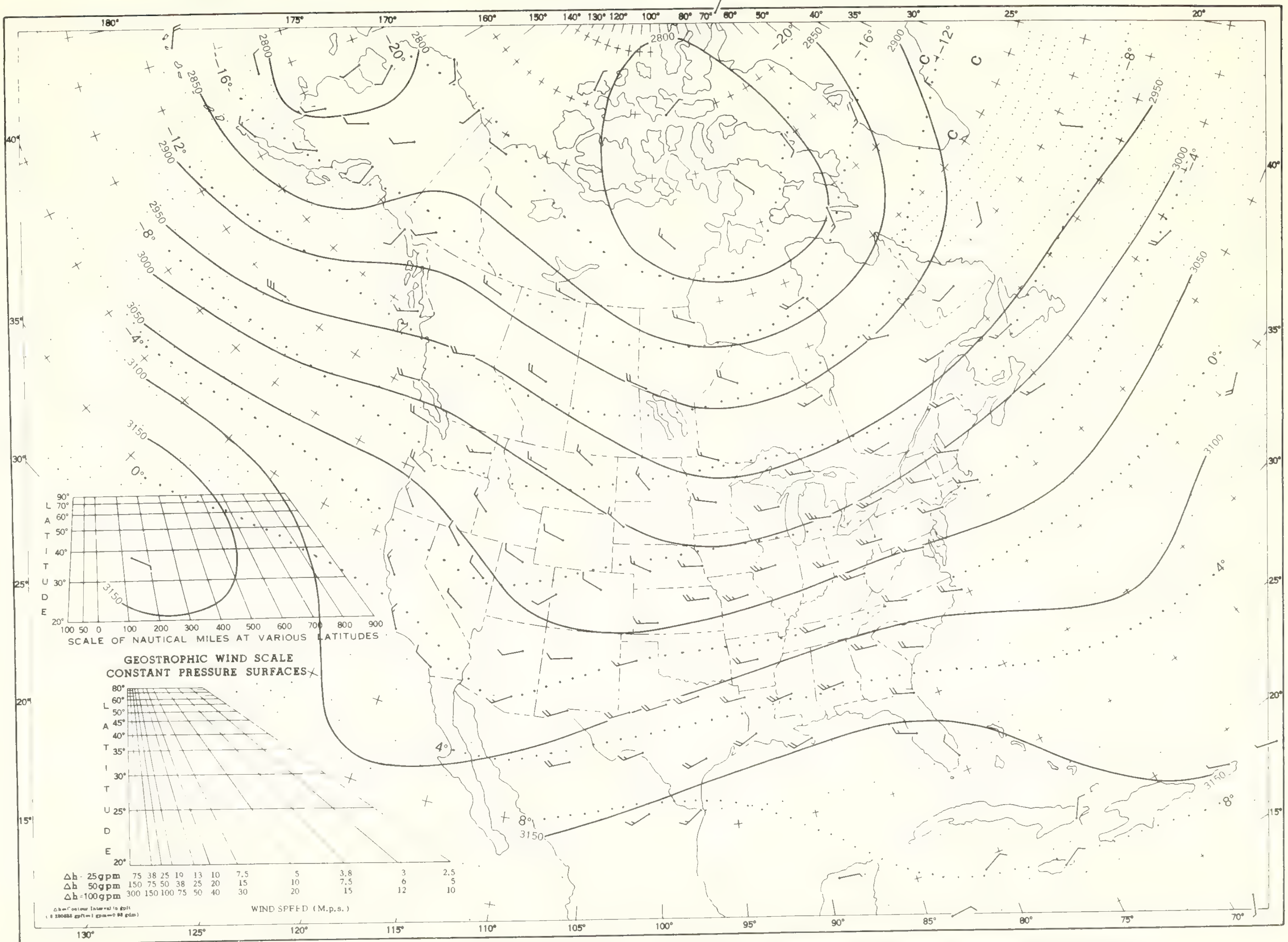
Average sea level pressures are obtained from eight daily 3-hourly observations. Resultant wind directions and speeds are shown by arrows. Constancy ratios (resultant speed÷average speed) are shown to two decimal places. Pressure normals are computed for stations having at least 10 years of record and for 10° intersections in a diamond grid over the oceans.

Chart XI. 850-mb. Surface, 1200 GMT, April 1968. Average Height and Temperature, and Resultant Winds.



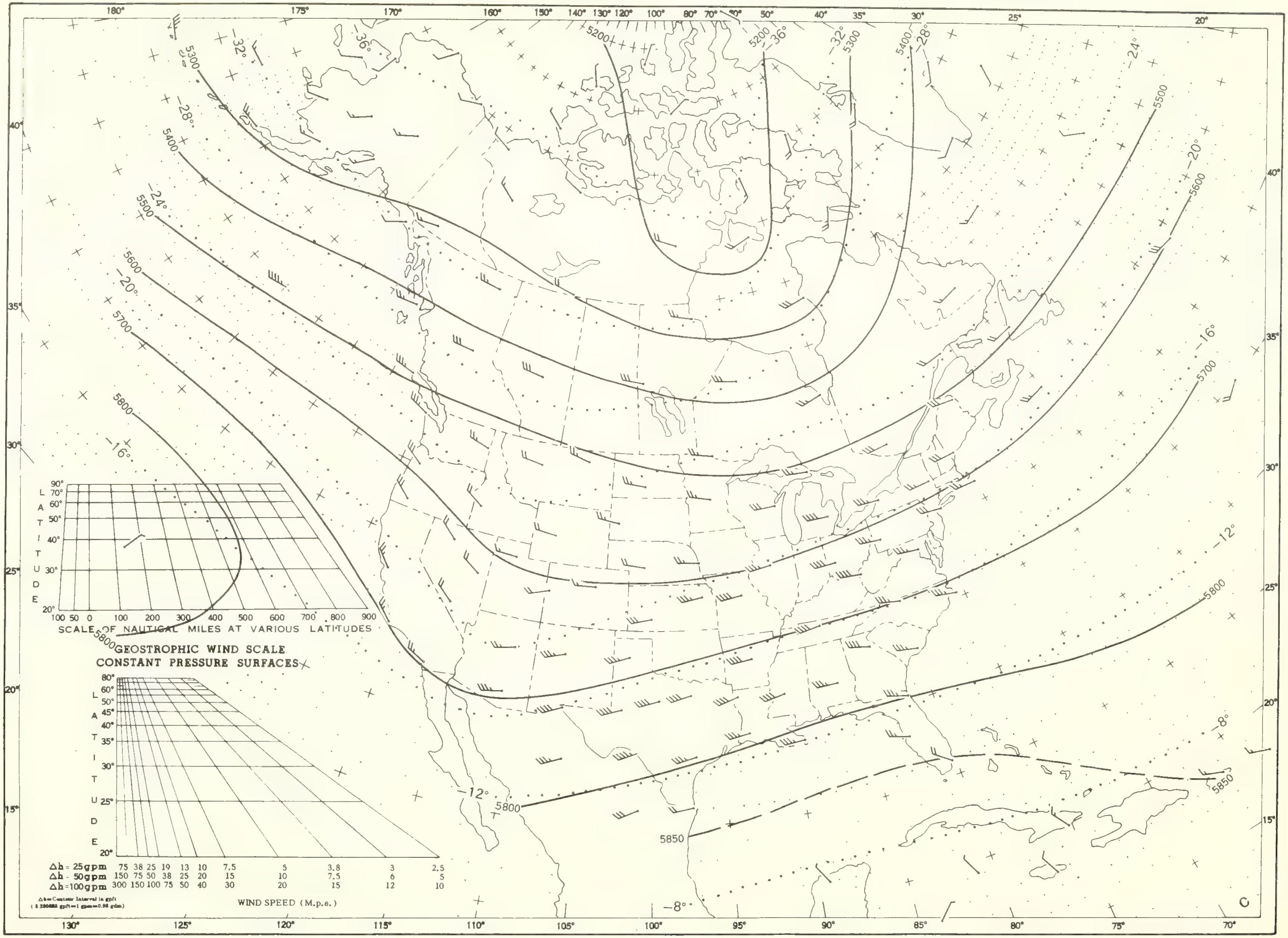
Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25mps, full feather 5mps, and half feather 2.5mps. All wind data are based on rawin observations.

Chart XII. 700-mb. Surface, 1200 GMT, April 1968. Average Height and Temperature, and Resultant Winds.



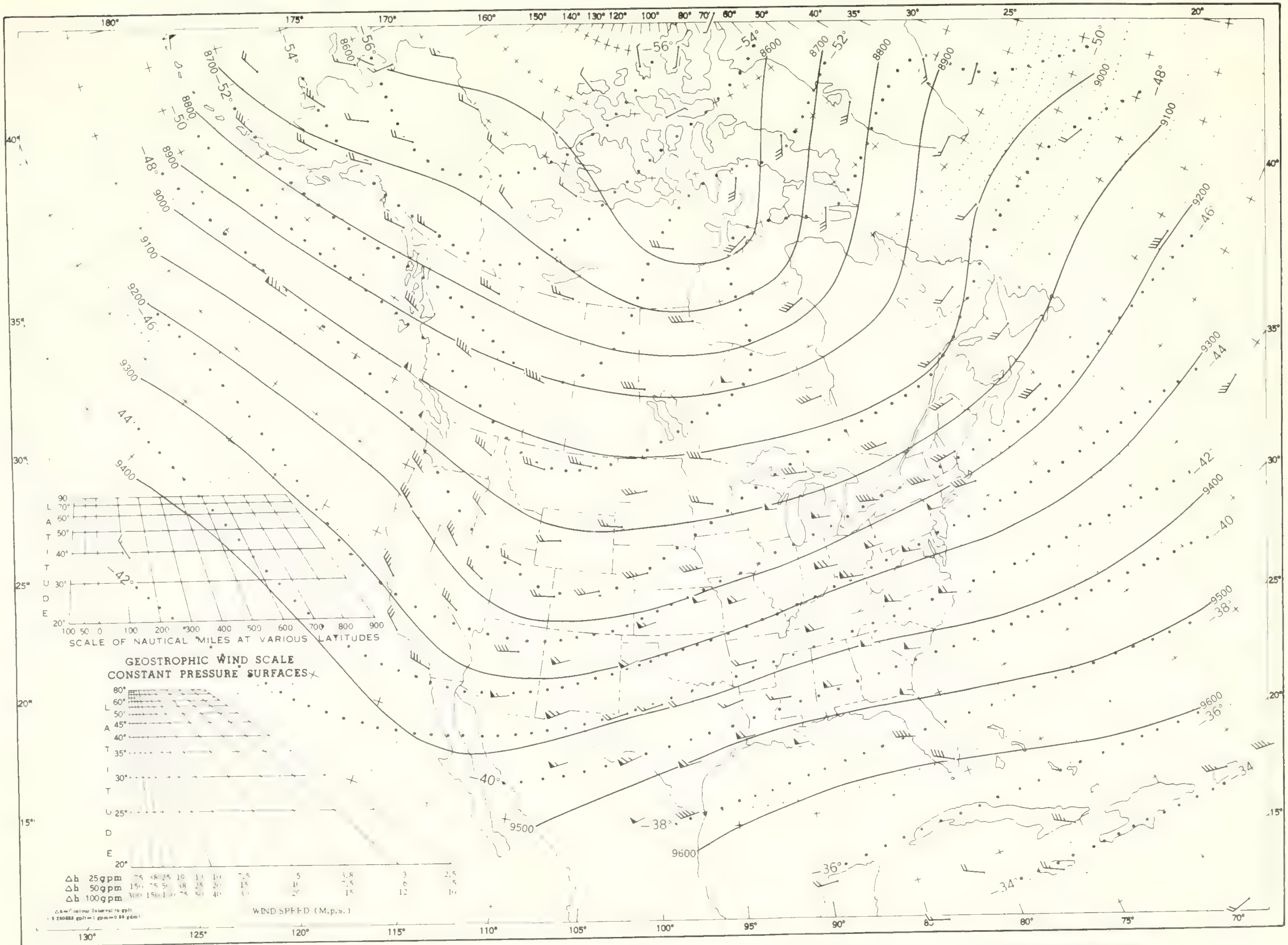
Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XIII. 500-mb. Surface, 1200 GMT, April 1968. Average Height and Temperature, and Resultant Winds.



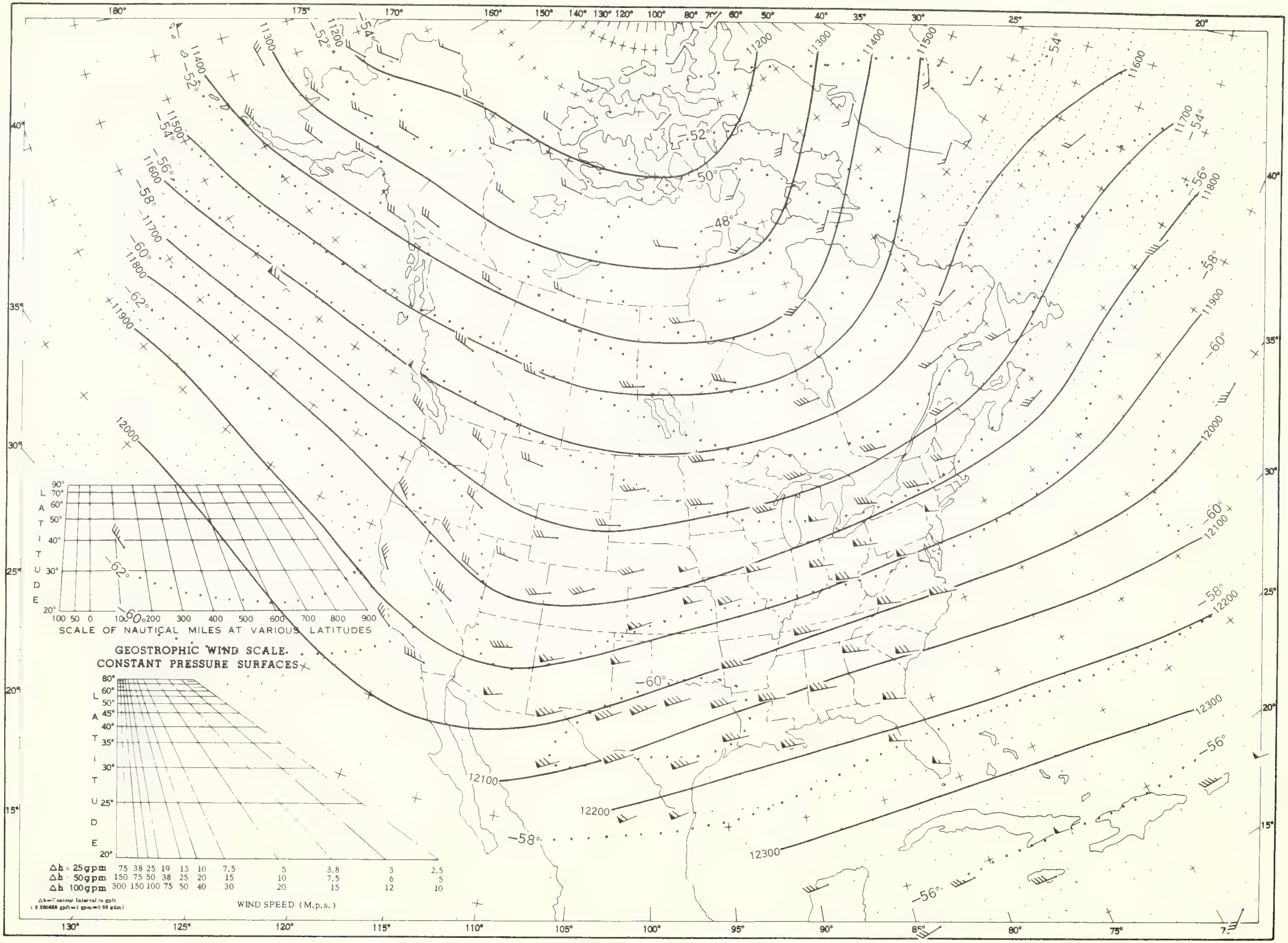
Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XIV. 300-mb. Surface, 1200 GMT, April 1968. Average Height and Temperature, and Resultant Winds.



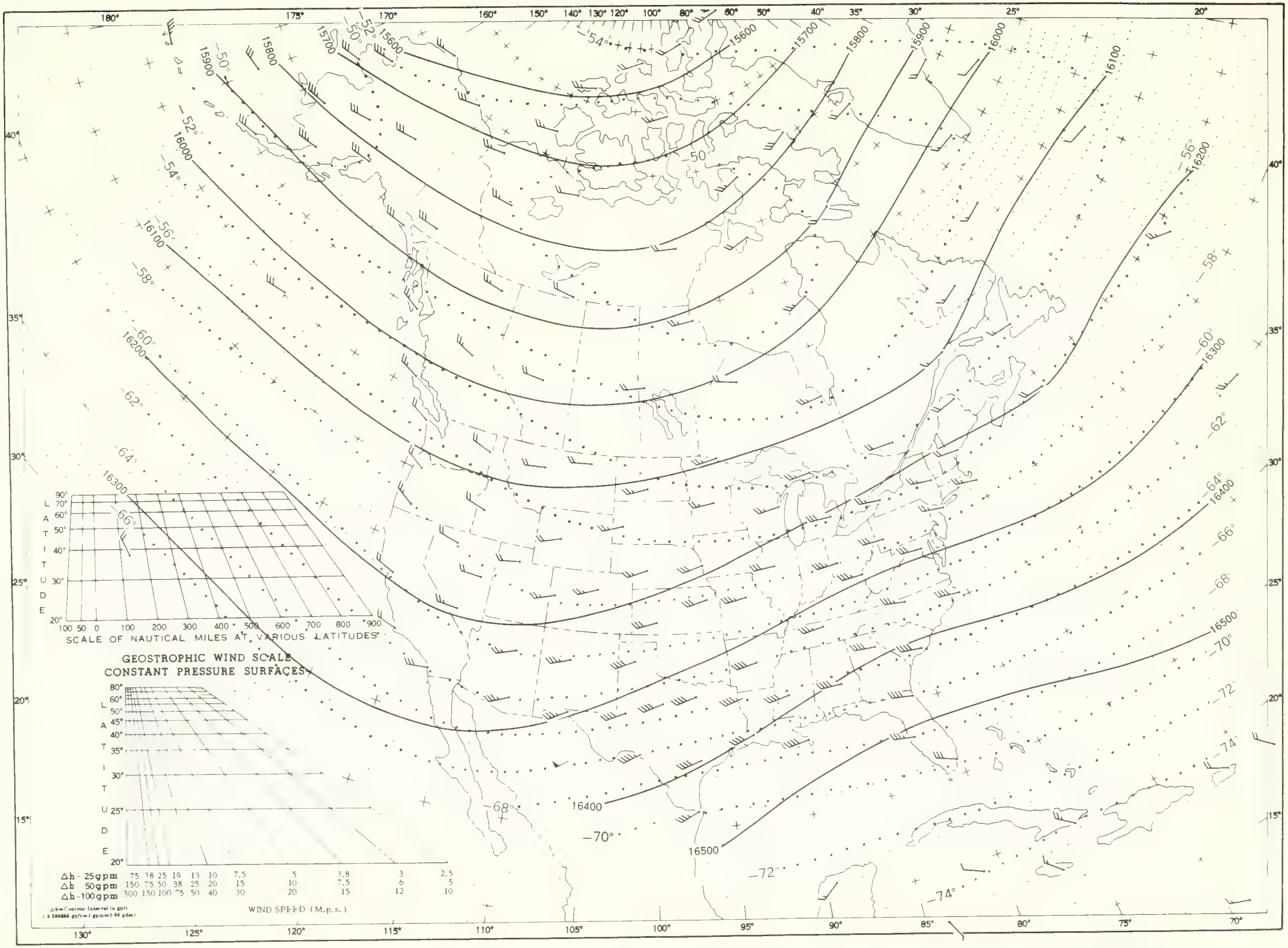
Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XV. 200-mb. Surface, 1200 GMT, April 1968. Average Height and Temperature, and Resultant Winds.



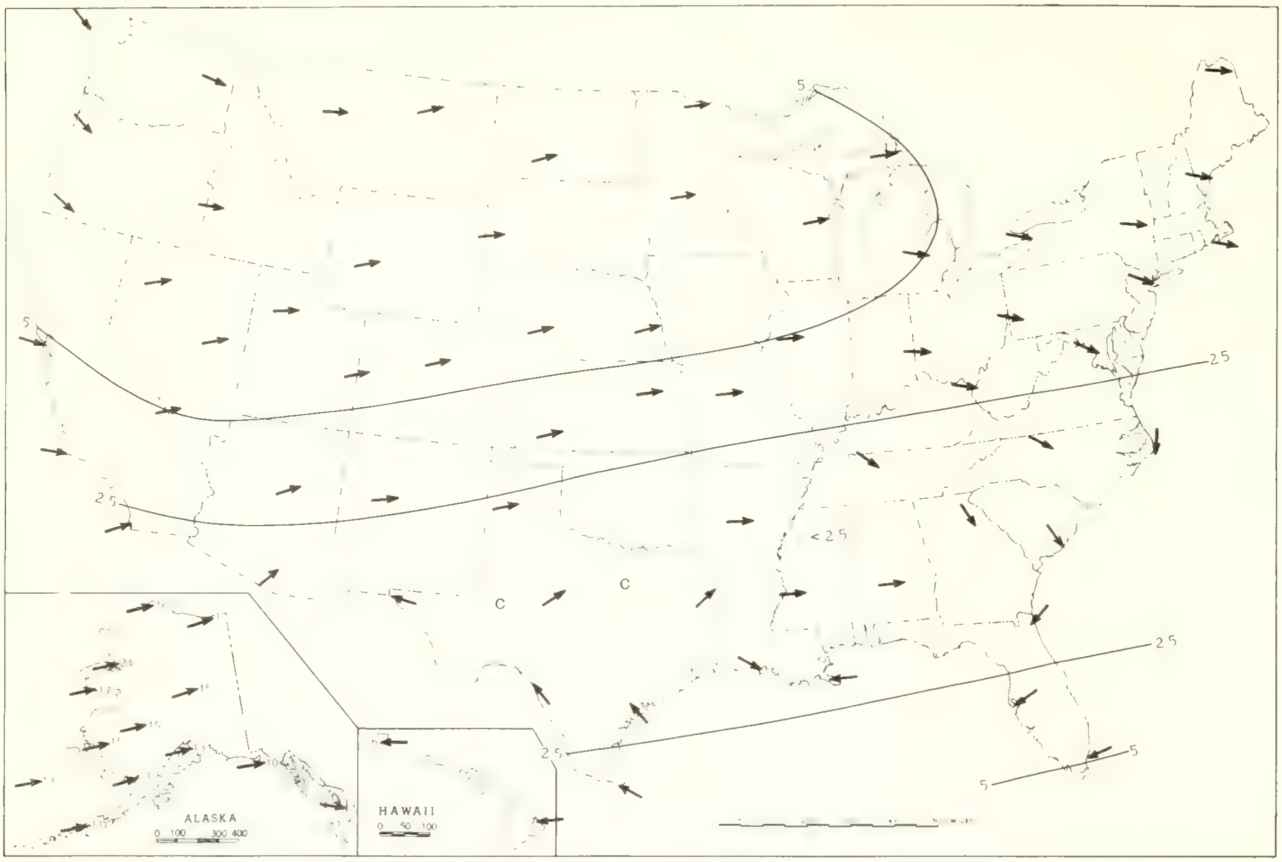
Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XVI. 100-mb. Surface, 1200 GMT, April 1968. Average Height and Temperature, and Resultant Winds.

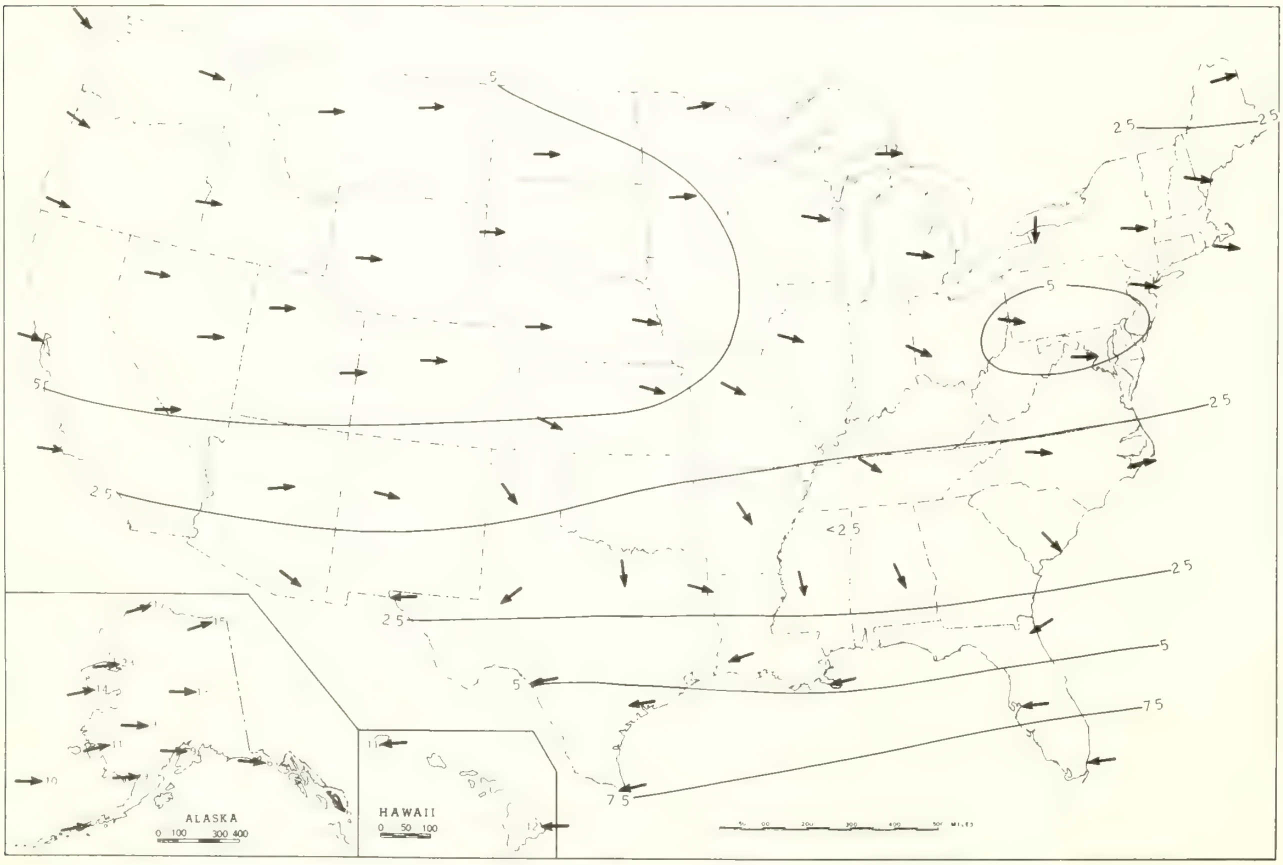


Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XVII. A. 50-mb. Surface, 1200 GMT, April 1968. Resultant Winds.



B. 30-mb. Surface, 1200 GMT, April 1968. Resultant Winds.



Wind speed (isotachs) in meters per second. Arrows show resultant wind direction. All wind data are based on rawin observations.

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CLIMATOLOGICAL DATA

NATIONAL SUMMARY

MAY 1968
Volume 19 No. 5

ASHEVILLE: 1968

CONTENTS

NOTE: Delayed data and corrections will be carried in the June and December issues of this publication. An explanatory page "Description of Charts" will be carried in the January and July issues.

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CLIMATOLOGICAL DATA

NATIONAL SUMMARY

Volume 19 No. 5 MAY 1968

GENERAL SUMMARY OF WEATHER CONDITIONS

HIGHLIGHTS:

1. Heavy rains Ohio River Valley, Texas' middle Gulf coast, central Arkansas, and southern Florida.
2. Many tornadoes in "Tornado Belt" on 15th. Dozens of persons killed and hundreds injured by tornadoes in Arkansas.
3. Cooler than normal over most of Nation.

TEMPERATURE.--The Far West and the northern Great Plains warmed early in May, reversing a trend that had persisted since late in March. Temperatures climbed to the high 80's and low 90's at many locations in Nebraska and Kansas in the first few days of May. Lincoln, Nebr., registered 92° the highest temperature in the month on May 1. On the 3d, temperatures reached the 80's in southern Pennsylvania and some 90° readings were noted in Virginia. The weather in the Northeast then turned sharply colder and by May 5, temperatures in Indiana, Ohio, and West Virginia had plunged to below freezing. This was the first cooler-than-normal weather in New York since March.

Cold air plunged southward over the entire Nation with freezing temperatures occurring as far southward as Prescott, Ariz., in the West and Pikeville, Ky., in the East. After a few cool days, temperatures over the East turned slightly warmer about the middle of the 2d week of May. This warm spell was brief, lasting only 5 or 6 days until more cool weather hit the East. The middle and eastern sections of the country remained cooler than normal to the end of the month. Some warming occurred in the West late in the month. The last 6 days were especially warm in the Southwest. Afternoon temperatures at Phoenix and Yuma, Ariz., ranged from 100° to 108° on the 26th to 31st.

Monthly average temperatures were near normal in the Far West, near the Mexican border, and near the Gulf of Mexico, but a few degrees cooler than normal over the rest of the Nation. Most of South Dakota, Nebraska, Kansas, Iowa, and Pennsylvania averaged 4° to 6° below normal.

PRECIPITATION.--Dry, sunny weather prevailed over the western half of the United States at the beginning of May. Late in the first week, however, light rain fell along the Washington coast and the northern half of the Oregon coast. Also, during the last half of the 1st week of May, scattered thundershowers developed across Texas. Some of these storms were accompanied by damaging hail and strong winds.

Near the end of the first week of May, a storm swirled out of the Rockies dumping snow in the Rockies and the adjacent Great Plains. By the 7th, 3 inches had accumulated at Sidney, Nebr., and on the 10th and 11th, spots in the Dakotas and Minnesota had received up to 5 or 6 inches. The Southeast also received rains early in the first week of May and over the weekend with most amounts near 1 inch but a few spots received more than 2 inches.

Early in the second week of May, a storm front became quasi-stationary over Texas, causing tornadoes, severe thunderstorms, heavy hail, strong gusty winds, and torrential rains. Downpours approaching 13 inches in 12 hours caused flooding along the rivers in south Texas. Papalote, Tex., received 6 inches of rain in 1 hour and Corsicana nearly 10 inches in 2 hours. The violent weather spread to nearby States. The wind gusted to 86 m.p.h. at Oklahoma City, Okla., and exceeded 70 m.p.h. at Goodland, Kans. Large hail fell at San Angelo, Texas. Clouds of dust reduced the visibility to near zero in parts of Kansas and Oklahoma. Tornadoes or thunderstorms occurred over almost the entire State of Texas from the Panhandle to the coast. The heavy rains missed only the Trans-Pecos and the lower Rio Grande Valley.

On the 13th, the severe weather--tornadoes, thunderstorms, hail, strong winds, and torrential showers--was still occurring over northern Texas, in Oklahoma, Kansas, Nebraska, Missouri, and Arkansas. This storm area expanded in the third week of May with tornadoes occurring in 17 States. More than 50 tornadoes struck in 7 States on the 15th. They killed dozens of persons, injured hundreds, and caused millions of dollars damage to property. A preliminary count showed 48 tornado deaths in Arkansas. Most of these occurred at Jonesboro where hundreds of persons were injured. Tornadoes at Charles City, Maynard, and Oelwein, all in Iowa, killed over a dozen persons, injured several hundred, and caused major property damage. Other killer tornadoes struck Missouri, Illinois, and Indiana.

The storm area at midmonth extended northward to the Great Lakes and eastward to the Appalachians. Some streams from Illinois to Texas overflowed their banks, flooding fields and highways.

Heavy rains fell along the east coast of Florida in the 3d week of May, followed by rains over the entire State in the final week. The monthly precipitation totals 8 to more than 20 inches, in southern Florida worsened the excessively wet field conditions but the smaller amounts benefited the central drought area of that State. The Atlantic coast also received needed rain in the 4th week of May. Widespread heavy rains began early in the 4th week in Missouri and spread eastward to western Maryland. Widespread flooding in southern Ohio resulting from these rains forced hundreds of persons from their homes. The rains in Ohio slackened or stopped on May 25 but began again on the 26th causing more widespread flooding and driving 3,000 persons from their homes. Property damage in Ohio due to the floods was expected to reach $9 million. Flooding also occurred in New Jersey in the last week of May due to 7-inch falls in the northern part of that State.

The heaviest rains in May fell over an irregular band averaging about 300 miles wide from eastern Texas northeastward over Arkansas, the Ohio River Valley, Pennsylvania, New Jersey, and northern Maryland. Monthly totals in the area ranged from about 6 to 10 inches over most of the Ohio River Valley but exceeded 12 inches in spots in Arkansas and Texas. The southwestern deserts and most of the Great Basin received no rain or only light sprinkles in May.

CONDENSED CLIMATOLOGICAL SUMMARY

Section	Temperature						Precipitation			
	Monthly extremes						Monthly extremes			
	Station	Highest	Date	Station	Lowest	Date	Station	Greatest	Station	Least
		°F			°F			In.		In.
Alabama	Mobile WBAP	96	31+	Waterloo	30	6	Heflin	10.24	Autaugaville 3N	0.55
Alaska	2 Stations	82	19+	Kotzebue WBAP	-5	2	Cape Hinchinbrook	14.26	2 Stations	T
Arizona	do	111	29+	2 Stations	15	15+	Walnut Creek	1.30	95 Stations	.00
Arkansas	3 Stations	92	26+	do	35	6	Hopper 1E	21.55	Huntsville	3.86
California	Needles FAA AP	115	28	White Mountain 2	5	14	Pit River Power House	6.96	71 Stations	.00
Colorado	La Junta FAA AP	96	30	Twin Lakes Reservoir	0	7	Lamar	5.35	Canon City	.07
Connecticut	6 Stations	79	30+	Coventry	23	8	Wolcott Reservoir	7.65	Pauchaug Forest	3.55
Delaware	Bridgeville 1NW	88	3	Georgetown 5SW	31	7	Middletown 1WSW	6.05	Selbyville	2.83
Florida	Fort Drum 5NW	100	18	De Funiak Springs	37	6	Royal Palm Ranger Sta	23.84	Pensacola WBAP	1.23
Georgia	6 Stations	95	24+	Blairsville Exp Sta	28	6	Tallapoosa 2N	11.62	Morgan 1W	1.46
Hawaii	Mauna Kea Beach 98	93	21	Mauna Loa Slope Obs	30	3	Honokane 181.1	16.46	2 Stations	.00
Idaho	2 Stations	94	28+	Leadore No 2	4	6	Ashton 1S	3.52	Glenns Ferry	.23
Illinois	Harrisburg	93	2	2 Stations	26	6	Farmer City	13.28	Keithsburg 1NW	1.50
Indiana	Crane Naval Depot	94	15	do	23	6	North Vernon 2SW	12.42	Hobart	2.07
Iowa	Clarinda	95	2	Swea City 5NW	20	10	Decorah	5.70	Grundy Center 3NE	1.37
Kansas	Ashland	98	3	Atwood	28	9	Chanute FAA AP	9.00	Reyford 3E	1.30
Kentucky	Hopkinsville	90	3	Vanceburg	25	6	Bowling Green	11.86	Jeremiah	1.00
Louisiana	Franklinton 3SW	94	30	Cotton Valley	44	5+	Winnfield 2W	17.58	New Iberia 5NW	1.10
Maine	Orono	86	16	Squa Pan Dam	18	8	Hiram	5.12	Squa Pan Dam	1.28
Maryland	Leonardtown 3NW	90	3	Oakland 1SE	21	7	Sines Deep Creek 2	9.59	Leonardtown 3NW	2.15
Massachusetts	Haverhill	82	14	Framingham	21	8	Chester 2	8.60	Provincetown 1N	2.62
Michigan	Traverse City FAA AP	90	15	Vanderbilt Trout Sta	13	6	Adrian 2NNE	7.61	Traverse City FAA AP	1.54
Minnesota	3 Stations	90	1	3 Stations	15	5	Grand Meadow	6.10	Minneota	.98
Mississippi	Monticello	97	12	Tupelo 2WNW	35	6	Alcorn A and M College	14.02	Buckatunna	.71
Missouri	4 Stations	92	3+	3 Stations	29	6	Charleston	8.38	Conception	1.37
Montana	Circle	89	1	Jackson	5	6	Lame Deer	6.80	Glasgow 15NW	.06
Nebraska	Red Cloud	95	2	Harrison	14	11	Mullen	8.84	Gothenburg	.69
Nevada	Sunrise Manor Las Vegas	108	29	2 Stations	7	7+	Montello	2.54	7 Stations	.00
New Hampshire	Franklin	82	15	Mount Washington	7	7	Greenville	6.53	Colebrook 2E	1.87
New Jersey	2 Stations	87	4+	Sussex 1SE	26	7	Canoe Brook	11.10	Millville	2.13
New Mexico	Bitter Lakes WL Ref	103	30	2 Stations	11	10+	Pearl	3.24	19 Stations	.00
New York	New York Laurel Hill	83	26	Old Forge 1E	16	7	Suffern Water Works	8.84	Cutchogue	2.07
North Carolina	3 Stations	95	24	Grandfather Mountain	23	4	Hickory	7.86	William O. Huske L & D	.81
North Dakota	do	89	1	Pretty Rock	15	9	Hurdsfield	5.25	Mott	.43
Ohio	Toledo Blade	89	16	Toledo Sewage	17	6	Laurelville	13.70	Painesville 4NW	3.18
Oklahoma	Buffalo	99	2	4 Stations	35	21+	Carter Tower	17.88	Regnier	.92
Oregon	The Dalles No 2	92	19	Juniper Lake	0	2	Silver Creek Falls	6.49	Arlington	.23
Pennsylvania	Mercersburg	89	4	Clermont 4NW	16	7	Quakertown	9.76	Erie WBAP	3.06
Puerto Rico	2 Stations	96	5+	Barranquitas	55	1	Rio Blanco Upper	21.44	Fredericksted Fort	.45
Rhode Island	Greenville	76	15	Kingston	25	8	2 Stations	3.62	Block Island WBAP	2.78
South Carolina	5 Stations	94	25+	Walhalla	32	6	Hogback Mountain	9.24	2 Stations	1.22
South Dakota	3 Stations	92	1	Deerfield 4NW	9	11+	Sisseton	4.16	Fort Sully 8NE	.47
Tennessee	2 Stations	91	25	Mountain City No 2	27	6	Statesville	8.55	Sevierville 1SE	2.49
Texas	Pecos	108	31	Plains	33	1	Hempstead	17.34	2 Stations	.00
Utah	Saint George	102	28	2 Stations	9	15+	Cottonwood Weir	5.64	Navajo Mountain	.00
Vermont	Newport	83	16	4 Stations	20	9+	Plymouth Union	6.32	Saint Albans Bay	1.57
Virginia	Hopewell	92	24	Wytheville 1S	23	7	Lincoln	6.85	Cape Henry WB City	1.16
Washington	Dallesport FAA AP	97	18	Rainier Paradise RS	13	5	Grays River Hatchery	7.34	Holden Village	.00
West Virginia	Williamson	89	16	2 Stations	17	7	Parkersburg FAA AP	10.47	Franklin 2NE	3.30
Wisconsin	River Falls	89	2	Gordon 2ESE	16	5	Marshfield Exp Farm	8.27	Lone Rock FAA AP	1.58
Wyoming	3 Stations	85	30+	Kendall	8	7	Weston 1E	6.45	Centennial	.25

+ And also on an earlier date or dates.

NOTE: Dates in the above Condensed Climatological Summary apply to the period 24 hours prior to time of observation. In some cases the actual occurrence is on the calendar date preceding that shown. (See individual Climatological Data for times of observations).

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure: Station ∅	Pressure: Sea level	Temperature: Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	No. of days: Max. 90°F. or above	No. of days: Min. 32°F. or below	Average dew point	Average relative humidity	Precipitation: Total	Departure from normal	Greatest in 24 hours	No. of days: .01 inch or more	No. of days: With thunderstorms	Snow, Sleet: Total	Snow, Sleet: Maximum depth on ground	Wind: Resultant speed	Resultant direction	Fastest mile: Speed	Fastest mile: Direction	Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	Ft.	Mb.	Mb.	°F.	°F.	°F.	°F.	°F.		°F.				°F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
ALABAMA																																
BIRMINGHAM	620	993.2	1015.5	80	56	68.3	-3.5	88	25	38	6	0	0	57	69	3.51	0.09	1.21	10	8	0.0	0	1.7	22	34	W	29	7	9	15	6.1	73
HUNTSVILLE	624	992.2	1015.1	77	57	67.1	-3.3	89	25	42	6	0	0	57	74	5.87	2.48	2.60	11	6	0.0	0	2.0	19	31	24	16+	7	10	14	6.3	
MOBILE	211	1007.1	1014.9	86	66	76.0	0.4	96	31	53	6	9	0	62	68	3.17	-1.71	2.24	7	5	0.0	0	2.0	16	21	21	17+	10	10	11	5.6	
MONTGOMERY	194	1008.5	1015.5	83	61	71.7	-0.7	89	24+	47	6	0	0	60	70	1.94	-1.53	0.99	9	5	0.0	0	1.7	24	21	NW	5	9	11	11	5.4	72
ALASKA																																
ANCHORAGE	114	1010.5	1015.4	56	41	48.2	0.8	73	20	30	3	B 1	4	35	62	1.60	1.08	0.83	13	0	T	0	2.8	19	23	17	8	5	3	23	8.0	45
ANNETTE	110	1012.9	1016.8	63	44	53.1	3.9	77	10	35	3	5	0	40	67	1.57	-5.50	0.36	12	0	0.0	0	0.6	18	21	14	1	10	3	18	6.4	
BARROW	31	1017.3	1018.0	27	17	21.8	3.4	36	30+	7	1	0	31	20	91	0.16	0.04	0.03	7	0	2.8	17	3.2	14	39	25	12	2	6	23	8.8	
BARTER ISLAND	39	1018.0	1019.9	30	17	23.3	2.6	48	9	5	22	0	31	20	85	0.88	0.63	0.56	4	0	4.3	22	2.9	25	55	26	12	3	10	18	7.3	
BETHEL	125	1009.8	1015.5	51	32	41.6	2.6	64	20+	11	1	0	17	33	75	0.99	0.04	0.50	9	0	1.7	T	2.6	1	29	19	9	6	6	19	7.0	
COLD BAY	96	1009.8	1013.6	48	37	42.7	3.2	62	13	25	1	0	4	37	82	1.30	-0.99	0.48	14	0	2.1	T	1.0	28	47	15	3	1	3	27	8.9	
FAIRBANKS	436	998.0	1015.1	59	36	47.6	0.5	70	20+	27	4	2	9	26	45	0.67	-0.04	0.56	4	1	2.7	4	2.6	31	23	23	30+	2	15	14	7.0	
JUNEAU	12	1016.3	1016.9	59	38	48.4	2.8	72	19	29	4	1	6	40	77	1.45	-1.79	0.45	13	0	T	T	2.6	14	28	12	2	7	5	19	7.0	51
KING SALMON	49	1011.5	1013.6	53	35	43.8	0.5	72	20	20	2+	2	9	31	64	1.26	0.30	0.32	12	0	2.2	T	3.2	15	35	14	4	1	9	21	8.3	
KOTZEBUE	10	1016.6	1017.1	37	22	29.4	-1.5	48	26	-5	2	0	31	24	79	0.94	0.61	0.46	7	0	3.3	31	2.2	20	38	16	9	11	7	13	5.4	
MC GRATH	344	1002.7	1015.4	54	35	44.1	0.0	69	19	16	2	0	10	29	57	0.78	-0.10	0.24	8	0	T	4	1.9	33	23	20	8	5	11	15	6.9	
NOME	13	1015.6	1016.4	36	23	29.1	-5.9	45	21	-2	2	0	31	23	75	0.76	0.07	0.36	6	0	3.8	21	0.6	29	33	2	6	10	8	13	5.8	49
ST. PAUL ISLAND	22	1014.2	1015.2	38	30	33.9	-0.9	46	31	26	13+	0	27	32	92	0.79	-0.51	0.28	13	0	4.0	7	7.7	36	40	35	6	3	2	26	8.8	
SHEMYA	122	1014.2	1018.0	41	35	38.2	0.2	46	6	32	18+	0	4	35	91	1.36	-1.04	0.68	12	0	0.8	T	3.1	5	52	33	3	0	1	30	9.6	
YAKUTAT	28	1015.9	1017.0	50	34	42.2	-2.4	72	19	22	4	1	13	38	85	5.35	-2.63	1.42	18	0	2.7	T	2.2	14	25	13	1	4	7	20	7.5	
ARIZONA																																
FLAGSTAFF	6993	786.0	1012.2	67	33	50.2	-0.7	83	28	19	7	0	14	26	43	0.55	0.04	0.32	4	5	2.0	2	4.3	22	23	23	29	15	9	7	4.1	
PHOENIX	1117	970.2	1008.4	94	60	76.6	1.6	108	28	50	15+	22	0	34	23	T	-0.13	T	0	0	0.0	0	1.6	24	30Y	W	22+	23	4	4	2.5	96
TUCSON	2584	922.8	1008.8	89	58	73.3	-0.2	102	28	47	13	13	0	32	24	T	-0.13	T	0	0	0.0	0	3.8	21	27	SW	22+	20	10	1	2.2	98
WINSLOW	4895	849.0	1010.6	78	45	61.7	-3.1	93	29+	32	7	3	1	23	26	0.03	-0.29	0.03	1	3	0.0	0	5.4	21	32	22	22+	17	9	5	3.6	
YUMA	194	1001.7	1008.9	94	64	78.7	0.7	108	28	54	15	21	0	39	27	0.00	-0.01	0.00	0	0	0.0	0	4.2	23	29	W	12	25	5	1	1.8	98
ARKANSAS																																
FORT SMITH	447	997.0	1013.5	78	58	68.2	-1.7	89	24+	46	20	0	0	57	70	11.35	6.09	5.02	15	10	0.0	0	1.2	10	26	W	25	6	7	18	7.1	53
LITTLE ROCK	257	1004.4	1013.7	78	57	67.6	-2.9	89	25	45	6	0	0	56	71	12.74	7.46	5.00	13	12	0.0	0	2.0	22	31	NW	13	9	8	14	6.5	73
TEXARKANA	391	1000.3	1013.4	81	61	71.1	-0.5	89	29+	49	20	0	0	61	76	13.33	8.43	5.54	12	10	0.0	0	3.7	17	29	34	25	6	10	15	6.5	
CALIFORNIA																																
BAKERSFIELD	475	996.3	1013.7	83	57	70.2	-0.2	99	28	45	6	12	0	40	36	0.06	-0.16	0.06	1	0	0.0	0	4.9	34	18	32	22+	21	6	4	2.8	
BISHOP	4108	870.6		82	45	63.3	0.7	96	28	33	15	7	0			0.01	-0.19	0.01	1		0.0	0						18	9	4	3.6	
BLUE CANYON	5280			60	43	51.7	-0.5	74	28+	27	14	0	2			1.48	-1.62	0.88	7		6.7	6			18	24	12	15	7	9	4.4	
EUREKA U	43			57	48	52.4	-0.6	66	24	38	6	0	0			1.04	-1.14	0.40	10		0.0	0			31	N	5	5	9	17	6.8	67
FRESNO	328	1002.0	1013.6	84	52	68.1	-0.1	99	28	41	6	11	0	43	45	0.24	-0.06	0.21	3	0	0.0	0	6.8	31	29	NW	20	23	2	6	3.0	83
LONG BEACH	34	1013.2	1014.7	76	56	66.1	2.6	93	26	48	14	1	0	54	69	T	-0.11	T	0	0	0.0	0	3.7	23	20	21	12+	15	5	11	4.9	
LOS ANGELES	97	1010.5	1014.1	71	57	63.9	1.9	85	26	51	14	0	0	53	72	T	-0.13	T	0	0	0.0	0	5.7	24	33Y	W	21	14	10	7	4.5	
LOS ANGELES U	270			73	58	65.5	0.7	92	27	50	14	1	0			0.00	-0.16	0.00	0		0.0	0			17	SW	14+	13	11	7	4.5	
MT SHASTA R	3544			67	38	52.6	-1.2	79	28+	27	6	0	5			1.12	-0.87	0.54	6		1.2	1										
OAKLAND	6	1016.3	1016.6	65	53	58.9	-0.8	75	26	46	7	0	0	49	74	0.45	-0.20	0.29	3	0	0.0	0	7.6	27	25	28	11	14	8	9	4.7	
RED BLUFF	342	1001.4	1014.0	81	53	66.7	-1.6	96	27	43	7	6	0	41	46	0.56	-0.57	0.24	3	1	0.0	0	0.6	18	34	SE	12	15	9	7	4.4	86
SACRAMENTO	17	1013.5	1014.4	80	49	64.7	0.7	96	27	42	14	6	0	47	61	0.16	-0.43	0.14	2	0	0.0	0	5.8	22	24	W	21	17	8	6	3.6	92
SANDBERG R	4517			66	43	54.4	-2.2	88	27	28	14	0	4			T	-0.31	T	0		0.0	0			43	35	26	19	6	6	3.4	
SAN DIEGO	13	1013.5	1014.5	69	59	63.9	-0.1	79	26	52	15+	0	0	52	67	0.08	-0.07	0.06	2	0	0.0	0	4.6	25	20	NW	4	12	7	12	5.4	63
SAN FRANCISCO	8	1015.9	1016.7	65	48	56.3	-2.0	72	27	40	7	0	0	47	74	0.28	-0.20	0.28	1	0	0.0	0	11.9	28	40	W	5	13	6	12	4.7	
SAN FRANCISCO U	52			61	51	55.7	-1.7	72	27	47	17	0	0			0.22	-0.41	0.16	3		0.0	0			33	W	5					72
SANTA MARIA	236			69	47	58.0	0.4	81	27	38	15	0	0			0.05	-0.17	0.03	3		0.0	0						18	9	4	3.5	
STOCKTON	22	1014.2	1015.1	78	51	64.1	-2.1	93	28	42	14	3	0	42	50	0.19	-0.25	0.18	2	0	0.0	0	8.3	29	29	27	12	17	10	4	3.5	
COLORADO																																
ALAMOSA	7536	770.1		66	32	48.7	-2.1	80	30	20	7	0	18			0.20	-0.53	0.11	4		T	T						11	13	7	5.0	
COLORADO SPRINGS	6145	809.7	1012.9	65	38	51.5	-3.5	81	30+	27	17	0	6	29	50	0.62	-1.51	0.29	7	9	0.2	0	1.7	12	35	24	6	5	12	14	6.5	
DENVER	5283	834.1	1010.9	69	39	53.9	-2.3	85	29	28	8	0	4	34	55	0.71	-1.99	0.23	10	8	T	T	1.0	7	34	SW	2	9	10	12	5.8	64
GRAND JUNCTION	4855	849.3	1010.0	73	45	59.1	-3.1	93	29	27	7	1	2	31	39	1.14	0.54	0.56	7	7	T	T	1.4	12	42	NE	30	8	11	12	6.1	64
PUEBLO	4684	853.4	1011.0	73	46	59.3	-1.3	90	30	34	8	1	0	34	45	1.62	-0.18	0.92	6	4	T	0	2.0	8	43	NW	6	8	13	10	5.8	79

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Date	Temperature: Lowest	Date	No. of days: Max. 90° F. or above	No. of days: Min. 32° F. or below	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	No. of days: .01 inch or more	No. of days: With thunderstorms	Snow, Sleet: Total	Snow, Sleet: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Fastest mile: Speed	Fastest mile: Direction	Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	Ft.	Mb.	Mb.	F.	F.	F.	F.	F.		F.				F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
CONNECTICUT																																
BRIDGEPORT	7	1014.2	1014.8	66	50	58.0	- 0.7	79	17	41	8	0	0	46	69	5.59	1.88	3.23	16	1	0.0	0	1.1	36	33	7	29	3	13	15	6.9	
HARTFORD	169	1007.5	1014.1	70	46	58.2	- 1.7	79	30+	31	8	0	1	43	61	3.93	0.52	1.33	12	3	0.0	0	0.8	33	25	NW	20	2	12	17	7.3	55
NEW HAVEN	6	1014.2		66	48	56.9	- 0.3	79	25+	33	8	0	0			4.48	0.77	1.62	17		0.0	0			24	NE	29	3	14	14	7.0	57
DELAWARE																																
WILMINGTON	74	1011.9	1014.9	69	50	59.6	- 3.1	83	3	36	7	0	0	48	68	4.78	1.25	2.35	14	5	0.0	0	1.6	31	29	5	28	6	8	17	7.1	
DIST.OF COLUMBIA																																
WASH NATL AP	14	1012.2	1014.7	74	53	63.7	- 2.1	85	3	42	7	0	0	48	60	4.23	0.09	1.83	13	4	0.0	0	2.0	27	30	SW	30	4	10	17	7.0	51
FLORIDA																																
APALACHICOLA U	13			82	68	74.7	- 0.1	88	19	56	6	0	0			2.58	- 0.30	1.01	5	2	0.0	0			29	E	7		13	6	4.5	87
DAYTONA BEACH	31	1014.9	1016.4	85	65	75.1	0.9	93	18+	54	1	4	0	63	69	4.79	1.94	1.77	10	10	0.0	0	3.4	11	26	32	28		11	12	6.1	
FORT MYERS	15	1015.2	1015.8	88	70	78.7	1.3	91	31+	59	1	10	0	68	74	10.32	6.47	3.29	14	13	0.0	0	1.2	14	25	8	8		18	11	6.5	
JACKSONVILLE	20	1014.9	1015.9	87	67	76.7	0.9	93	18+	55	6	8	0	62	67	2.17	- 1.30	0.89	9	7	0.0	0	1.5	19	32				10	12	5.6	72
KEY WEST	4	1014.6	1015.3	84	75	79.4	0.4	86	30+	69	5	0	0	72	80	8.00	5.27	2.68	14	11	0.0	0	5.8	14	38	SW	28	3	10	18	7.0	65
LAKELAND U	214			86	67	76.8	- 0.1	91	31	60	1	5	0			9.10	5.56	4.36	12		0.0	0						5	20	6	5.5	82
MIAMI	7	1015.2	1015.5	83	72	77.6	0.0	90	4	65	2	1	0	70	81	18.54	12.10	5.42	21	11	0.0	0	4.4	13	30	7	7	1	12	18	7.6	
ORLANDO	108	1012.2	1016.3	87	66	76.7	- 0.9	92	18	57	1	9	0	63	69	3.72	0.15	1.50	12	9	0.0	0	1.2	14	24	10	14	7	14	10	6.1	
PENSACOLA	112	1010.8	1015.0	82	66	73.9	- 1.6	91	30	55	7	1	0	63	71	1.23	- 3.33	0.55	7		0.0	0	2.6	18	32	E	8+	6	13	12	6.0	65
TALLAHASSEE	55	1013.5	1015.8	88	61	74.3	- 0.6	94	16+	46	1	10	0	62	69	4.00	- 0.10	1.92	9	5	0.0	0	1.0	17	21	8	25+	12	14	5	4.9	
TAMPA	19	1015.6	1015.7	86	65	75.7	- 1.1	93	31+	54	2+	4	0	64	71	2.08	- 0.77	1.21	9	2	0.0	0	0.9	24	18	25	26+	7	15	9	5.8	78
WEST PALM BEACH	15	1015.2	1015.9	84	70	76.9	- 0.7	90	28	62	3	1	0	67	74	13.82	8.71	3.69	14	9	0.0	0	5.2	12	26	24	28+	2	11	18	7.7	
GEORGIA																																
ATHENS	802	986.5	1015.3	78	56	66.9	- 3.2	87	25+	40	6	0	0	56	71	6.39	2.78	1.67	12	9	0.0	0	1.8	26	35	16	25	9	8	14	5.6	
ATLANTA	1010	979.0	1015.6	78	57	67.4	- 1.7	88	25	43	6	0	0	56	73	6.42	3.26	1.48	11	11	0.0	0	2.2	27	29	S	25	8	9	14	5.8	74
AUGUSTA	145	1009.8	1015.1	82	57	69.1	- 2.5	91	25	42	7	3	0	57	70	4.05	1.06	2.00	10	8	0.0	0	1.4	24	35	28	17+	9	12	10	5.6	
COLUMBUS	385			82	59	70.8	- 1.3	92	25	47	6	2	0	59	72	4.73	1.23	1.96	10		0.0	0	1.1	28	23	22	27	10	10	11	5.5	
MACON	354	1002.7	1015.5	83	57	69.9	- 4.0	93	25	40	6	4	0	56	65	6.29	2.97	2.26	15	7	0.0	0	1.2	25	29	W	17	9	12	10	5.4	71
ROME	637			79	53	66.2	- 2.5	90	25	36	6	1	0			6.33	2.53	1.74	14		0.0	0										
SAVANNAH	46	1013.9	1015.6	84	61	72.5	- 0.9	93	13	48	6	4	0	61	71	4.80	1.03	1.68	11	9	0.0	0	1.7	21	21	E	7	9	9	13	5.7	62
HAWAII																																
HILO	27	1014.9	1016.1	83	68	75.7	2.7	87	30+	64	17	0	0	67	77	2.71	- 6.62	0.60	18	1	0.0	0	0.8	11	20	SE	25+	2	13	16	7.5	47
HONOLULU	7	1015.2	1015.8	86	71	78.4	2.5	91	22	66	7+	3	0	65	65	1.22	0.23	1.17	5	0	0.0	0	7.7	5	27	NE	2	8	10	13	6.3	58
KAHULUI	48	1013.2	1015.6	85	65	75.0	- 0.3	91	30	57	7+	5	0	65	75	2.56	1.87	1.99	5	0	0.0	0	8.9	4	28	NE	21	12	6	13	5.7	62
LIHUE	103	1011.9	1017.1	80	69	74.2	- 0.3	83	28	62	11	0	0	67	80	0.42	- 2.17	0.19	6	0	0.0	0	7.6	4	23	E	2	6	13	12	6.4	64
IDAHO																																
BOISE	2838	913.6	1012.9	72	44	57.8	- 0.4	88	19	27	6	0	2	31	39	0.40	- 0.89	0.27	5	1	T	T	2.6	30	31	NW	4	7	15	9	5.5	74
LEWISTON	1413			71	47	58.6	0.2	88	13	35	5	0	0			0.97	- 0.58	0.40	7		T	T						4	14	13	6.4	
POCATELLO	4454	861.5	1013.5	66	38	51.7	- 3.4	83	28	25	7	0	6	30	49	1.70	0.57	0.66	10	3	T	0	5.6	24	42	SW	5	7	14	10	5.9	70
ILLINOIS																																
CAIRO U	314			76	58	66.9	- 2.1	88	2	46	6	0	0			6.40	2.01	2.94	12		0.0	0			29	SW	15	10	5	16	6.4	59
CHICAGO O HARE	658	988.8	1013.1	68	46	57.0	- 0.8	85	2	31	6	0	1	43		2.99	- 0.77	0.97	13	5	0.0	0	1.5	14	38	20	15+	3	12	16	6.9	
CHICAGO MIDWAY	607	990.5		68	49	58.3	- 1.7	86	2	35	5	0	0	44	63	2.06	- 1.67	0.51	12	7	0.0	0	1.9	16	36	W	4	4	13	14	6.8	54
MOLINE	582	990.9	1012.5	68	46	57.2	- 4.0	89	2	35	10	0	0	44	65	2.59	- 1.21	0.59	13	4	0.0	0	1.6	24	38	W	16	3	10	18	7.1	48
PEORIA	652	988.8	1012.8	68	48	57.7	- 3.8	88	2	36	5	0	0	44	68	4.70	0.43	2.43	16	6	0.0	0	1.8	22	30	W	16+	5	6	20	7.5	44
ROCKFORD	724	985.4	1012.2	66	46	56.1	- 3.0	83	2	32	6	0	1	46	72	3.78	- 0.05	1.60	14	4	0.0	0	1.1	17	35	26	16	5	11	15	7.0	
SPRINGFIELD	588	990.5	1012.7	69	49	59.0	- 4.9	87	15+	37	6	0	0	47	67	5.69	1.81	2.38	15	9	0.0	0	2.2	22	35	SW	15	5	9	17	6.9	53
INDIANA																																
EVANSVILLE	381	999.7	1013.7	73	53	63.2	- 3.6	87	15+	37	6	0	0	51	68	4.13	- 0.06	1.81	12	8	0.0	0	2.9	23	26	S	15	7	9	15	6.5	54
FORT WAYNE	791	983.4	1013.6	65	46	55.4	- 5.3	80	15	30	6	0	1	46	73	6.12	2.39	3.24	16	6	0.0	0	2.2	23	36	W	16	3	10	18	7.5	58
INDIANAPOLIS	792	984.4	1013.5	68	49	58.6	- 2.8	83	2	31	6	0	1	49	72	9.25	5.26	3.13	20	6	0.0	0	1.5	23	34	SW	9	5	8	18	7.5	48
SOUTH BEND	773	985.4	1013.3	65	46	55.2	- 3.5	81	15	24	6	0	2	44	69	2.44	- 1.18	0.79	16	5	T	T	2.0	21	26	25	16	3	10	18	7.2	

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	No. of days: Max. 90°F. or above	No. of days: Min. 32°F. or below	Average dew point	Average relative humidity	Precipitation: Total	Departure from normal	Greatest in 24 hours	No. of days: .01 inch or more	No. of days: With thunderstorms	Snow, Sleet: Total	Snow, Sleet: Maximum depth on ground	Wind: Resultant speed	Resultant direction	Fastest mile: Speed	Fastest mile: Direction	Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	Ft.	Mb.	Mb.	°F.	°F.	°F.	°F.	°F.		°F.				°F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
IOWA																																
BURLINGTON	692			69	48	58.6	- 3.2	87	2	39	10	0	0	45	65	1.84	- 2.19		10	4	0.0		1.9	26	32	17	15	3	12	16	7.0	
DES MOINES	938	978.3	1013.0	67	47	57.0	- 3.6	87	2	35	5	0	0	42	60	2.62	- 1.45	0.65	11	5	T	T	2.3	30	46	NW	15	7	13	11	6.1	52
DUBUQUE	1056	973.6		66	45	55.3	- 2.8	80	2	34	19	0	0			3.76	- 0.46	1.34	15		0.0	0						4	10	17	7.5	
SIOUX CITY	1095	973.2	1012.8	70	45	57.5	- 3.9	92	1	30	5	2	1	41	58	2.34	- 0.89	1.16	10	5	T	T	2.6	32	47	NW	28	6	13	12	6.1	61
WATERLOO	868	980.7	1012.4	66	43	54.1	- 5.8	84	15	29	5	0	2	43	68	1.95	- 1.79	0.56	17	5	0.0	0	1.6	28	39	31	16	5	11	15	6.9	
KANSAS																																
CONCORDIA	1470	960.0	1012.6	70	47	58.1	- 5.0	92	2	35	19	2	0	45	66	2.61	- 1.28	0.97	9	6	0.0	0	1.1	28	53	W	2	9	11	11	6.0	62
DODGE CITY	2582	922.5	1012.4	71	48	59.3	- 4.4	94	2	39	19+	2	0	43	63	3.93	0.71	1.27	16	9	0.0	0	0.9	3	47	S	6	9	7	15	6.2	64
GOODLAND	3650	886.2	1012.2	68	42	55.0	- 3.5	88	30+	32	9	0	1	38	61	1.89	- 0.52	0.98	13	4	0.4	T	0.2	27	55	30	6	5	12	14	6.7	
TOPEKA	876	981.4	1012.9	70	48	59.1	- 5.3	88	2	33	21	0	0	48	69	3.37	- 1.01	0.94	9	11	0.0	0	1.2	30	40	SE	13	6	13	12	6.2	62
WICHITA	1321	965.1	1012.6	73	49	61.0	- 5.0	92	2	37	20	2	0	48	67	4.37	0.40	1.39	14	9	0.0	0	0.7	2	47	SE	6	9	9	13	6.2	58
KENTUCKY																																
COVINGTON	869	982.4	1013.9	71	51	60.7	- 1.8	82	15+	36	6	0	0	49	68	9.48	5.89	3.30	17	6	0.0	0	2.2	22	26	27	16	2	10	19	7.6	
LEXINGTON	966	979.0	1014.3	71	53	62.1	- 2.4	82	3+	34	6	0	0	51	70	6.87	3.02	2.30	19	8	0.0	0	3.7	20	29	18	23	4	7	20	7.3	
LOUISVILLE	477	995.9	1013.5	72	55	63.4	- 1.0	84	15	35	6	0	0	54	72	5.16	1.26	1.96	19	5	0.0	0	2.8	25	29	SW	11	4	8	19	7.3	45
LOUISIANA																																
ALEXANDRIA	92	1010.2	1014.4	83	60	71.1	- 1.8	89	24	47	7	0	0	63	79	4.14	- 1.40	1.95	10	8	0.0	0	2.1	18	31	36	17	9	9	13	5.9	
BATON ROUGE	64	1011.9	1014.6	85	64	74.6	- 0.2	91	24	52	7	7	0	64	73	2.63	- 2.17	1.11	7	5	0.0	0	2.6	16	27	13	24	9	13	9	5.6	
LAKE CHARLES	9	1012.9	1013.9	84	66	74.8	- 0.8	88	30+	58	21+	0	0	66	78	3.16	- 1.45	1.08	12	12	0.0	0	4.0	16	29	2	26	5	16	10	6.1	
NEW ORLEANS	3	1013.9	1014.8	84	64	74.1	- 0.3	90	31+	47	7	3	0	65	75	4.13	- 0.25	0.93	9	5	0.0	0	3.1	15	25	13	24+	13	6	12	5.2	
SHREVEPORT	254	1004.4	1013.4	82	63	72.7	- 0.4	90	24	51	1	1	0	61	72	6.05	1.26	1.38	12	9	0.0	0	3.2	17	30	34	17	7	10	14	6.2	57
MAINE																																
CARIBOU	624	990.5		61	39	49.7	- 0.2	75	29	28	8	0	5			1.33	- 1.70	0.41	9		0.0	0						5	9	17	7.1	
PORTLAND	47	1011.9	1014.3	62	40	51.0	- 2.0	76	14	29	8	0	1	39	69	3.81	0.40	0.92	10	0	0.0	0	0.5	21	26	N	26	4	14	13	6.6	53
MARYLAND																																
BALTIMORE	148	1009.1	1014.7	71	49	59.7	- 4.7	85	3	34	7	0	0	49	72	5.41	1.43	2.69	14	5	0.0	0	2.4	28	37	W	3	5	11	15	6.7	50
MASSACHUSETTS																																
BLUE HILL OBS R	629			65	45	54.6	- 2.1	78	15	38	7	0	0			4.00	0.52	1.49	11		0.0	0			38	SE	29					56
BOSTON	15	1013.5	1014.5	63	49	56.1	- 2.7	77	10	44	1	0	0	43	68	3.26	- 0.08	1.13	11	1	0.0	0	0.6	34	38	NE	26	4	13	14	6.9	57
NANTUCKET	43	1014.2	1014.5	61	45	53.0	0.4	70	17+	35	8+	0	0	47	85	3.40	0.52	1.53	12	2	0.0	0	1.2	28	35	NE	26	4	9	18	7.4	47
PITTSFIELD	1170			65	40	52.6	- 2.0	76	30	27	8	0	4			4.41	0.54	0.80	15		0.0	0										
WORCESTER	986	977.7	1014.8	64	44	53.8	- 1.4	74	30+	36	7	0	0	39	63	6.83	3.04	2.09	15	3	0.0	0	3.3	30	27	32	7	3	9	19	7.2	
MICHIGAN																																
ALPENA	689	989.2	1014.6	60	36	47.9	- 2.7	78	15	24	6	0	13	38	69	2.55	- 0.36	1.52	13	2	T	T	2.4	11	28	SE	28	6	11	14	6.6	55
DETROIT	619			65	48	56.8	- 2.2	85	15	32	6	0	1	45	68	5.60	2.07	2.36	13	2	0.0		0.8	10	25	29	9					
DETROIT M WAYNE CO	633	989.2	1013.4	66	47	56.1	- 1.5	85	15	32	6	0	1	44	66	5.88	2.34	2.87	16	5	0.0	0	1.2	8	33	SW	16	3	13	15	7.1	49
DETROIT WILLOW RUN	711	985.4	1013.8	64	43	53.7	- 5.0	83	15	28	6	0	1	42	66	5.32	1.84	2.06	15	6	T	T	0.5	9	30	23	16	2	16	13	7.1	
FLINT	770	985.8	1013.5	62	43	52.9	- 3.5	82	15	27	6	0	1	42	69	3.51	0.12	1.25	13	1	T	T	1.6	14	28	27	16	2	13	16	7.5	
GRAND RAPIDS	784	984.1	1013.3	66	42	54.0	- 2.8	83	15	25	6	0	3	42	65	2.67	- 0.79	0.88	10	4	0.0	0	0.5	18	36	SW	16	5	11	15	6.6	52
HOUGHTON LAKE	1149	972.2	1014.2	62	39	50.7	- 5.6	84	15	23	6	0	8	38	66	2.62	- 0.31	0.99	13	5	0.0	0	1.6	11	29	27	16	5	7	19	7.1	
LANSING	841	982.1	1013.7	64	42	53.2	- 3.9	83	15	26	6	0	4	39	61	4.16	0.43	1.96	14	3	0.0	0	1.5	15	34	W	16	5	11	15	6.8	54
MARQUETTE U	677			57	40	48.6	- 1.3	81	15	32	5+	0	2			2.86	- 0.10	1.05	12		T	T			35	SW	8	5	13	13	6.6	54
MUSKEGON	627	990.2	1013.1	64	45	54.5	- 1.3	81	15	29	6	0	1	40	60	2.44	- 0.53	0.66	12	4	0.0	0	1.2	19	24	22	16	7	10	14	6.1	
SAULT STE MARIE	721	988.2	1014.8	61	38	49.2	- 0.4	73	24	26	6	0	5	37	67	2.49	- 0.28	0.91	10	3	T	T	1.1	10	31	SE	7	6	9	16	7.0	55
MINNESOTA																																
DULUTH	1428	961.7	1013.6	58	39	48.4	- 0.8	77	15	25	5	0	3	35	66	4.02	0.73	0.78	19	1	3.7	1	3.5	7	38	W	16	3	10	18	7.7	43
INTERNATIONAL FALLS	1179	970.5	1014.0	59	38	48.2	- 2.5	75	13	19	5	0	7	38	70	1.50	- 1.11	0.42	15	2	1.3	1	2.1	7	26	18	7	3	12	16	7.5	
MINNEAPOLIS	834	982.1	1012.7	63	44	53.4	- 3.9	81	15+	29	5	0	1	42	70	3.74	0.55	0.93	17	3	0.0	0	1.4	34	36	SW	8	4	9	18	7.2	43
ROCHESTER	1297	965.1	1012.8	63	41	51.6	- 5.1	85	15	26	5	0	2	40	69	4.37	0.72	1.22	15	3	0.0	0	1.8	28	40	25	8	6	7	18	7.3	
ST CLOUD	1034	974.6	1012.4	62	42	51.9	- 3.7	77	14+	26	5	0	2		66	2.80	- 0.71	0.52	13		T	T						6	2	23	7.7	

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No. of days: Max. 90 F. or above	Temperature: No. of days: Min. 32 F. or below	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No. of days: .01 inch or more	Precipitation: No. of days: With thunderstorms	Snow, Sleet: Total	Snow, Sleet: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile: Speed	Wind: Fastest mile: Direction	Wind: Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	No. of days (sunrise to sunset): Partly cloudy, 4-7	No. of days (sunrise to sunset): Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	Ft.	Mb.	Mb.	F.	F.	°F.	°F.	F.		F.				F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
MISSISSIPPI																																
JACKSON	310	1002.7	1014.6	83	60	71.2	- 1.9	90	31+	45	6+	2	0	62	76	7.54	3.16	2.35	11	11	0.0	0	2.7	18	34	N	17	10	8	13	5.7	58
MERIDIAN	290	1004.4	1015.4	85	59	72.2	- 0.2	91	24	43	6	8	0	61	73	3.03	- 0.88	2.03	9	9	0.0	0	2.3	21	29	31	12	7	8	16	6.1	
MISSOURI																																
COLUMBIA	778	984.8	1012.7	71	52	61.4	- 3.0	90	2	39	5	1	0	48	65	5.46	0.76	2.20	11	9	0.0	0	1.7	26	35	N	28	7	10	14	6.4	64
KANSAS CITY	742	986.1	1012.8	72	52	62.2	- 3.4	91	2	40	21	1	0	48	61	5.19	0.79	2.38	12	9	0.0	0	1.2	25	31	W	15	7	13	11	5.9	60
ST JOSEPH	811			73	48	60.7	- 3.4	92	2	32	21	2	1	46	65	3.13	- 1.26		13	6	0.0		1.2	30	41	29	15	10	10	11	5.6	
ST LOUIS	535	992.9	1013.3	72	52	61.9	- 2.3	91	15	37	6	2	0	50	68	6.78	3.05	2.47	13	7	0.0	0	2.4	24	34	NW	4	5	12	14	6.6	55
SPRINGFIELD	1268	968.5	1013.6	72	50	60.8	- 3.7	85	2	38	21+	0	0	50	71	4.58	- 0.70	1.56	15	13	0.0	0	2.5	19	34	N	8	8	6	17	6.6	49
MONTANA																																
BILLINGS	3567	889.6	1013.1	64	44	54.0	- 2.8	77	29+	30	11	0	1	31	44	1.79	- 0.09	0.75	14	7	T	0	3.5	34	34	NW	7	4	14	13	6.6	66
GLASGOW	2284	931.9		66	38	52.1	- 3.0	82	29	26	19+	0	7			0.23	- 1.26	0.07	8		0.9	T						6	11	14	6.4	
GREAT FALLS	3662	887.2	1014.5	61	38	49.5	- 3.5	74	21	23	10	0	7	32	55	2.64	0.54	1.35	15	6	T	0	3.1	27	38	NW	7	6	9	16	6.5	73
HAVRE	2582	921.8	1013.8	65	38	51.1	- 3.6	78	29	26	11+	0	8	32	53	1.17	- 0.36	0.34	11	3	T	0	1.7	29	35	W	30+	6	11	14	6.5	76
HELENA	3828	879.8	1014.9	62	37	49.6	- 3.3	74	28+	25	11	0	6	33	56	1.62	0.06	0.59	13	6	T	0	5.0	28	33	W	5	6	9	16	6.5	60
KALISPELL	2965	910.3	1015.1	63	37	49.8	- 2.4	72	20+	24	3	0	8	36	64	2.59	0.92	1.26	12	0	1.4	1	1.6	13	28	1	9	8	10	13	6.4	
MILES CITY	2629	920.4	1013.4	66	41	53.2	- 4.2	83	29	26	11	0	6	36	55	1.64	- 0.09		17	6	T		2.5	33								
MISSOULA	3190	903.5	1015.3	65	40	52.6	0.0	75	19	28	8	0	5	34	55	1.05	- 0.82	0.45	15	1	T	0	1.1	33	28	NW	4	5	10	16	7.1	63
NEBRASKA																																
GRAND ISLAND	1841	947.2	1012.9	71	46	58.2	- 2.4	92	2	34	5	2	0	42	60	2.23	- 1.62	0.58	9	7	0.0	0	1.8	31	37	16	7+	6	12	13	6.5	
LINCOLN U	1150			69	48	58.8	- 3.7	92	1	37	21+	2	0			2.10	- 1.38	0.82	11		0.0	0			45	S	6	5	17	9	5.8	66
NORFOLK	1544			67	43	55.2	- 5.0	91	1	30	21	1	2			1.38	- 2.28	0.50	10		T	T						6	12	13	6.0	
NORTH PLATTE	2775	915.3	1012.9	67	40	53.3	- 5.2	88	1	27	20	0	4	37	58	1.72	- 1.23	0.83	10	4	0.0	0	1.5	35	36	NW	18	6	10	15	6.8	58
OMAHA	977	977.7	1012.8	70	46	58.0	- 5.0	90	2	33	5	1	0	46	66	4.35	0.87	1.16	12	7	T	T	1.7	33	65	NW	15	9	10	12	5.9	67
SCOTTSBLUFF	3957	877.8	1013.1	65	40	52.4	- 4.4	84	29	29	11	0	2	38	64	2.69	- 0.01	0.81	15	6	T	T	1.4	1	35	33	17	5	10	16	6.7	
VALENTINE	2587			65	39	52.1	- 5.0	87	1	28	11	0	5			2.98	0.31	1.31	10		T	T			37	NW	8	6	12	13	6.5	66
NEVADA																																
ELKO	5050	842.5	1012.0	70	38	54.0	2.0	91	28	20	7	1	5	28	40	1.15	0.19	0.49	9	6	0.4	T	2.1	26	35	33	5	8	11	12	6.1	
ELY	6253	807.0	1011.5	66	32	49.3	- 1.0	84	28	19	7	0	16	26	47	1.00	0.15	0.45	7	7	0.7	1	2.4	23	33	SE	13	2	17	12	6.4	73
LAS VEGAS	2162	933.3	1008.5	88	59	73.5	- 0.3	106	28	44	15	14	0	26	19	T	- 0.08	T	0	0	0.0	0	5.8	23	42	SW	21+	17	10	4	3.5	91
RENO	4404	864.2	1013.1	72	34	52.8	- 1.1	90	28	23	6	1	15	27	38	0.30	- 0.22	0.30	2	1	T	T	3.3	28	39	W	5	12	11	8	4.7	85
WINNEMUCCA	4299	866.2	1012.9	72	36	53.7	0.0	90	28	20	7	1	9	27	38	0.18	- 0.76	0.12	4	3	0.0	0	2.8	28	31	NE	11+	6	13	12	6.3	67
NEW HAMPSHIRE																																
CONCORD	342	1001.7	1014.3	65	38	51.1	- 4.4	77	15+	22	8	0	7	40	67	5.20	2.03	1.51	14	2	0.0	0	0.9	33	29	W	7	2	16	13	7.0	62
MT WASHINGTON OBS	6262			39	27	32.6	- 2.4	54	15	7	7	0	24			6.27	0.43	2.08	15	2	6.6	3			74Y	SE	29	3	8	20	7.9	38
NEW JERSEY																																
ATLANTIC CITY	64	1012.5	1014.9	70	48	58.9	- 2.4	86	3	35	1	0	0	46	66	5.55	2.04	3.56	12	6	0.0	0	1.5	24	25	8	28	4	13	14	7.0	41
ATLANTIC CITY U	11			67	54	60.2	0.7	83	17	43	1	0	0			5.04	1.88	2.81	14						35	E	28					
NEWARK	7	1013.5	1014.5	68	51	59.6	- 2.4	79	17	40	1	0	0	44	61	6.28	2.63	4.11	14	3	0.0	0	1.0	29	24	22	3	5	10	16	6.8	
TRENTON U	56			68	51	59.3	- 3.0	82	3	41	1	0	0			5.84	2.22	3.11	17		0.0	0			32	E	26	2	11	18	7.2	55
NEW MEXICO																																
ALBUQUERQUE	5311	836.1	1009.8	78	48	62.7	- 2.4	92	30	40	7	1	0	28	31	0.99	0.24	0.60	6	5	0.0	0	2.0	27	47	S	30	14	11	6	4.2	84
CLAYTON	4969			71	44	57.5	- 2.3	92	30	31	7	1	1			0.75	- 1.99	0.25	6		0.0	0						9	5	17	6.1	
RATON	6379			70	40	54.6	- 0.8	83	30	31	1	0	4			1.51	- 0.78	0.44	10		0.8	T						6	13	12	6.3	
ROSWELL	3617	887.9		85	49	66.7	- 1.3	101	30	36	8	10	0	40	43	0.57	- 0.71	0.51	5	2	0.0	0	0.9	21	29	N	17	12	10	9	4.7	77
SILVER CITY	5373			79	48	63.7	- 1.0	91	29	38	13	3	0			0.00	- 0.28	0.00	0		0.0	0						19	9	3	2.7	
NEW YORK																																
ALBANY	275	1004.1	1014.8	68	42	54.9	- 3.0	79	30	26	8	0	3	43	67	4.79	1.32	2.17	16	0	0.0	0	2.8	27	28	NE	26	2	9	20	7.7	54
BINGHAMTON	1590	956.0	1015.1	59	43	51.3	- 3.8	71	30	32	6	0	1	43	78	6.46	2.97	1.30	19	3	0.0	0	1.0	28	29	E	29	3	5	23	8.2	38
BUFFALO	705	988.8	1014.4	62	45	53.4	- 1.4	78	8	33	7+	0	0	44	75	3.30	0.35	0.86	14	3	0.0	0	2.6	20	32	SW	9	4	5	22	7.9	44
J.F. KENNEDY	13	1013.9	1014.7	64	49	56.8	- 3.4	78	17	42	8	0	0	46	71	5.34	1.67	2.88	18	2	0.0	0	0.6	14	32	11	26	3	13	15	6.9	
NEW YORK U	132	1011.2	1014.4	68	51	59.6	- 2.8	80	17	42	1	0	0	44	62	7.06	3.39	4.88	13	3	0.0	0	1.1	35	28	NE	28					53
NEW YORK LA GUARDIA	11	1012.5	1014.5	67	52	59.4	- 2.7	80	17	44	1	0	0	45	62	4.67	1.09	3.02	13	3	0.0	0	1.5	36	42	SE	29	4	10	17	6.9	

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	No. of days: Max. 90 F. or above	No. of days: Min. 32°F. or below	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	No. of days: .01 inch or more	No. of days: With thunderstorms	Snow, Sleet: Total	Snow, Sleet: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Fastest mile: Speed	Fastest mile: Direction	Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	Ft.	Mb.	Mb.	°F.	°F.	°F.	°F.	F.		°F.				°F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
NEW YORK																																
ROCHESTER	547	994.6	1015.0	62	44	53.2	- 3.5	77	8	28	6	0	2	43	71	2.84	0.07	0.72	14	3	0.0	0	1.6	24	38	SW	9	5	5	21	7.8	46
SYRACUSE	410	1000.0	1014.8	63	45	53.6	- 4.1	73	15+	31	6	0	2	42	68	3.46	0.19	0.62	16	3	0.0	0	1.1	26	24	W	17	5	6	20	7.3	49
NORTH CAROLINA																																
ASHEVILLE	2140	939.7	1015.4	74	48	61.0	- 2.0	87	24	34	7	0	0	51	74	2.92	- 0.74	0.96	12	8	0.0	0	0.9	31	25	35	5	6	15	10	6.0	65
CAPE HATTERAS R	7	1015.6	1015.8	73	57	64.8	- 3.2	81	17	39	7	0	0	57	75	3.63	- 0.35	1.62	10	6	0.0	0	1.1	24	34	E	27	7	12	12	6.1	73
CHARLOTTE	736	987.8	1015.1	76	54	64.8	- 4.2	88	24	42	7	0	0	53	70	2.45	- 0.66	0.84	11	5	0.0	0	1.9	24	29	SW	18	8	11	12	5.8	73
GREENSBORO	897	983.7	1015.2	76	54	65.0	- 1.9	88	24	41	7	0	0	55	73	3.92	0.63	1.62	12	6	0.0	0	1.8	22	27	NW	1	7	9	15	6.3	50
RALEIGH	434	999.3	1015.0	76	52	63.9	- 3.7	89	24	39	7	0	0	54	75	3.82	0.30	1.45	13	6	0.0	0	1.9	25	29	30	18	6	11	14	6.1	50
WILMINGTON	28	1014.6	1015.8	80	59	69.6	- 0.9	89	17+	46	8	0	0	57	68	2.30	- 1.22	1.47	11	1	0.0	0	2.2	22	25	N	5	9	13	9	5.5	79
NORTH DAKOTA																																
BISMARCK	1647	953.9	1013.9	62	38	49.8	- 6.1	78	29	28	20+	0	8	36	62	2.51	0.54	0.91	12	3	2.3	2	2.7	34	40	NW	17+	6	11	14	6.5	72
FARGO	896	980.0	1012.9	65	41	52.9	- 2.5	86	1	30	5	0	2	42	70	2.08	0.05	0.67	15	2	0.4	T	2.3	1	40	SE	6	2	16	13	7.2	53
WILLISTON	1899	944.8	1013.3	66	38	52.0	- 2.7	83	29	22	4	0	6	33	53	1.05	- 0.38	0.72	9	3	T	T	2.2	35	42	N	17	8	14	9	5.5	71
OHIO																																
AKRON	1208	969.9	1014.2	67	48	57.1	- 2.6	81	15	31	6	0	1	46	70	6.54	2.69	1.18	22	9	0.0	0	0.9	17	25	29	20	4	2	25	8.2	
CINCINNATI OBS	761			71	52	61.3	- 2.9	83	14+	35	6	0	0			10.22	6.42	3.69	20		0.0	0			19	NW	24					41
CLEVELAND	777	985.1	1014.4	63	46	54.4	- 3.6	81	15	26	6	0	4	45	72	4.08	0.56	1.22	19	5	T	0	0.9	18	32	SE	27	1	10	20	7.9	40
COLUMBUS	812	984.4	1014.3	68	49	58.5	- 3.0	82	15	29	6	0	1	50	76	9.11	5.11	2.72	20	10	0.0	0	1.5	20	41	W	19	3	7	21	7.7	35
DAYTON	1002	977.7	1013.8	68	49	58.3	- 3.3	81	15+	31	6	0	1	47	70	7.33	3.60	2.93	17	6	0.0	0	1.9	23	38	N	15	3	9	19	7.6	50
MANSFIELD	1295			65	46	55.5	- 2.5	81	15	31	6	0	1	46	74	6.27	2.55	1.84	21	6	0.0	0	2.2	20	24	24	16	3	5	23	8.0	
TOLEDO	669	988.8	1014.0	66	46	55.9	- 2.4	86	15	26	6	0	4	45	70	5.13	2.09	1.60	15	5	0.0	0	0.2	26	33	NE	24	1	13	17	7.5	49
YOUNGSTOWN	1178	971.9	1014.7	62	43	52.4	- 5.5	74	8+	26	7	0	4	44	77	5.25	1.18	1.11	20	6	0.0	0	0.3	22	27	13	27	3	3	25	8.4	
OKLAHOMA																																
OKLAHOMA CITY	1285	966.8	1012.6	75	55	64.7	- 3.7	87	29+	46	8	0	0	55	74	8.40	3.21	2.11	15	14	0.0	0	1.5	11	39	S	6	5	13	13	6.5	56
TULSA	650	988.8	1012.9	76	55	65.5	- 2.3	88	14+	45	20	0	0	54	71	3.56	- 1.70	0.98	13	11	0.0	0	2.3	19	41	SE	7	8	7	16	6.3	56
OREGON																																
ASTORIA	8	1016.9	1017.6	60	45	52.2	- 1.1	73	16	36	16+	0	0	45	77	3.91	0.71	1.74	17	0	0.0	0	3.9	24	28	22	21	3	7	21	7.5	
BURNS U	4151	871.7	1014.3	66	37	51.7	- 1.7	80	18	25	6	0	8	31	50	1.14	0.25	0.44	10		0.0	0	3.6	31				6	12	13	6.1	
EUGENE	359	1004.1	1017.4	67	44	55.5	- 0.6	80	16	34	7	0	0	47	77	2.86	0.72	0.94	12	1	0.0	0	2.1	26	21	28	4	6	6	19	6.8	
MEACHAM	4050	875.7	1015.0	56	38	46.9	- 1.1	74	18	25	5	0	6			1.96	- 0.49	0.84	12		2.3	2			22	26	25	6	8	17	6.9	
MEDFORD	1298	968.8	1016.4	73	43	57.9	0.4	86	3	28	6	0	1	41	58	1.05	- 0.42	0.40	10	0	T	T	3.4	31	21	32	12	10	10	11	5.5	
PENDLETON	1482	961.4	1014.8	72	47	59.7	0.1	88	18	32	5	0	1	37	46	0.66	- 0.46	0.28	7	1	0.0	0	6.1	26	35	26	14+	7	12	12	5.9	
PORTLAND	21	1015.6	1017.0	66	47	56.3	- 1.1	79	16	38	7+	0	0	45	69	3.63	1.64	1.47	15	0	0.0	0	2.2	30	24	SW	20+	7	3	21	7.2	56
SALEM	196	1009.8	1017.2	66	43	54.5	- 1.8	78	16	32	7	0	1	46	74	3.46	1.35	0.89	17	1	0.0	0	1.6	23	17	30	4	6	5	20	6.8	
SEXTON SUMMIT R	3836	883.5	1016.2	58	37	47.3	- 2.7	72	16	24	6	0	8			1.37	- 0.82	0.45	9		0.4	T			44	18	24	12	6	13	5.1	
PACIFIC AREA																																
JOHNSTON	7	1012.9	1013.4	84	76	80.0	0.8	86	31+	73	11+	0	0	72	77	5.56	4.57	4.48	13	0	0.0	0	14.6	8	32	SE	4	7	12	12	6.3	46
KOROR R	94	1006.1	1009.6	89	76	82.7	1.4	91	31+	72	1	14	0	76	84	9.51	- 5.12	3.77	21	3	0.0	0	3.4	9	29	SE	18	0	3	28	9.3	79
KWAJALEIN	8	1009.1	1009.8	85	76	80.4	- 0.7	87	23+	71	1	0	0	76	86	11.80	3.62	4.35	26	0	0.0	0	9.6	8	30	9	23	0	3	28	9.5	
MAJURO	10	1009.8	1010.2	85	76	80.8	0.4	87	29+	74	26+	0	0	75	82	9.33	- 3.42	1.79	28	2	0.0	0	6.9	8	30	E	15	3	9	19	8.0	63
MARCUS ISLAND	20			83	70	76.6	- 2.4	86	31+	65	19	0	0			3.00	1.13	0.97	9		0.0	0			19	SW	12+					66
PAGO PAGO	12	1011.5	1011.7	85	74	79.3		87	14	70	31+	0	0	74	85	7.00		1.59	24	5	0.0	0	5.2	10	20	E	20	2	18	11	6.8	45
PONAPE R	123	1004.1	1009.3	87	73	80.0	- 0.4	90	15+	70	9	2	0	75	87	16.99	- 3.32	2.65	25	3	0.0	0	3.3	10	17	SE	25+	0	3	28	9.1	43
TAGUAC GUAM R	361			88	70	78.6	- 1.8	89	27+	66	15+	0	0			3.16	- 1.03	1.21	11		0.0	0			20	SE	30+	0	21	10	6.4	68
TRUK MOEN ISLAND	5	1008.8	1009.2	87	76	81.4	0.6	88	30+	73	5+	0	0	75	82	10.00	- 4.12	1.93	29	6	0.0	0	5.3	7	19	NE	31+	0	5	26	9.2	58
WAKE	11	1012.9	1013.1	85	75	80.1	0.3	88	31+	69	10+	0	0	71	75	3.65	1.61	2.02	7	2	0.0	0	8.4	9	38	SE	1	17	9	5	4.4	82
YAP R	44	1007.5	1009.3	88	76	81.8	- 0.2	90	29+	72	30	4	0	75	81	3.94	- 5.58	2.42	13	0	0.0	0	6.3	9	19	NW	2	0	10	21	8.1	77
PENNSYLVANIA																																
ALLENTOWN	387	1000.7	1014.8	67	46	56.2	- 4.2	81	3	35	8	0	0	45	69	6.74	2.66	2.46	17	2	0.0	0	1.4	29	29	10	26+	4	11	16	7.1	
ERIE	731	987.8	1014.5	61	45	52.6	- 3.8	77	15	30	7	0	2	43	73	3.06	- 0.48	0.59	15	3	0.0	0	2.3	20	30	16	27	2	13	16	7.3	
HARRISBURG	338	1002.0	1014.7	68	48	58.0	- 4.7	85	3	34	7	0	0	47	70	6.55	2.65	2.61	16	3	0.0	0	0.9	26	27	NW	3	2	10	19	7.7	48
PHILADELPHIA	5	1013.5	1014.6	69	50	59.7	- 2.9	82	3	38	7	0	0	45	62	5.17	1.43	1.91	16	6	0.0	0	1.4	30	32	NW	3	4	12	15	7.0	49
PITTSBURGH	1137	970.2	1014.4	64	45	54.7	- 5.1	78	3	27	7	0	2	43	68	6.36	2.45	1.33	19	5	0.0	0	1.7	27	31	31	20	4	2	25	8.4	34

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	No. of days: Max. 90° F. or above	No. of days: Min. 32° F. or below	Average dew point	Average relative humidity	Precipitation: Total	Departure from normal	Greatest in 24 hours	No. of days: .01 inch or more	No. of days: With thunderstorms	Snow, Sleet: Total	Snow, Sleet: Maximum depth on ground	Wind: Resultant speed	Resultant direction	Fastest mile: Speed	Fastest mile: Direction	Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	Ft.	Mb.	Mb.	°F.	°F.	°F.	F.	F.		°F.				F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
PENNSYLVANIA																																
READING U	266			68	50	59.2	-4.1	85	3	40	8+	0	0			5.52	1.73	2.36	17		0.0	0			49	E	26	5	10	16	7.0	49
SCRANTON	930	981.0	1015.1	65	47	56.3	-3.3	79	3	36	7+	0	0	46	74	4.64	0.69	1.19	18	2	0.0	0	0.8	27	39	W	3	4	7	20	7.9	45
WILLIAMSPORT	524	995.9	1014.9	66	46	56.3	-4.1	82	3	30	7	0	1	47	77	4.93	0.85	1.44	20	3	0.0	0	1.1	24	32	27	3	1	10	20	8.0	
RHODE ISLAND																																
BLOCK ISLAND	110			59	47	53.0	-0.9	69	17	36	8	0	0			2.78	-0.23	1.22	14		0.0	0						5	14	12	6.3	
PROVIDENCE	51	1012.2	1014.5	66	46	55.7	-1.8	75	17+	34	8	0	0	41	62	3.54	0.19	1.57	15	4	0.0	0	0.9	29	31	12	29	4	9	18	7.3	51
SOUTH CAROLINA																																
CHARLESTON	40	1013.9	1015.5	83	61	71.7	-1.2	93	13	49	22+	4	0	58	67	2.54	-1.07	1.10	8	3	0.0	0	2.0	20	30Y	E	7	11	10	10	5.3	59
CHARLESTON U	9			79	66	72.5	-0.8	88	27	56	6	0	0			5.56	2.47	2.55	6		0.0	0			32	SE	26+					
COLUMBIA	213	1007.5	1015.6	82	58	69.6	-2.6	91	25+	42	7	3	0	57	70	4.17	0.63	2.53	13	7	0.0	0	1.5	26	29	29	16	12	10	9	5.0	68
GNVLE-SPARTANBURG	957	981.0	1015.3	77	53	65.4	-4.0	89	24	39	7	0	0	53	68	3.93	0.71	1.31	12	6	0.0	0	2.2	24	24	SW	19	7	12	12	5.8	56
SOUTH DAKOTA																																
ABERDEEN	1296	965.8	1012.8	63	40	51.3	-6.0	87	1	24	5	0	6	39	66	1.66	-0.68	0.68	10	1	T	T	3.3	34	35	26	8	7	9	15	6.6	
HURON	1282	966.1	1012.8	65	40	52.2	-5.3	87	1	24	5	0	7	38	61	1.02	-1.34	0.56	10	2	0.3	T	2.5	31	40	NW	8	5	14	12	6.6	58
RAPID CITY	3162	902.8	1013.6	63	39	50.8	-4.9	79	29	26	20+	0	6	35	58	1.68	-0.98	0.37	15	1	T	T	4.4	34	52	NW	10	5	8	18	6.8	53
SIOUX FALLS	1418	961.4	1012.7	66	40	52.6	-5.7	87	1	23	5	0	5	40	65	2.69	-0.69	1.61	8	3	0.1	T	2.6	32	38	26	8	3	15	13	6.4	
TENNESSEE																																
BRISTOL	1507	961.7	1015.5	73	50	61.3	-4.4	85	24	35	7+	0	0	52	74	3.83	0.38	0.93	15	8	0.0	0	1.9	27	24	30	1	3	11	17	7.0	
CHATTANOOGA	665	990.5	1015.0	77	54	65.8	-4.3	90	25	36	6	1	0	55	71	3.93	0.41	1.55	10	8	0.0	0	2.2	21	26	N	29	7	12	12	6.4	51
KNOXVILLE	980	979.7	1014.4	76	55	65.3	-2.4	88	25	40	6	0	0	54	70	3.01	-0.49	0.82	13	6	0.0	0	3.1	25	30	NE	24	5	8	18	7.0	62
MEMPHIS	258	1004.1	1014.1	79	60	69.7	-0.6	90	25	42	6	1	0	54	60	5.21	0.98	2.00	13	9	0.0	0	3.2	22	38	NW	25	6	10	15	6.4	65
NASHVILLE	590	992.6	1014.1	77	56	66.3	-2.3	88	25+	35	6	0	0	54	69	6.28	2.56	2.02	15	10	0.0	0	4.6	21	30	NW	25	4	16	11	6.5	52
OAK RIDGE R	905			76	54	65.2	-1.3	88	24	39	6	0	0			4.01	0.28	1.13	13		0.0	0			39Y		29	8	5	18	6.9	
TEXAS																																
ABILENE	1762	950.9	1011.2	82	61	71.4	-0.3	93	23	47	18	5	0	60	70	2.40	-1.93	0.65	12	11	0.0	0	6.4	16	45	NW	10	5	13	13	6.4	74
AMARILLO	3604	888.6	1010.0	76	51	63.4	-3.1	92	29+	43	11	2	0	44	59	2.84	-0.53	1.27	13	14	0.0	0	3.7	16	50	NE	31	8	10	13	6.2	65
AUSTIN	597	990.9	1012.5	83	65	74.2	-0.9	92	25	52	1	3	0	64	74	8.75	5.04	1.96	10	7	0.0	0	5.5	16	35	N	3	6	11	14	6.5	55
BROWNSVILLE	19	1010.5	1011.1	87	73	80.2	1.2	91	26	53	4	6	0	72	79	5.90	3.54	2.27	7	6	0.0	0	11.8	14	66	NW	4	3	17	11	6.7	71
CORPUS CHRISTI	41	1010.2	1011.8	84	70	76.9	-0.6	88	26+	58	1	0	0	71	83	9.38	6.39	4.65	10	9	0.0	0	10.4	14	45	NE	11	0	12	19	7.6	51
DALLAS	481	995.3	1012.4	82	64	73.0	0.1	93	29	51	18	3	0	61	67	4.11	-0.72	1.73	11	12	0.0	0	5.5	16	38	N	25	5	11	15	6.8	52
DEL RIO	1026	974.6	1010.0	87	68	77.4	-1.0	98	30+	56	1	12	0	65	70	1.03	-1.70	0.61	7	8	0.0	0	9.1	12	26	15	9	2	10	19	7.5	
EL PASO	3918	878.4	1007.4	87	59	73.0	1.1	99	29	47	14+	10	0	30	23	T	-0.40	T	0	1	0.0	0	4.8	26	36	W	22	23	6	2	2.5	94
FORT WORTH	537	992.6	1012.6	82	63	72.4	-0.3	91	29	49	1	3	0	63	73	6.02	1.43	3.17	12	13	0.0	0	4.0	18	23	18	31+	5	8	18	7.0	
GALVESTON U	7			80	72	75.7	-0.1	84	25	65	4	0	0			4.82	2.03	1.73	7		0.0	0			35	NW	4					59
HOUSTON	50	1011.2	1013.3	85	68	76.3	0.3	91	26+	55	1	3	0	66	75	13.24	8.92	6.35	11	9	0.0	0	6.3	15	41	17	11	4	14	13	6.3	55
LUBBOCK	3254	900.4	1010.1	80	51	65.5	-2.7	96	30	44	18+	5	0	47	60	2.01	-1.17	0.85	7	8	0.0	0	4.6	15	40	36	31	7	14	10	5.7	
MIDLAND	2851	912.6	1009.3	83	58	70.8	-2.6	99	30	48	1	6	0	51	58	4.96	2.88	4.75	3	4	0.0	0	5.0	15	35	9	9	14	10	7	4.3	
PORT ARTHUR	16	1013.5	1014.1	84	65	74.6	-0.1	88	30+	55	1	0	0	67	80	3.20	-1.74	1.22	12	9	0.0	0	6.0	14	42	SE	11	6	14	11	6.0	69
SAN ANGELO	1903	944.5	1009.9	87	62	74.5	0.2	100	30	49	18	15	0	61	68	1.98	-1.22	1.11	7	8	0.0	0	5.5	16	29	1	3	8	12	11	6.1	
SAN ANTONIO	788	984.4	1012.0	84	66	75.3	0.0	91	30	50	1	4	0	65	73	2.82	-0.63	1.29	10	8	0.0	0	6.5	13	29	E	11	4	10	17	7.0	43
VICTORIA	104	1008.1	1012.4	85	69	76.8	0.6	93	25	61	1	5	0	68	78	14.08	9.96	5.47	11	9	0.0	0	7.1	15	61Y	ESE	11	4	11	16	7.0	
WACO	501	994.6	1012.5	82	64	73.1	-1.2	92	25	52	1	3	0	63	74	7.12	2.55	4.01	11	12	0.0	0	6.4	15	30	34	25	5	12	14	6.5	
WICHITA FALLS	994	975.6	1011.9	82	57	69.7	-2.5	97	29	47	1	6	0	59	73	4.41	-0.19	0.97	12	14	0.0	0	3.5	13	37	17	24	3	10	18	7.0	
UTAH																																
MILFORD	5028	843.9		73	37	54.6	-1.9	91	29+	23	7	2	8			0.46	-0.23	0.27	6		2.4	1						8	17	6	4.8	
SALT LAKE CITY	4220	869.3	1012.1	71	42	56.4	-2.5	87	29	30	7	0	1	35	50	2.18	0.78	0.91	10	8	T	0	1.9	19	54	NW	5	7	9	15	6.3	67
WENDOVER	4237	868.6	1012.4	70	48	59.0	-2.4	87	29	32	6	0	1			1.06	0.40	0.44	8		0.0	0										
VERMONT																																
BURLINGTON	332	1001.7	1014.3	63	41	51.7	-2.1	76	30	25	7	0	3	40	69	2.43	-0.56	0.58	11	1	0.0	0	0.8	23	27	S	9	4	9	18	7.6	72
VIRGINIA																																
LYNCHBURG	916			74	50	62.1	-3.2	87	3	36	6	0	0			3.58	0.37	2.65	9		0.0	0			33	NE	27	6	11	14	6.4	59
NORFOLK	22	1014.2	1015.1	74	55	64.6	-2.9	90	24	42	8+	1	0	52	67	2.16	-1.20	1.65	9	2	0.0	0	1.6	20	52	SE	27	6	9	16	6.8	74

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

MAY 1968

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	No. of days: Max. 90°F. or above	No. of days: Min. 32°F. or below	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	No. of days: .01 inch or more	No. of days: With thunderstorms	Snow, Sleet: Total	Snow, Sleet: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Fastest mile: Speed	Fastest mile: Direction	Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	Ft.	Mb.	Mb.	°F.	°F.	°F.	°F.	°F.		°F.				°F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
VIRGINIA																																
RICHMOND	164	1009.1	1015.0	77	53	64.7	- 2.3	91	3	37	7	2	0	52	67	3.13	- 0.59	1.79	12	2	0.0	0	1.7	24	28	NE	27	7	9	15	6.8	65
ROANOKE	1149	973.2	1014.8	74	51	62.4	- 3.3	84	3	34	7	0	0	48	62	1.89	- 1.90	0.98	13	7	0.0	0	2.7	28	35	31	1	6	9	16	6.5	
WALLOPS ISLAND	9			69	53	61.1		83	17	41	7	0	0			2.15		1.38	9		0.0	0			49Y	E	27	8	7	16	6.5	
WASHINGTON																																
OLYMPIA	195	1009.5	1016.8	65	43	54.0	- 1.1	77	18+	32	7+	0	2	45	73	2.57	0.56	0.84	12	2	0.0	0	3.3	22	30	25	4	3	10	18	7.3	
QUILLAYUTE	179	1009.5	1017.1	60	43	51.5	- 0.5	73	16	35	13	0	0	46	83	4.33	- 0.09	0.85	16	0	0.0	0	1.9	23	19	5	20+	2	6	23	8.0	36
SEATTLE TACOMA	400	1000.3	1016.8	66	49	57.3	1.8	80	17	41	5+	0	0	43	63	1.67	- 0.06	0.88	9	1	0.0	0	3.2	23	32	23	4	3	10	18	7.3	56
SPOKANE	2356	930.2	1014.4	67	41	53.8	- 2.4	82	19	30	5+	0	2	34	50	1.16	- 0.05	0.69	5	1	T	0	3.7	18	26	SW	4	6	12	13	6.0	63
STAMPEDE PASS R	3958	879.1		51	37	43.7	- 0.2	70	18	25	5	0	7			4.93	0.68	1.18	21		12.6	50						5	5	21	7.6	
WALLA WALLA U	949			71	50	60.4	- 0.6	85	18+	38	5	0	0			0.69	- 0.80	0.31	7		T	0			27	W	4	6	9	16	6.5	67
YAKIMA	1052	976.0	1014.3	71	42	56.8	- 1.7	85	18	30	5	0	2	35	44	0.47	- 0.07	0.22	4	1	0.0	0	3.9	30	24	29	4	10	13	8	5.1	
WEST INDIES																																
SAN JUAN P.R.	13	1014.6	1016.8	86	74	79.9	1.2	93	3	71	5	4	0	74	84	6.31	- 0.81	1.04	19	5	0.0	0	7.4	8	31	NE	6	1	21	9	6.3	68
SWAN ISLAND	28			87	77	81.9	- 0.6	89	18	70	31	0	0			4.46	1.16	1.53	6		0.0	0						3	13	15	7.3	
WEST VIRGINIA																																
BECKLEY	2504	927.2	1014.8	66	47	56.9	- 3.9	79	15	31	6	0	2	46	70	4.62	0.49	1.85	20	7	0.0	0	3.8	22	31	30	18	2	12	17	7.7	
CHARLESTON	939	980.4	1014.1	72	51	61.0	- 3.8	86	3	29	7	0	2	49	67	6.59	2.88	1.71	19	6	0.0	0	2.5	22	29	25	29	2	10	19	7.6	
ELKINS	1970	944.1	1015.2	67	45	55.8	- 3.5	80	15+	25	7	0	4	45	73	7.30	2.73	1.86	18	4	0.0	0	3.4	27	37	31	3	2	4	25	8.4	
HUNTINGTON	827	984.4	1014.5	71	50	60.3	- 4.3	81	15+	32	6	0	1	52	78	6.10	2.21	1.74	17	8	0.0	0	2.0	21	26	24	19	3	10	18	7.5	
PARKERSBURG U	615			70	50	60.0	- 4.0	84	3	33	6	0	0			10.00	6.30	2.49	17		0.0	0			31	W	3					37
WISCONSIN																																
GREEN BAY	682	987.5	1013.2	63	43	52.6	- 2.2	81	15	28	5	0	3	41	68	3.10	0.04	0.79	15	4	0.0	0	2.6	11	54	SW	8	5	8	18	7.1	51
LA CROSSE	651	988.2	1012.6	67	46	56.3	- 2.9	86	15	32	5	0	1	44	67	3.20	- 0.56	1.05	14	4	0.0	0	0.9	30	36	17	15+	5	9	17	7.2	
MADISON	858	981.4	1012.6	66	43	54.3	- 1.8	83	15	29	6	0	2	43	67	2.02	- 1.32	0.73	16	5	0.0	0	0.9	19	34	S	7	5	8	18	7.2	53
MILWAUKEE	672	987.8	1013.3	62	44	53.2	- 0.2	81	15+	31	6	0	1	43	71	3.28	0.12	1.09	17	4	0.0	0	1.1	12	36	W	16	4	13	14	6.8	56
WYOMING																																
CASPER	5338	835.4	1012.7	62	34	48.1	- 5.0	79	29	17	11	0	14	32	61	3.35	1.32	0.95	11	9	3.4	1	2.0	26	43	30	24	7	10	14	6.5	
CHEYENNE	6126	810.4	1012.7	61	37	49.2	- 3.7	80	29	29	11	0	6	29	52	3.54	1.02	1.52	13	10	2.2	1	4.0	31	46	NW	17	3	17	11	6.6	59
LANDER	5563	826.6	1011.9	62	37	49.5	- 3.4	77	29	24	7	0	9	30	51	2.16	- 0.49	0.91	7	4	5.2	4	1.0	24	42	W	5	3	15	13	6.7	58
SHERIDAN	3964	877.1	1014.1	62	37	49.4	- 4.2	76	29	23	11	0	8	34	58	2.29	- 0.28	0.90	12	4	0.6	1	1.9	32	40	NW	6	5	11	15	6.8	61

Data from airport unless otherwise specified. U indicates Urban, R indicates Rural, sites.

Precipitation data in column headed "Greatest in 24 hours" are computed on a 24-hour basis without regard to calendar day - data may include precipitation with a measurable amount from the last day of the previous month or the first day of the following month.

Wind directions under resultant direction are in tens of degrees.

Value entered in column "Fastest Mile" is the highest observed 1-minute wind speed when the direction is in tens of degrees. These stations are not equipped with a recording anemometer from which "Fastest Mile" data can be evaluated.

B Number of days maximum 70°F. or above for Alaskan Stations.
Y Peak Gust.
\+ And also on an earlier date or dates.
Ø Station pressures apply to elevations shown in the "Elevations - Station Pressure" table of the annual issue of this publication.

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	No. of days: Max 32.2 °C or above	No. of days: Min. 0 °C or lower	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	No. of days: .25 mm. or more	No. of days: With thunderstorms	Snow, Sleet: Total	Snow, Sleet: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Fastest mile (1.6 kilometers): Speed	Fastest mile: Direction	Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	M.	Mb.	Mb.	C.	°C.	°C.	C.	C.		C.				C.	%	Mm.	Mm.	Mm.			Mm.	Mm.	M.p.s.		M.p.s.							%
ALABAMA																																
BIRMINGHAM	189	993.2	1015.5	26.7	13.3	20.2	-1.9	31.1	25	3.3	6	0	0	13.9	69	89	2	31	10	8	0	0	0.8	22	15.2	W	29	7	9	15	6.1	73
HUNTSVILLE	190	992.2	1015.1	25.0	13.9	19.5	-1.8	31.7	25	5.6	6	0	0	13.9	74	149	63	66	11	6	0	0	0.9	19	13.9	24	16+	7	10	14	6.3	
MOBILE	64	1007.1	1014.9	30.0	18.9	24.4	0.2	35.6	31	11.7	6	9	0	16.7	68	81	- 43	57	7	5	0	0	0.9	16	9.4	21	17+	10	10	11	5.6	
MONTGOMERY	59	1008.5	1015.5	28.3	16.1	22.1	-0.4	31.7	24+	8.3	6	0	0	15.6	70	49	- 39	25	9	5	0	0	0.8	24	9.4	NW	5	9	11	11	5.4	72
ALASKA												B																				
ANCHORAGE	35	1010.5	1015.4	13.3	5.0	9.0	0.4	22.8	20	- 1.1	3	1	4	1.7	62	41	27	21	13	0	T	0	1.3	19	10.3	17	8	5	3	23	8.0	45
ANNETTE	34	1012.9	1016.8	17.2	6.7	11.7	2.2	25.0	10	1.7	3	5	0	4.4	67	40	-140	9	12	0	0	0	0.3	18	9.4	14	1	10	3	18	6.4	
BARROW	9	1017.3	1018.0	- 2.8	- 8.3	- 5.7	1.9	2.2	30+	-13.9	1	0	31	- 6.7	91	4	1	1	7	0	71	432	1.4	14	17.4	25	12	2	6	23	8.8	
BARTER ISLAND	12	1018.0	1019.9	- 1.1	- 8.3	- 4.8	1.4	8.9	9	-15.0	22	0	31	- 6.7	85	22	16	14	4	0	109	559	1.3	25	24.6	26	12	3	10	18	7.3	
BETHEL	38	1009.8	1015.5	10.6	0.0	5.3	1.4	17.8	20+	-11.7	1	0	17	0.6	75	25	1	13	9	0	43	T	1.2	1	13.0	19	9	6	6	19	7.0	
COLD BAY	29	1009.8	1013.6	8.9	2.8	5.9	1.8	16.7	13	- 3.9	1	0	4	2.8	82	33	- 25	12	14	0	53	T	0.4	28	21.0	15	3	1	3	27	8.9	
FAIRBANKS	133	998.0	1015.1	15.0	2.2	8.7	0.3	21.1	20+	- 2.8	4	2	9	- 3.3	45	17	- 1	14	4	1	69	102	1.2	31	10.3	23	30+	2	15	14	7.0	
JUNEAU	4	1016.3	1016.9	15.0	3.3	9.1	1.6	22.2	19	- 1.7	4	1	6	4.4	77	37	- 45	11	13	0	T	T	1.2	14	12.5	12	2	7	5	19	7.0	51
KING SALMON	15	1011.5	1013.6	11.7	1.7	6.6	0.3	22.2	20	- 6.7	2+	2	9	- 0.6	64	32	8	8	12	0	56	T	1.4	15	15.6	14	4	1	9	21	8.3	
KOTZEBUE	3	1016.6	1017.1	2.8	- 5.6	- 1.4	-0.8	8.9	26	-20.6	2	0	31	- 4.4	79	24	15	12	7	0	84	787	1.0	20	17.0	16	9	11	7	13	5.4	
MC GRATH	105	1002.7	1015.4	12.2	1.7	6.7	0.0	20.6	19	- 8.9	2	0	10	- 1.7	57	20	- 3	6	8	0	T	102	0.8	33	10.3	20	8	5	11	15	6.9	
NOME	4	1015.6	1016.4	2.2	- 5.0	- 1.6	-3.3	7.2	21	-18.9	2	0	31	- 5.0	75	19	2	9	6	0	97	533	0.3	29	14.8	2	6	10	8	13	5.8	49
ST. PAUL ISLAND	7	1014.2	1015.2	3.3	- 1.1	1.1	-0.5	7.8	31	- 3.3	13+	0	27	0.0	92	20	- 13	7	13	0	102	178	3.4	36	17.9	35	6	3	2	26	8.8	
SHEMYA	37	1014.2	1018.0	5.0	1.7	3.4	0.1	7.8	6	0.0	18+	0	4	1.7	91	35	- 26	17	12	0	20	T	1.4	5	23.2	33	3	0	1	30	9.6	
YAKUTAT	9	1015.9	1017.0	10.0	1.1	5.7	-1.3	22.2	19	- 5.6	4	1	13	3.3	85	136	- 67	36	18	0	69	T	1.0	14	11.2	13	1	4	7	20	7.5	
ARIZONA																																
FLAGSTAFF	2131	786.0	1012.2	19.4	0.6	10.1	-0.4	28.3	28	- 7.2	7	0	14	- 3.3	43	14	1	8	4	5	51	51	1.9	22	10.3	23	29	15	9	7	4.1	
PHOENIX	340	970.2	1008.4	34.4	15.6	24.8	0.9	42.2	28	10.0	15+	22	0	1.1	23	T	- 3	T	0	0	0	0	0.7	24	13.4Y	W	22+	23	4	4	2.5	96
TUCSON	788	922.8	1008.8	31.7	14.4	22.9	-0.1	38.9	28	8.3	13	13	0	0.0	24	T	- 3	T	0	0	0	0	1.7	21	12.1	SW	22+	20	10	1	2.2	98
WINSLOW	1492	849.0	1010.6	25.6	7.2	16.5	-1.7	33.9	29+	0.0	7	3	1	- 5.0	26	1	- 7	1	1	3	0	0	2.4	21	14.3	22	22+	17	9	5	3.6	
YUMA	59	1001.7	1008.9	34.4	17.8	25.9	0.4	42.2	28	12.2	15	21	0	3.9	27	0	0	0	0	0	0	0	1.9	23	13.0	W	12	25	5	1	1.8	98
ARKANSAS																																
FORT SMITH	136	997.0	1013.5	25.6	14.4	20.1	-0.9	31.7	24+	7.8	20	0	0	13.9	70	288	155	128	15	10	0	0	0.5	10	11.6	W	25	6	7	18	7.1	53
LITTLE ROCK	78	1004.4	1013.7	25.6	13.9	19.8	-1.6	31.7	25	7.2	6	0	0	13.3	71	324	189	127	13	12	0	0	0.9	22	13.9	NW	13	9	8	14	6.5	73
TEXARKANA	119	1000.3	1013.4	27.2	16.1	21.7	-0.3	31.7	29+	9.4	20	0	0	16.1	76	339	214	141	12	10	0	0	1.7	17	13.0	34	25	6	10	15	6.5	
CALIFORNIA																																
BAKERSFIELD	145	996.3	1013.7	28.3	13.9	21.2	-0.1	37.2	28	7.2	6	12	0	4.4	36	2	- 4	2	1	0	0	0	2.2	34	8.0	32	22+	21	6	4	2.8	
BISHOP	1252	870.6		27.8	7.2	17.4	0.4	35.6	28	0.6	15	7	0			T	- 5	T	1		0	0						18	9	4	3.6	
BLUE CANYON	1609			15.6	6.1	10.9	-0.3	23.3	28+	- 2.8	14	0	2			38	- 41	22	7		170	152			8.0	24	12	15	7	9	4.4	
EUREKA U	13			13.9	8.9	11.3	-0.3	18.9	24	3.3	6	0	0			26	- 29	10	10		0	0			13.9	N	5	5	9	17	6.8	67
FRESNO	100	1002.0	1013.6	28.9	11.1	20.1	-0.1	37.2	28	5.0	6	11	0	6.1	45	6	- 2	5	3	0	0	0	3.0	31	13.0	NW	20	23	2	6	3.0	83
LONG BEACH	10	1013.2	1014.7	24.4	13.3	18.9	1.4	33.9	26	8.9	14	1	0	12.2	69	T	- 3	T	0	0	0	0	1.7	23	8.9	21	12+	15	5	11	4.9	
LOS ANGELES	30	1010.5	1014.1	21.7	13.9	17.7	1.1	29.4	26	10.6	14	0	0	11.7	72	T	- 3	T	0	0	0	0	2.5	24	14.8Y	W	21	14	10	7	4.5	
LOS ANGELES U	82			22.8	14.4	18.6	0.4	33.3	27	10.0	14	1	0			0	- 4	0	0		0	0			7.6	SW	14+	13	11	7	4.5	
MT SHASTA R	1080			19.4	3.3	11.4	-0.7	26.1	28+	- 2.8	6	0	5			28	- 22	14	6		30	25										
OAKLAND	2	1016.3	1016.6	18.3	11.7	14.9	-0.4	23.9	26	7.8	7	0	0	9.4	74	11	- 5	7	3	0	0	0	3.4	27	11.2	28	11	14	8	9	4.7	
RED BLUFF	104	1001.4	1014.0	27.2	11.7	19.3	-0.9	35.6	27	6.1	7	6	0	5.0	46	14	- 14	6	3	1	0	0	0.3	18	15.2	SE	12	15	9	7	4.4	86
SACRAMENTO	5	1013.5	1014.4	26.7	9.4	18.2	0.4	35.6	27	5.6	14	6	0	8.3	61	4	- 11	4	2	0	0	0	2.6	22	10.7	W	21	17	8	6	3.6	92
SANDBERG R	1377			18.9	6.1	12.4	-1.2	31.1	27	- 2.2	14	0	4			T	- 8	T	0		0	0			19.2	35	26	19	6	6	3.4	
SAN DIEGO	4	1013.5	1014.5	20.6	15.0	17.7	-0.1	26.1	26	11.1	15+	0	0	11.1	67	2	- 2	2	2	0	0	0	2.1	25	8.9	NW	4	12	7	12	5.4	63
SAN FRANCISCO	2	1015.9	1016.7	18.3	8.9	13.5	-1.1	22.2	27	4.4	7	0	0	8.3	74	7	- 5	7	1	0	0	0	5.3	28	17.9	W	5	13	6	12	4.7	
SAN FRANCISCO U	16			16.1	10.6	13.2	-0.9	22.2	27	8.3	17	0	0			6	- 10	4	3		0	0			14.8	W	5					72
SANTA MARIA	72			20.6	8.3	14.4	0.2	27.2	27	3.3	15	0	0			1	- 4	1	3		0	0						18	9	4	3.5	
STOCKTON	7	1014.2	1015.1	25.6	10.6	17.8	-1.2	33.9	28	5.6	14	3	0	5.6	50	5	- 6	5	2	0	0	0	3.7	29	13.0	27	12	17	10	4	3.5	
COLORADO																																
ALAMOSA	2297	770.1		18.9	0.0	9.3	-1.2	26.7	30	- 6.7	7	0	18			5	- 13	3	4		T	T						11	13	7	5.0	
COLORADO SPRINGS	1873	809.7	1012.9	18.3	3.3	10.8	-1.9	27.2	30+	- 2.8	17	0	6	- 1.7	50	16	- 38	7	7	9	5	0	0.8	12	15.6	24	6	5	12	14	6.5	
DENVER	1610	834.1	1010.9	20.6	3.9	12.2	-1.3	29.4	29	- 2.2	8	0	4	1.1	55	18	- 51	6	10	8	T	T	0.4	7	15.2	SW	2	9	10	12	5.8	64
GRAND JUNCTION	1480	849.3	1010.0	22.8	7.2	15.1	-1.7	33.9	29	- 2.8	7	1	2	- 0.6	39	29	14	14	7	7	T	T	0.6	12	18.8	NE	30	8	11	12	6.1	64
PUEBLO	1428	853.4	1011.0	22.8	7.8	15.2	-0.7	32.2	30	1.1	8	1	0	1.1	45	41	- 5	23	6	4	T	0	0.9	8	19.2	NW	6	8	13	10	5.8	79
CONNECTICUT																																
BRIDGEPORT	2	1014.2	1014.8	18.9	10.0	14.4	-0.4	26.1	17	5.0	8	0	0	7.8	69	142	48	82	16	1	0	0	0.5	36	14.8	7	29	3	13	15	6.9	

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	No. of days: Max. 32.2 °C or above	No. of days: Min. 0 °C or lower	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	No. of days: .25 mm. or more	No. of days: With thunderstorms	Snow, Sleet: Total	Snow, Sleet: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Fastest mile (1.6 kilometers): Speed	Fastest mile: Direction	Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	M.	Mb.	Mb.	C.	C.	C.	C.	°C.		°C.				°C.	%	Mm.	Mm.	Mm.			Mm.	Mm.	M.p.s.		M.p.s.							%
CONNECTICUT																																
HARTFORD	52	1007.5	1014.1	21.1	7.8	14.6	-0.9	26.1	30+	- 0.6	8	0	1	6.1	61	100	13	34	12	3	0	0	0.4	33	11.2	NW	20	2	12	17	7.3	55
NEW HAVEN	2	1014.2		18.9	8.9	13.8	-0.2	26.1	26+	0.6	8	0	0			114	20	41	17		0	0			10.7	NE	29	3	14	14	7.0	57
DELAWARE																																
WILMINGTON	23	1011.9	1014.9	20.6	10.0	15.3	-1.7	28.3	3	2.2	7	0	0	8.9	68	121	32	60	14	5	0	0	0.7	31	13.0	5	28	6	8	17	7.1	
DIST.OF COLUMBIA																																
WASH NATL AP	4	1012.2	1014.7	23.3	11.7	17.6	-1.2	29.4	3	5.6	7	0	0	8.9	60	107	2	46	13	4	0	0	0.9	27	13.4	SW	30	4	10	17	7.0	51
FLORIDA																																
APALACHICOLA U	4			27.8	20.0	23.7	-0.1	31.1	19	13.3	6	0	0			66	- 8	26	5	2	0	0			13.0	E	7	12	13	6	4.5	87
DAYTONA BEACH	9	1014.9	1016.4	29.4	18.3	23.9	0.5	33.9	18+	12.2	1	4	0	17.2	69	122	49	45	10	10	0	0	1.5	11	11.6	32	28	8	11	12	6.1	
FORT MYERS	5	1015.2	1015.8	31.1	21.1	25.9	0.7	32.8	31+	15.0	1	10	0	20.0	74	262	164	84	14	13	0	0	0.5	14	11.2	8	8	2	18	11	6.5	
JACKSONVILLE	6	1014.9	1015.9	30.6	19.4	24.8	0.5	33.9	18+	12.8	6	8	0	16.7	67	55	- 33	23	9	7	0	0	0.7	19	14.3	E	8	9	10	12	5.6	72
KEY WEST	1	1014.6	1015.3	28.9	23.9	26.3	0.2	30.0	30+	20.6	5	0	0	22.2	80	203	134	68	14	11	0	0	2.6	14	17.0	SW	28	3	10	18	7.0	65
LAKELAND U	65			30.0	19.4	24.9	-0.1	32.8	31	15.6	1	5	0			231	141	111	12		0	0						5	20	6	5.5	82
MIAMI	2	1015.2	1015.5	28.3	22.2	25.3	0.0	32.2	4	18.3	2	1	0	21.1	81	471	307	138	21	11	0	0	2.0	13	13.4	7	7	1	12	18	7.6	
ORLANDO	33	1012.2	1016.3	30.6	18.9	24.8	-0.5	33.3	18	13.9	1	9	0	17.2	69	94	4	38	12	9	0	0	0.5	14	10.7	10	14	7	14	10	6.1	
PENSACOLA	34	1010.8	1015.0	27.8	18.9	23.3	-0.9	32.8	30	12.8	7	1	0	17.2	71	31	- 85	14	7		0	0	1.2	18	14.3	E	8+	6	13	12	6.0	65
TALLAHASSEE	17	1013.5	1015.8	31.1	16.1	23.5	-0.3	34.4	16+	7.8	1	10	0	16.7	69	102	- 3	49	9	5	0	0	0.4	17	9.4	8	25+	12	14	5	4.9	
TAMPA	6	1015.6	1015.7	30.0	18.3	24.3	-0.6	33.9	31+	12.2	2+	4	0	17.8	71	53	- 20	31	9	2	0	0	0.4	24	8.0	25	26+	7	15	9	5.8	78
WEST PALM BEACH	5	1015.2	1015.9	28.9	21.1	24.9	-0.4	32.2	28	16.7	3	1	0	19.4	74	351	221	94	14	9	0	0	2.3	12	11.6	24	28+	2	11	18	7.7	
GEORGIA																																
ATHENS	244	986.5	1015.3	25.6	13.3	19.4	-1.8	30.6	25+	4.4	6	0	0	13.3	71	162	71	42	12	9	0	0	0.8	26	15.6	16	25	9	8	14	5.6	
ATLANTA	308	979.0	1015.6	25.6	13.9	19.7	-0.9	31.1	25	6.1	6	0	0	13.3	73	163	83	38	11	11	0	0	1.0	27	13.0	S	25	8	9	14	5.8	74
AUGUSTA	44	1009.8	1015.1	27.8	13.9	20.6	-1.4	32.8	25	5.6	7	3	0	13.9	70	103	27	51	10	8	0	0	0.6	24	15.6	28	17+	9	12	10	5.6	
COLUMBUS	117			27.8	15.0	21.6	-0.7	33.3	25	8.3	6	2	0	15.0	72	120	31	50	10		0	0	0.5	28	10.3	22	27	10	10	11	5.5	
MACON	108	1002.7	1015.5	28.3	13.9	21.1	-2.2	33.9	25	4.4	6	4	0	13.3	65	160	75	57	15	7	0	0	0.5	25	13.0	W	17	9	12	10	5.4	71
ROME	194			26.1	11.7	19.0	-1.4	32.2	25	2.2	6	1	0			161	64	44	14		0	0										
SAVANNAH	14	1013.9	1015.6	28.9	16.1	22.5	-0.5	33.9	13	8.9	6	4	0	16.1	71	122	26	43	11	9	0	0	0.8	21	9.4	E	7	9	9	13	5.7	62
HAWAII																																
HILO	8	1014.9	1016.1	28.3	20.0	24.3	1.5	30.6	30+	17.8	17	0	0	19.4	77	69	-168	15	18	1	0	0	0.4	11	8.9	SE	25+	2	13	16	7.5	47
HONOLULU	2	1015.2	1015.8	30.0	21.7	25.8	1.4	32.8	22	18.9	7+	3	0	18.3	65	31	6	30	5	0	0	0	3.4	5	12.1	NE	2	8	10	13	6.3	58
KAHULUI	15	1013.2	1015.6	29.4	18.3	23.9	-0.2	32.8	30	13.9	7+	5	0	18.3	75	65	47	51	5	0	0	0	4.0	4	12.5	NE	21	12	6	13	5.7	62
LIHUE	31	1011.9	1017.1	26.7	20.6	23.4	-0.2	28.3	28	16.7	11	0	0	19.4	80	11	- 55	5	6	0	0	0	3.4	4	10.3	E	2	6	13	12	6.4	64
IDAHO																																
BOISE	865	913.6	1012.9	22.2	6.7	14.3	-0.2	31.1	19	- 2.8	6	0	2	- 0.6	39	10	- 23	7	5	1	T	T	1.2	30	13.9	NW	4	7	15	9	5.5	74
LEWISTON	431			21.7	8.3	14.8	0.1	31.1	19	1.7	5	0	0			25	- 15	10	7		T	T						4	14	13	6.4	
POCATELLO	1358	861.5	1013.5	18.9	3.3	10.9	-1.9	28.3	28	- 3.9	7	0	6	- 1.1	49	43	14	17	10	3	T	0	2.5	24	18.8	SW	5	7	14	10	5.9	70
ILLINOIS																																
CAIRO U	96			24.4	14.4	19.4	-1.2	31.1	2	7.8	6	0	0			163	51	75	12		0	0			13.0	SW	15	10	5	16	6.4	59
CHICAGO O HARE	201	988.8	1013.1	20.0	7.8	13.9	-0.4	29.4	2	- 0.6	6	0	1	6.1		76	- 20	25	13	5	0	0	0.7	14	17.0	20	15+	3	12	16	6.9	
CHICAGO MIDWAY	185	990.5		20.0	9.4	14.6	-0.9	30.0	2	1.7	5	0	0	6.7	63	52	- 42	13	12	7	0	0	0.8	16	16.1	W	4	4	13	14	6.8	54
MOLINE	177	990.9	1012.5	20.0	7.8	14.0	-2.2	31.7	2	1.7	10	0	0	6.7	65	66	- 31	15	13	4	0	0	0.7	24	17.0	W	16	3	10	18	7.1	48
PEORIA	199	988.8	1012.8	20.0	8.9	14.3	-2.1	31.1	2	2.2	5	0	0	7.8	68	119	11	62	16	6	0	0	0.8	22	13.4	W	16+	5	6	20	7.5	44
ROCKFORD	221	985.4	1012.2	18.9	7.8	13.4	-1.7	28.3	2	0.0	6	0	1	7.8	72	96	- 1	41	14	4	0	0	0.5	17	15.6	26	16	5	11	15	7.0	
SPRINGFIELD	179	990.5	1012.7	20.6	9.4	15.0	-2.7	30.6	15+	2.8	6	0	0	8.3	67	145	46	60	15	9	0	0	1.0	22	15.6	SW	15	5	9	17	6.9	53
INDIANA																																
EVANSVILLE	116	999.7	1013.7	22.8	11.7	17.3	-2.0	30.6	15+	2.8	6	0	0	10.6	68	105	- 2	46	12	8	0	0	1.3	23	11.6	S	15	7	9	15	6.5	54
FORT WAYNE	241	983.4	1013.6	18.3	7.8	13.0	-2.9	26.7	15	- 1.1	6	0	1	7.8	73	155	61	82	16	6	0	0	1.0	23	16.1	W	16	3	10	18	7.5	58
INDIANAPOLIS	241	984.4	1013.5	20.0	9.4	14.8	-1.6	28.3	2	- 0.6	6	0	1	9.4	72	235	134	80	20	6	0	0	0.7	23	15.2	SW	9	5	8	18	7.5	48
SOUTH BEND	236	985.4	1013.3	18.3	7.8	12.9	-1.9	27.2	15	- 4.4	6	0	2	6.7	69	62	- 30	20	16	5	T	T	0.9	21	11.6	25	16	3	10	18	7.2	
IOWA																																
BURLINGTON	211			20.6	8.9	14.8	-1.8	30.6	2	3.9	10	0	0	7.2	65	47	- 56		10	4	0		0.8	26	14.3	17	15	3	12	16	7.0	
DES MOINES	286	978.3	1013.0	19.4	8.3	13.9	-2.0	30.6	2	1.7	5	0	0	5.6	60	67	- 37	17	11	5	T	T	1.0	30	20.6	NW	15	7	13	11	6.1	52
DUBUQUE	322	973.6		18.9	7.2	12.9	-1.6	26.7	2	1.1	19	0	0			96	- 12	34	15		0	0						4	10	17	7.5	
SIOUX CITY	334	973.2	1012.8	21.1	7.2	14.2	-2.2	33.3	1	- 1.1	5	2	1	5.0	58	59	- 23	29	10	5	T	T	1.2	32	21.0	NW	28	6	13	12	6.1	61

See footnotes at end of table

CLIMATOLOGICAL DATA
METRIC UNITS

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	No. of days: Max 32.2 °C or above	No. of days: Min 0 C or lower	Average dew point	Average relative humidity	Precipitation: Total	Departure from normal	Greatest in 24 hours	No. of days: .25 mm or more	No. of days: With thunderstorms	Snow, Sleet: Total	Snow, Sleet: Maximum depth on ground	Wind: Resultant speed	Resultant direction	Fastest mile (1.6 kilometers): Speed	Direction	Date	No. of days (sunrise to sunset): Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	M.	Mb.	Mb.	C.	C.	C.	C.	C.		C.				C.	%	Mm.	Mm.	Mm.			Mm.	Mm.	M.p.s.		M.p.s.							%
IOWA																																
WATERLOO	265	980.7	1012.4	18.9	6.1	12.3	-3.2	28.9	15	- 1.7	5	0	2	6.1	68	50	- 45	14	17	5	0	0	0.7	28	17.4	31	16	5	11	15	6.9	
KANSAS																																
CONCORDIA	448	960.0	1012.6	21.1	8.3	14.5	-2.8	33.3	2	1.7	19	2	0	7.2	66	66	- 33	25	9	6	0	0	0.5	28	23.7	W	2	9	11	11	6.0	62
DODGE CITY	787	922.5	1012.4	21.7	8.9	15.2	-2.4	34.4	2	3.9	19+	2	0	6.1	63	100	18	32	16	9	0	0	0.4	3	21.0	S	6	9	7	15	6.2	64
GOODLAND	1113	886.2	1012.2	20.0	5.6	12.8	-1.9	31.1	30+	0.0	9	0	1	3.3	61	48	- 13	25	13	4	10	T	0.1	27	24.6	30	6	5	12	14	6.7	
TOPEKA	267	981.4	1012.9	21.1	8.9	15.1	-2.9	31.1	2	0.6	21	0	0	8.9	69	86	- 26	24	9	11	0	0	0.5	30	17.9	SE	13	6	13	12	6.2	62
WICHITA	403	965.1	1012.6	22.8	9.4	16.1	-2.8	33.3	2	2.8	20	2	0	8.9	67	111	10	35	14	9	0	0	0.3	2	21.0	SE	6	9	9	13	6.2	58
KENTUCKY																																
COVINGTON	265	982.4	1013.9	21.7	10.6	15.9	-1.0	27.8	15+	2.2	6	0	0	9.4	68	241	150	84	17	6	0	0	1.0	22	11.6	27	16	2	10	19	7.6	
LEXINGTON	294	979.0	1014.3	21.7	11.7	16.7	-1.3	27.8	3+	1.1	6	0	0	10.6	70	174	77	58	19	8	0	0	1.7	20	13.0	18	23	4	7	20	7.3	
LOUISVILLE	145	995.9	1013.5	22.2	12.8	17.4	-0.6	28.9	15	1.7	6	0	0	12.2	72	131	32	50	19	5	0	0	1.3	25	13.0	SW	11	4	8	19	7.3	45
LOUISIANA																																
ALEXANDRIA	28	1010.2	1014.4	28.3	15.6	21.7	-1.0	31.7	24	8.3	7	0	0	17.2	79	105	- 36	50	10	8	0	0	0.9	18	13.9	36	17	9	9	13	5.9	
BATON ROUGE	20	1011.9	1014.6	29.4	17.8	23.7	-0.1	32.8	24	11.1	7	7	0	17.8	73	67	- 55	28	7	5	0	0	1.2	16	12.1	13	24	9	13	9	5.6	
LAKE CHARLES	3	1012.9	1013.9	28.9	18.9	23.8	-0.4	31.1	30+	14.4	21+	0	0	18.9	78	80	- 37	27	12	12	0	0	1.8	16	13.0	2	26	5	16	10	6.1	
NEW ORLEANS	1	1013.9	1014.8	28.9	17.8	23.4	-0.2	32.2	31+	8.3	7	3	0	18.3	75	105	- 6	24	9	5	0	0	1.4	15	11.2	13	24+	13	6	12	5.2	
SHREVEPORT	77	1004.4	1013.4	27.8	17.2	22.6	-0.2	32.2	24	10.6	1	1	0	16.1	72	154	32	35	12	9	0	0	1.4	17	13.4	34	17	7	10	14	6.2	57
MAINE																																
CARIBOU	190	990.5		16.1	3.9	9.8	-0.1	23.9	29	- 2.2	8	0	5			34	- 43	10	9		0	0						5	9	17	7.1	
PORTLAND	14	1011.9	1014.3	16.7	4.4	10.6	-1.1	24.4	14	- 1.7	8	0	1	3.9	69	97	10	23	10	0	0	0	0.2	21	11.6	N	26	4	14	13	6.6	53
MARYLAND																																
BALTIMORE	45	1009.1	1014.7	21.7	9.4	15.4	-2.6	29.4	3	1.1	7	0	0	9.4	72	137	36	68	14	5	0	0	1.1	28	16.5	W	3	5	11	15	6.7	50
MASSACHUSETTS																																
BLUE HILL OBS R	192			18.3	7.2	12.6	-1.2	25.6	15	3.3	7	0	0			102	13	38	11		0	0			17.0	SE	29					56
BOSTON	5	1013.5	1014.5	17.2	9.4	13.4	-1.5	25.0	10	6.7	1	0	0	6.1	68	83	- 2	29	11	1	0	0	0.3	34	17.0	NE	26	4	13	14	6.9	57
NANTUCKET	13	1014.2	1014.5	16.1	7.2	11.7	0.2	21.1	17+	1.7	8+	0	0	8.3	85	86	13	39	12	2	0	0	0.5	28	15.6	NE	26	4	9	18	7.4	47
PITTSFIELD	357			18.3	4.4	11.4	-1.1	24.4	30	- 2.8	8	0	4			112	14	20	15		0	0										
WORCESTER	301	977.7	1014.8	17.8	6.7	12.1	-0.8	23.3	30+	2.2	7	0	0	3.9	63	173	77	53	15	3	0	0	1.5	30	12.1	32	7	3	9	19	7.2	
MICHIGAN																																
ALPENA	210	989.2	1014.6	15.6	2.2	8.8	-1.5	25.6	15	- 4.4	6	0	13	3.3	69	65	- 9	39	13	2	T	T	1.1	11	12.5	SE	28	6	11	14	6.6	55
DETROIT	189			18.3	8.9	13.8	-1.2	29.4	15	0.0	6	0	1	7.2	68	142	53	60	13	2	0		0.4	10	11.2	29	9					
DETROIT M WAYNE CO	193	989.2	1013.4	18.9	8.3	13.4	-0.8	29.4	15	0.0	6	0	1	6.7	66	149	59	73	16	5	0	0	0.5	8	14.8	SW	16	3	13	15	7.1	49
DETROIT WILLOW RUN	217	985.4	1013.8	17.8	6.1	12.1	-2.8	28.3	15	- 2.2	6	0	1	5.6	66	135	47	52	15	6	T	T	0.2	9	13.4	23	16	2	16	13	7.1	
FLINT	235	985.8	1013.5	16.7	6.1	11.6	-1.9	27.8	15	- 2.8	6	0	1	5.6	69	89	3	32	13	1	T	T	0.7	14	12.5	27	16	2	13	16	7.5	
GRAND RAPIDS	239	984.1	1013.3	18.9	5.6	12.2	-1.6	28.3	15	- 3.9	6	0	3	5.6	65	68	- 20	22	10	4	0	0	0.2	18	16.1	SW	16	5	11	15	6.6	52
HOUGHTON LAKE	350	972.2	1014.2	16.7	3.9	10.4	-3.1	28.9	15	- 5.0	6	0	8	3.3	66	67	- 8	25	13	5	0	0	0.7	11	13.0	27	16	5	7	19	7.1	
LANSING	256	982.1	1013.7	17.8	5.6	11.8	-2.2	28.3	15	- 3.3	6	0	4	3.9	61	106	11	50	14	3	0	0	0.7	15	15.2	W	16	5	11	15	6.8	54
MARQUETTE U	206			13.9	4.4	9.2	-0.7	27.2	15	0.0	5+	0	2			73	- 3	27	12		T	T			15.6	SW	8	5	13	13	6.6	54
MUSKEGON	191	990.2	1013.1	17.8	7.2	12.5	-0.7	27.2	15	- 1.7	6	0	1	4.4	60	62	- 13	17	12	4	0	0	0.5	19	10.7	22	16	7	10	14	6.1	
SAULT STE MARIE	220	988.2	1014.8	16.1	3.3	9.6	-0.2	22.8	24	- 3.3	6	0	5	2.8	67	63	- 7	23	10	3	T	T	0.5	10	13.9	SE	7	6	9	16	7.0	55
MINNESOTA																																
DULUTH	435	961.7	1013.6	14.4	3.9	9.1	-0.4	25.0	15	- 3.9	5	0	3	1.7	66	102	19	20	19	1	94	25	1.6	7	17.0	W	16	3	10	18	7.7	43
INTERNATIONAL FALLS	359	970.5	1014.0	15.0	3.3	9.0	-1.4	23.9	13	- 7.2	5	0	7	3.3	70	38	- 28	11	15	2	33	25	0.9	7	11.6	18	7	3	12	16	7.5	
MINNEAPOLIS	254	982.1	1012.7	17.2	6.7	11.9	-2.2	27.2	15+	- 1.7	5	0	1	5.6	70	95	14	24	17	3	0	0	0.6	34	16.1	SW	8	4	9	18	7.2	43
ROCHESTER	395	965.1	1012.8	17.2	5.0	10.9	-2.8	29.4	15	- 3.3	5	0	2	4.4	69	111	18	31	15	3	0	0	0.8	28	17.9	25	8	6	7	18	7.3	
ST CLOUD	315	974.6	1012.4	16.7	5.6	11.1	-2.1	25.0	14+	- 3.3	5	0	2		66	71	- 18	13	13		T	T						6	2	23	7.7	
MISSISSIPPI																																
JACKSON	94	1002.7	1014.6	28.3	15.6	21.8	-1.1	32.2	31+	7.2	6+	2	0	16.7	76	192	80	60	11	11	0	0	1.2	18	15.2	N	17	10	8	13	5.7	58
MERIDIAN	88	1004.4	1015.4	29.4	15.0	22.3	-0.1	32.8	24	6.1	6	8	0	16.1	73	77	- 22	52	9	9	0	0	1.0	21	13.0	31	12	7	8	16	6.1	
MISSOURI																																
COLUMBIA	237	984.8	1012.7	21.7	11.1	16.3	-1.7	32.2	2	3.9	5	1	0	8.9	65	139	19	56	11	9	0	0	0.8	26	15.6	N	28	7	10	14	6.4	64
KANSAS CITY	226	986.1	1012.8	22.2	11.1	16.8	-1.9	32.8	2	4.4	21	1	0	8.9	61	132	20	60	12	9	0	0	0.5	25	13.9	W	15	7	13	11	5.9	60
ST JOSEPH	247			22.8	8.9	15.9	-1.9	33.3	2	0.0	21	2	1	7.8	65	80	- 32		13	6	0		0.5	30	18.3	29	15	10	10	11	5.6	

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Date	Temperature: Lowest	Date	No. of days: Max. 32.2 °C or above	No. of days: Min. 0 °C or lower	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	No. of days: .25 mm or more	No. of days: With thunderstorms	Snow, Sleet: Total	Snow, Sleet: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Fastest mile (1.6 kilometers): Speed	Fastest mile: Direction	Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	M.	Mb.	Mb.	C.	C.	C.	C.	C.		C.				C.	%	Mm.	Mm.	Mm.			Mm.	Mm.	M.p.s.		M.p.s.							%
MISSOURI																																
ST LOUIS	163	992.9	1013.3	22.2	11.1	16.6	-1.3	32.8	15	2.8	6	2	0	10.0	68	172	77	63	13	7	0	0	1.1	24	15.2	NW	4	5	12	14	6.6	55
SPRINGFIELD	386	968.5	1013.6	22.2	10.0	16.0	-2.1	29.4	2	3.3	21+	0	0	10.0	71	116	- 18	40	15	13	0	0	1.1	19	15.2	N	8	8	6	17	6.6	49
MONTANA																																
BILLINGS	1087	889.6	1013.1	17.8	6.7	12.2	-1.6	25.0	29+	- 1.1	11	0	1	- 0.6	44	45	- 2	19	14	7	T	0	1.6	34	15.2	NW	7	4	14	13	6.6	66
GLASGOW	696	931.9		18.9	3.3	11.2	-1.7	27.8	29	- 3.3	19+	0	7			6	- 32	2	8		23	T						6	11	14	6.4	
GREAT FALLS	1116	887.2	1014.5	16.1	3.3	9.7	-1.9	23.3	21	- 5.0	10	0	7	0.0	55	67	14	34	15	6	T	0	1.4	27	17.0	NW	7	6	9	16	6.5	73
HAVRE	787	921.8	1013.8	18.3	3.3	10.6	-2.0	25.6	29	- 3.3	11+	0	8	0.0	53	30	- 9	9	11	3	T	0	0.8	29	15.6	W	30+	6	11	14	6.5	76
HELENA	1167	879.8	1014.9	16.7	2.8	9.8	-1.8	23.3	28+	- 3.9	11	0	6	0.6	56	41	2	15	13	6	T	0	2.2	28	14.8	W	5	6	9	16	6.5	60
KALISPELL	904	910.3	1015.1	17.2	2.8	9.9	-1.3	22.2	20+	- 4.4	3	0	8	2.2	64	66	23	32	12	0	36	25	0.7	13	12.5	1	9	8	10	13	6.4	
MILES CITY	801	920.4	1013.4	18.9	5.0	11.8	-2.3	28.3	29	- 3.3	11	0	6	2.2	55	42	- 2		17	6	T		1.1	33								
MISSOULA	972	903.5	1015.3	18.3	4.4	11.4	0.0	23.9	19	- 2.2	8	0	5	1.1	55	27	- 21	11	15	1	T	0	0.5	33	12.5	NW	4	5	10	16	7.1	63
NEBRASKA																																
GRAND ISLAND	561	947.2	1012.9	21.7	7.8	14.6	-1.3	33.3	2	1.1	5	2	0	5.6	60	57	- 41	15	9	7	0	0	0.8	31	16.5	16	7+	6	12	13	6.5	
LINCOLN U	351			20.6	8.9	14.9	-2.1	33.3	1	2.8	21+	2	0			53	- 35	21	11		0	0			20.1	S	6	5	17	9	5.8	66
NORFOLK	471			19.4	6.1	12.9	-2.8	32.8	1	- 1.1	21	1	2			35	- 58	13	10		T	T						6	12	13	6.0	
NORTH PLATTE	846	915.3	1012.9	19.4	4.4	11.8	-2.9	31.1	1	- 2.8	20	0	4	2.8	58	44	- 31	21	10	4	0	0	0.7	35	16.1	NW	18	6	10	15	6.8	58
OMAHA	298	977.7	1012.8	21.1	7.8	14.4	-2.8	32.2	2	0.6	5	1	0	7.8	66	110	22	29	12	7	T	T	0.8	33	29.1	NW	15	9	10	12	5.9	67
SCOTTSBLUFF	1206	877.8	1013.1	18.3	4.4	11.3	-2.4	28.9	29	- 1.7	11	0	2	3.3	64	68	0	21	15	6	T	T	0.6	1	15.6	33	17	5	10	16	6.7	
VALENTINE	789			18.3	3.9	11.2	-2.8	30.6	1	- 2.2	11	0	5			76	8	33	10		T	T			16.5	NW	8	6	12	13	6.5	66
NEVADA																																
ELKO	1539	842.5	1012.0	21.1	3.3	12.2	1.1	32.8	28	- 6.7	7	1	5	- 2.2	40	29	5	12	9	6	10	T	0.9	26	15.6	33	5	8	11	12	6.1	
ELY	1906	807.0	1011.5	18.9	0.0	9.6	-0.6	28.9	28	- 7.2	7	0	16	- 3.3	47	25	4	11	7	7	18	25	1.1	23	14.8	SE	13	2	17	12	6.4	73
LAS VEGAS	659	933.3	1008.5	31.1	15.0	23.1	-0.2	41.1	28	6.7	15	14	0	- 3.3	19	T	- 2	T	0	0	0	0	2.6	23	18.8	SW	21+	17	10	4	3.5	91
RENO	1342	864.2	1013.1	22.2	1.1	11.6	-0.6	32.2	28	- 5.0	6	1	15	- 2.8	38	8	- 6	8	2	1	T	T	1.5	28	17.4	W	5	12	11	8	4.7	85
WINNEMUCCA	1310	866.2	1012.9	22.2	2.2	12.1	0.0	32.2	28	- 6.7	7	1	9	- 2.8	38	5	- 19	3	4	3	0	0	1.3	28	13.9	NE	11+	6	13	12	6.3	67
NEW HAMPSHIRE																																
CONCORD	104	1001.7	1014.3	18.3	3.3	10.6	-2.4	25.0	15+	- 5.6	8	0	7	4.4	67	132	52	38	14	2	0	0	0.4	33	13.0	W	7	2	16	13	7.0	62
MT WASHINGTON OBS	1909			3.9	- 2.8	0.3	-1.3	12.2	15	-13.9	7	0	24			159	11	53	15	2	168	76			33.1Y	SE	29	3	8	20	7.9	38
NEW JERSEY																																
ATLANTIC CITY	20	1012.5	1014.9	21.1	8.9	14.9	-1.3	30.0	3	1.7	1	0	0	7.8	66	141	52	90	12	6	0	0	0.7	24	11.2	8	28	4	13	14	7.0	41
ATLANTIC CITY U	3			19.4	12.2	15.7	0.4	28.3	17	6.1	1	0	0			128	48	71	14						15.6	E	28					
NEWARK	2	1013.5	1014.5	20.0	10.6	15.3	-1.3	26.1	17	4.4	1	0	0	6.7	61	160	67	104	14	3	0	0	0.4	29	10.7	22	3	5	10	16	6.8	
TRENTON U	17			20.0	10.6	15.2	-1.7	27.8	3	5.0	1	0	0			148	56	79	17		0	0			14.3	E	26	2	11	18	7.2	55
NEW MEXICO																																
ALBUQUERQUE	1619	836.1	1009.8	25.6	8.9	17.1	-1.3	33.3	30	4.4	7	1	0	- 2.2	31	25	6	15	6	5	0	0	0.9	27	21.0	S	30	14	11	6	4.2	84
CLAYTON	1515			21.7	6.7	14.2	-1.3	33.3	30	- 0.6	7	1	1			19	- 51	6	6		0	0						9	5	17	6.1	
RATON	1944			21.1	4.4	12.6	-0.4	28.3	30	- 0.6	1	0	4			38	- 20	11	10		20	T						6	13	12	6.3	
ROSWELL	1102	887.9		29.4	9.4	19.3	-0.7	38.3	30	2.2	8	10	0	4.4	43	14	- 18	13	5	2	0	0	0.4	21	13.0	N	17	12	10	9	4.7	77
SILVER CITY	1638			26.1	8.9	17.6	-0.6	32.8	29	3.3	13	3	0			0	- 7	0	0		0	0						19	9	3	2.7	
NEW YORK																																
ALBANY	84	1004.1	1014.8	20.0	5.6	12.7	-1.7	26.1	30	- 3.3	8	0	3	6.1	67	122	34	55	16	0	0	0	1.3	27	12.5	NE	26	2	9	20	7.7	54
BINGHAMTON	485	956.0	1015.1	15.0	6.1	10.7	-2.1	21.7	30	0.0	6	0	1	6.1	78	164	75	33	19	3	0	0	0.4	28	13.0	E	29	3	5	23	8.2	38
BUFFALO	215	988.8	1014.4	16.7	7.2	11.9	-0.8	25.6	8	0.6	7+	0	0	6.7	75	84	9	22	14	3	0	0	1.2	20	14.3	SW	9	4	5	22	7.9	44
J.F. KENNEDY	4	1013.9	1014.7	17.8	9.4	13.8	-1.9	25.6	17	5.6	8	0	0	7.8	71	136	42	73	18	2	0	0	0.3	14	14.3	11	26	3	13	15	6.9	
NEW YORK U	40	1011.2	1014.4	20.0	10.6	15.3	-1.6	26.7	17	5.6	1	0	0	6.7	62	179	86	124	13	3	0	0	0.5	35	12.5	NE	28					53
NEW YORK LA GUARDIA	3	1012.5	1014.5	19.4	11.1	15.2	-1.5	26.7	17	6.7	1	0	0	7.2	62	119	28	77	13	3	0	0	0.7	36	18.8	SE	29	4	10	17	6.9	
ROCHESTER	167	994.6	1015.0	16.7	6.7	11.8	-1.9	25.0	8	- 2.2	6	0	2	6.1	71	72	2	18	14	3	0	0	0.7	24	17.0	SW	9	5	5	21	7.8	46
SYRACUSE	125	1000.0	1014.8	17.2	7.2	12.0	-2.3	22.8	15+	- 0.6	6	0	2	5.6	68	88	5	16	16	3	0	0	0.5	26	10.7	W	17	5	6	20	7.3	49
NORTH CAROLINA																																
ASHEVILLE	652	939.7	1015.4	23.3	8.9	16.1	-1.1	30.6	24	1.1	7	0	0	10.6	74	74	- 19	24	12	8	0	0	0.4	31	11.2	35	5	6	15	10	6.0	65
CAPE HATTERAS R	2	1015.6	1015.8	22.8	13.9	18.2	-1.8	27.2	17	3.9	7	0	0	13.9	75	92	- 9	41	10	6	0	0	0.5	24	15.2	E	27	7	12	12	6.1	73
CHARLOTTE	224	987.8	1015.1	24.4	12.2	18.2	-2.3	31.1	24	5.6	7	0	0	11.7	70	62	- 17	21	11	5	0	0	0.8	24	13.0	SW	18	8	11	12	5.8	73
GREENSBORO	273	983.7	1015.2	24.4	12.2	18.3	-1.1	31.1	24	5.0	7	0	0	12.8	73	100	16	41	12	6	0	0	0.8	22	12.1	NW	1	7	9	15	6.3	50
RALEIGH	132	999.3	1015.0	24.4	11.1	17.7	-2.1	31.7	24	3.9	7	0	0	12.2	75	97	8	37	13	6	0	0	0.8	25	13.0	30	18	6	11	14	6.1	50
WILMINGTON	9	1014.6	1015.8	26.7	15.0	20.9	-0.5	31.7	17+	7.8	8	0	0	13.9	68	58	- 31	37	11	1	0	0	1.0	22	11.2	N	5	9	13	9	5.5	79

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No. of days: Max 32.2 °C or above	Temperature: No. of days: Min 0 C or lower	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No. of days: .25 mm or more	Precipitation: No. of days: With thunderstorms	Snow, Sleet: Total	Snow, Sleet: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile (1.6 kilometers): Speed	Wind: Fastest mile: Direction	Wind: Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	No. of days: Partly cloudy, 4-7	No. of days: Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	M.	Mb.	Mb.	°C.	C.	°C.	C.	C.		C.				C.	%	Mm.	Mm.	Mm.			Mm.	Mm.	M.p.s.		M.p.s.							%
NORTH DAKOTA																																
BISMARCK	502	953.9	1013.9	16.7	3.3	9.9	-3.4	25.6	29	- 2.2	20+	0	8	2.2	62	64	14	23	12	3	58	51	1.2	34	17.9	NW	17+	6	11	14	6.5	72
FARGO	273	980.0	1012.9	18.3	5.0	11.6	-1.4	30.0	1	- 1.1	5	0	2	5.6	70	53	1	17	15	2	10	T	1.0	1	17.9	SE	6	2	16	13	7.2	53
WILLISTON	579	944.8	1013.3	18.9	3.3	11.1	-1.5	28.3	29	- 5.6	4	0	6	0.6	53	27	- 10	18	9	3	T	T	1.0	35	18.8	N	17	8	14	9	5.5	71
OHIO																																
AKRON	368	969.9	1014.2	19.4	8.9	13.9	-1.4	27.2	15	- 0.6	6	0	1	7.8	70	166	68	30	22	9	0	0	0.4	17	11.2	29	20	4	2	25	8.2	
CINCINNATI OBS	232			21.7	11.1	16.3	-1.6	28.3	14+	1.7	6	0	0			260	163	94	20		0	0			8.5	NW	24					41
CLEVELAND	237	985.1	1014.4	17.2	7.8	12.4	-2.0	27.2	15	- 3.3	6	0	4	7.2	72	104	14	31	19	5	T	0	0.4	18	14.3	SE	27	1	10	20	7.9	40
COLUMBUS	247	984.4	1014.3	20.0	9.4	14.7	-1.7	27.8	15	- 1.7	6	0	1	10.0	76	231	130	69	20	10	0	0	0.7	20	18.3	W	19	3	7	21	7.7	35
DAYTON	305	977.7	1013.8	20.0	9.4	14.6	-1.8	27.2	15+	- 0.6	6	0	1	8.3	70	186	91	74	17	6	0	0	0.8	23	17.0	N	15	3	9	19	7.6	50
MANSFIELD	395			18.3	7.8	13.1	-1.4	27.2	15	- 0.6	6	0	1	7.8	74	159	65	47	21	6	0	0	1.0	20	10.7	24	16	3	5	23	8.0	
TOLEDO	204	988.8	1014.0	18.9	7.8	13.3	-1.3	30.0	15	- 3.3	6	0	4	7.2	70	130	53	41	15	5	0	0	0.1	26	14.8	NE	24	1	13	17	7.5	49
YOUNGSTOWN	359	971.9	1014.7	16.7	6.1	11.3	-3.1	23.3	8+	- 3.3	7	0	4	6.7	77	133	30	28	20	6	0	0	0.1	22	12.1	13	27	3	3	25	8.4	
OKLAHOMA																																
OKLAHOMA CITY	392	966.8	1012.6	23.9	12.8	18.2	-2.1	30.6	29+	7.8	8	0	0	12.8	74	213	82	54	15	14	0	0	0.7	11	17.4	S	6	5	13	13	6.5	56
TULSA	198	988.8	1012.9	24.4	12.8	18.6	-1.3	31.1	14+	7.2	20	0	0	12.2	71	90	- 43	25	13	11	0	0	1.0	19	18.3	SE	7	8	7	16	6.3	56
OREGON																																
ASTORIA	2	1016.9	1017.6	15.6	7.2	11.2	-0.6	22.8	16	2.2	16+	0	0	7.2	77	99	18	44	17	0	0	0	1.7	24	12.5	22	21	3	7	21	7.5	
BURNS U	1265	871.7	1014.3	18.9	2.8	10.9	-0.9	26.7	18	- 3.9	6	0	8	- 0.6	50	29	6	11	10		0	0	1.6	31				6	12	13	6.1	
EUGENE	109	1004.1	1017.4	19.4	6.7	13.1	-0.3	26.7	16	1.1	7	0	0	8.3	77	73	18	24	12	1	0	0	0.9	26	9.4	28	4	6	6	19	6.8	
MEACHAM	1234	875.7	1015.0	13.3	3.3	8.3	-0.6	23.3	18	- 3.9	5	0	6			50	- 12	21	12		58	51			9.8	26	25	6	8	17	6.9	
MEDFORD	396	968.8	1016.4	22.8	6.1	14.4	0.2	30.0	3	- 2.2	6	0	1	5.0	58	27	- 11	10	10	0	T	T	1.5	31	9.4	32	12	10	10	11	5.5	
PENDLETON	452	961.4	1014.8	22.2	8.3	15.4	0.1	31.1	18	0.0	5	0	1	2.8	46	17	- 12	7	7	1	0	0	2.7	26	15.6	26	14+	7	12	12	5.9	
PORTLAND	6	1015.6	1017.0	18.9	8.3	13.5	-0.6	26.1	16	3.3	7+	0	0	7.2	69	92	42	37	15	0	0	0	1.0	30	10.7	SW	20+	7	3	21	7.2	56
SALEM	60	1009.8	1017.2	18.9	6.1	12.5	-1.0	25.6	16	0.0	7	0	1	7.8	74	88	34	23	17	1	0	0	0.7	23	7.6	30	4	6	5	20	6.8	
SEXTON SUMMIT R	1169	883.5	1016.2	14.4	2.8	8.5	-1.5	22.2	16	- 4.4	6	0	8			35	- 21	11	9		10	T			19.7	18	24	12	6	13	5.1	
PACIFIC AREA																																
JOHNSTON	2	1012.9	1013.4	28.9	24.4	26.7	0.4	30.0	31+	22.8	11+	0	0	22.2	77	141	116	114	13	0	0	0	6.5	8	14.3	SE	4	7	12	12	6.3	46
KOROR R	29	1006.1	1009.6	31.7	24.4	28.2	0.8	32.8	31+	22.2	1	14	0	24.4	84	242	-130	96	21	3	0	0	1.5	9	13.0	SE	18	0	3	28	9.3	79
KWAJALEIN	2	1009.1	1009.8	29.4	24.4	26.9	-0.4	30.6	23+	21.7	1	0	0	24.4	86	300	92	110	26	0	0	0	4.3	8	13.4	9	23	0	3	28	9.5	
MAJURO	3	1009.8	1010.2	29.4	24.4	27.1	0.2	30.6	29+	23.3	26+	0	0	23.9	82	237	- 87	45	28	2	0	0	3.1	8	13.4	E	15	3	9	19	8.0	63
MARCUS ISLAND	6			28.3	21.1	24.8	-1.3	30.0	31+	18.3	19	0	0			76	29	25	9		0	0			8.5	SW	12+					66
PAGO PAGO	4	1011.5	1011.7	29.4	23.3	26.3		30.6	14	21.1	31+	0	0	23.3	85	178		40	24	5	0	0	2.3	10	8.9	E	20	2	18	11	6.8	45
PONAPE R	37	1004.1	1009.3	30.6	22.8	26.7	-0.2	32.2	15+	21.1	9	2	0	23.9	87	432	- 84	67	25	3	0	0	1.5	10	7.6	SE	25+	0	3	28	9.1	43
TAGUAC GUAM R	110			31.1	21.1	25.9	-1.0	31.7	27+	18.9	15+	0	0			80	- 26	31	11		0	0			8.9	SE	30+	0	21	10	6.4	68
TRUK MOEN ISLAND	2	1008.8	1009.2	30.6	24.4	27.4	0.3	31.1	30+	22.8	5+	0	0	23.9	82	254	-105	49	29	6	0	0	2.4	7	8.5	NE	31+	0	5	26	9.2	58
WAKE	3	1012.9	1013.1	29.4	23.9	26.7	0.2	31.1	31+	20.6	10+	0	0	21.7	75	93	41	51	7	2	0	0	3.8	9	17.0	SE	1	17	9	5	4.4	82
YAP R	13	1007.5	1009.3	31.1	24.4	27.7	-0.1	32.2	29+	22.2	30	4	0	23.9	81	100	-142	61	13	0	0	0	2.8	9	8.5	NW	2	0	10	21	8.1	77
PENNSYLVANIA																																
ALLENTOWN	118	1000.7	1014.8	19.4	7.8	13.4	-2.3	27.2	3	1.7	8	0	0	7.2	69	171	68	62	17	2	0	0	0.6	29	13.0	10	26+	4	11	16	7.1	
ERIE	223	987.8	1014.5	16.1	7.2	11.4	-2.1	25.0	15	- 1.1	7	0	2	6.1	73	78	- 12	15	15	3	0	0	1.0	20	13.4	16	27	2	13	16	7.3	
HARRISBURG	103	1002.0	1014.7	20.0	8.9	14.4	-2.6	29.4	3	1.1	7	0	0	8.3	70	166	67	66	16	3	0	0	0.4	26	12.1	NW	3	2	10	19	7.7	48
PHILADELPHIA	2	1013.5	1014.6	20.6	10.0	15.4	-1.6	27.8	3	3.3	7	0	0	7.2	62	131	36	49	16	6	0	0	0.6	30	14.3	NW	3	4	12	15	7.0	49
PITTSBURGH	347	970.2	1014.4	17.8	7.2	12.6	-2.8	25.6	3	- 2.8	7	0	2	6.1	68	162	62	34	19	5	0	0	0.8	27	13.9	31	20	4	2	25	8.4	34
READING U	81			20.0	10.0	15.1	-2.3	29.4	3	4.4	8+	0	0			140	44	60	17		0	0			21.9	E	26	5	10	16	7.0	49
SCRANTON	283	981.0	1015.1	18.3	8.3	13.5	-1.8	26.1	3	2.2	7+	0	0	7.8	74	118	18	30	18	2	0	0	0.4	27	17.4	W	3	4	7	20	7.9	45
WILLIAMSPORT	160	995.9	1014.9	18.9	7.8	13.5	-2.3	27.8	3	- 1.1	7	0	1	8.3	77	125	22	37	20	3	0	0	0.5	24	14.3	27	3	1	10	20	8.0	
RHODE ISLAND																																
BLOCK ISLAND	34			15.0	8.3	11.7	-0.5	20.6	17	2.2	8	0	0			71	- 6	31	14		0	0						5	14	12	6.3	
PROVIDENCE	16	1012.2	1014.5	18.9	7.8	13.2	-1.0	23.9	17+	1.1	8	0	0	5.0	62	90	5	40	15	4	0	0	0.4	29	13.9	12	29	4	9	18	7.3	51
SOUTH CAROLINA																																
CHARLESTON	12	1013.9	1015.5	28.3	16.1	22.1	-0.7	33.9	13	9.4	22+	4	0	14.4	67	65	- 27	28	8	3	0	0	0.9	20	13.4Y	E	7	11	10	10	5.3	59
CHARLESTON U	3			26.1	18.9	22.5	-0.4	31.1	27	13.3	6	0	0			141	63	65	6		0	0			14.3	SE	26+					
COLUMBIA	65	1007.5	1015.6	27.8	14.4	20.9	-1.4	32.8	25+	5.6	7	3	0	13.9	70	106	16	64	13	7	0	0	0.7	26	13.0	29	16	12	10	9	5.0	68
GNVLE-SPARTANBURG	292	981.0	1015.3	25.0	11.7	18.6	-2.2	31.7	24	3.9	7	0	0	11.7	68	100	18	33	12	6	0	0	1.0	24	10.7	SW	19	7	12	12	5.8	56

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No. of days: Max 32.2 °C or above	Temperature: No. of days: Min. 0 °C or lower	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No. of days: .25 mm. or more	Precipitation: No. of days: With thunderstorms	Snow, Sleet: Total	Snow, Sleet: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile (1.6 kilometers): Speed	Wind: Fastest mile: Direction	Wind: Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	No. of days: Partly cloudy, 4-7	No. of days: Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	M.	Mb.	Mb.	C.	C.	C.	C.	C.		C.				C.	%	Mm.	Mm.	Mm.			Mm.	Mm.	M.p.s.		M.p.s.							%
SOUTH DAKOTA																																
ABERDEEN	395	965.8	1012.8	17.2	4.4	10.7	-3.3	30.6	1	- 4.4	5	0	6	3.9	66	42	- 17	17	10	1	T	T	1.5	34	15.6	26	8	7	9	15	6.6	
HURON	391	966.1	1012.8	18.3	4.4	11.2	-2.9	30.6	1	- 4.4	5	0	7	3.3	61	26	- 34	14	10	2	8	T	1.1	31	17.9	NW	8	5	14	12	6.6	58
RAPID CITY	964	902.8	1013.6	17.2	3.9	10.4	-2.7	26.1	29	- 3.3	20+	0	6	1.7	58	43	- 25	9	15	1	T	T	2.0	34	23.2	NW	10	5	8	18	6.8	53
SIOUX FALLS	432	961.4	1012.7	18.9	4.4	11.4	-3.2	30.6	1	- 5.0	5	0	5	4.4	65	68	- 18	41	8	3	T	T	1.2	32	17.0	26	8	3	15	13	6.4	
TENNESSEE																																
BRISTOL	459	961.7	1015.5	22.8	10.0	16.3	-2.4	29.4	24	1.7	7+	0	0	11.1	74	97	10	24	15	8	0	0	0.8	27	10.7	30	1	3	11	17	7.0	
CHATTANOOGA	203	990.5	1015.0	25.0	12.2	18.8	-2.4	32.2	25	2.2	6	1	0	12.8	71	100	10	39	10	8	0	0	1.0	21	11.6	N	29	7	12	12	6.4	51
KNOXVILLE	299	979.7	1014.4	24.4	12.8	18.5	-1.3	31.1	25	4.4	6	0	0	12.2	70	76	- 12	21	13	6	0	0	1.4	25	13.4	NE	24	5	8	18	7.0	62
MEMPHIS	79	1004.1	1014.1	26.1	15.6	20.9	-0.3	32.2	25	5.6	6	1	0	12.2	60	132	25	51	13	9	0	0	1.4	22	17.0	NW	25	6	10	15	6.4	65
NASHVILLE	180	992.6	1014.1	25.0	13.3	19.1	-1.3	31.1	25+	1.7	6	0	0	12.2	69	160	65	51	15	10	0	0	2.1	21	13.4	NW	25	4	16	11	6.5	52
OAK RIDGE R	276			24.4	12.2	18.4	-0.7	31.1	24	3.9	6	0	0			102	7	29	13		0	0			17.4Y		29	8	5	18	6.9	
TEXAS																																
ABILENE	537	950.9	1011.2	27.8	16.1	21.9	-0.2	33.9	23	8.3	18	5	0	15.6	70	61	- 49	17	12	11	0	0	2.9	16	20.1	NW	10	5	13	13	6.4	74
AMARILLO	1098	888.6	1010.0	24.4	10.6	17.4	-1.7	33.3	29+	6.1	11	2	0	6.7	59	72	- 13	32	13	14	0	0	1.7	16	22.4	NE	31	8	10	13	6.2	65
AUSTIN	182	990.9	1012.5	28.3	18.3	23.4	-0.5	33.3	25	11.1	1	3	0	17.8	74	222	128	50	10	7	0	0	2.5	16	15.6	N	3	6	11	14	6.5	55
BROWNSVILLE	6	1010.5	1011.1	30.6	22.8	26.8	0.7	32.8	26	11.7	4	6	0	22.2	79	150	90	58	7	6	0	0	5.3	14	29.5	NW	4	3	17	11	6.7	71
CORPUS CHRISTI	12	1010.2	1011.8	28.9	21.1	24.9	-0.3	31.1	26+	14.4	1	0	0	21.7	83	238	162	118	10	9	0	0	4.6	14	20.1	NE	11	0	12	19	7.6	51
DALLAS	147	995.3	1012.4	27.8	17.8	22.8	0.1	33.9	29	10.6	18	3	0	16.1	67	104	- 18	44	11	12	0	0	2.5	16	17.0	N	25	5	11	15	6.8	52
DEL RIO	313	974.6	1010.0	30.6	20.0	25.2	-0.6	36.7	30+	13.3	1	12	0	18.3	70	26	- 43	15	7	8	0	0	4.1	12	11.6	15	9	2	10	19	7.5	
EL PASO	1194	878.4	1007.4	30.6	15.0	22.8	0.6	37.2	29	8.3	14+	10	0	- 1.1	23	T	- 10	T	0	1	0	0	2.1	26	16.1	W	22	23	6	2	2.5	94
FORT WORTH	164	992.6	1012.6	27.8	17.2	22.4	-0.2	32.8	29	9.4	1	3	0	17.2	73	153	36	81	12	13	0	0	1.8	18	10.3	18	31+	5	8	18	7.0	
GALVESTON U	2			26.7	22.2	24.3	-0.1	28.9	25	18.3	4	0	0			122	52	44	7		0	0			15.6	NW	4					59
HOUSTON	15	1011.2	1013.3	29.4	20.0	24.6	0.2	32.8	26+	12.8	1	3	0	18.9	75	336	227	161	11	9	0	0	2.8	15	18.3	17	11	4	14	13	6.3	55
LUBBOCK	992	900.4	1010.1	26.7	10.6	18.6	-1.5	35.6	30	6.7	18+	5	0	8.3	60	51	- 30	22	7	8	0	0	2.1	15	17.9	36	31	7	14	10	5.7	
MIDLAND	869	912.6	1009.3	28.3	14.4	21.6	-1.4	37.2	30	8.9	1	6	0	10.6	58	126	73	121	3	4	0	0	2.2	15	15.6	9	9	14	10	7	4.3	
PORT ARTHUR	5	1013.5	1014.1	28.9	18.3	23.7	-0.1	31.1	30+	12.8	1	0	0	19.4	80	81	- 44	31	12	9	0	0	2.7	14	18.8	SE	11	6	14	11	6.0	69
SAN ANGELO	580	944.5	1009.9	30.6	16.7	23.6	0.1	37.8	30	9.4	18	15	0	16.1	68	50	- 31	28	7	8	0	0	2.5	16	13.0	1	3	8	12	11	6.1	
SAN ANTONIO	240	984.4	1012.0	28.9	18.9	24.1	0.0	32.8	30	10.0	1	4	0	18.3	73	72	- 16	33	10	8	0	0	2.9	13	13.0	E	11	4	10	17	7.0	43
VICTORIA	32	1008.1	1012.4	29.4	20.6	24.9	0.3	33.9	25	16.1	1	5	0	20.0	78	358	253	139	11	9	0	0	3.2	15	27.3Y	ESE	11	4	11	16	7.0	
WACO	153	994.6	1012.5	27.8	17.8	22.8	-0.7	33.3	25	11.1	1	3	0	17.2	74	181	65	102	11	12	0	0	2.9	15	13.4	34	25	5	12	14	6.5	
WICHITA FALLS	303	975.6	1011.9	27.8	13.9	20.9	-1.4	36.1	29	8.3	1	6	0	15.0	73	112	- 5	25	12	14	0	0	1.6	13	16.5	17	24	3	10	18	7.0	
UTAH																																
MILFORD	1533	843.9		22.8	2.8	12.6	-1.1	32.8	29+	- 5.0	7	2	8			12	- 6	7	6		61	25						8	17	6	4.8	
SALT LAKE CITY	1286	869.3	1012.1	21.7	5.6	13.6	-1.4	30.6	29	- 1.1	7	0	1	1.7	50	55	20	23	10	8	T	0	0.8	19	24.1	NW	5	7	9	15	6.3	67
WENDOVER	1291	868.6	1012.4	21.1	8.9	15.0	-1.3	30.6	29	0.0	6	0	1			27	10	11	8		0	0										
VERMONT																																
BURLINGTON	101	1001.7	1014.3	17.2	5.0	10.9	-1.2	24.4	30	- 3.9	7	0	3	4.4	69	62	- 14	15	11	1	0	0	0.4	23	12.1	S	9	4	9	18	7.6	72
VIRGINIA																																
LYNCHBURG	279			23.3	10.0	16.7	-1.8	30.6	3	2.2	6	0	0			91	9	67	9		0	0			14.8	NE	27	6	11	14	6.4	59
NORFOLK	7	1014.2	1015.1	23.3	12.8	18.1	-1.6	32.2	24	5.6	8+	1	0	11.1	67	55	- 30	42	9	2	0	0	0.7	20	23.2	SE	27	6	9	16	6.8	74
RICHMOND	50	1009.1	1015.0	25.0	11.7	18.2	-1.3	32.8	3	2.8	7	2	0	11.1	67	80	- 15	45	12	2	0	0	0.8	24	12.5	NE	27	7	9	15	6.8	65
ROANOKE	350	973.2	1014.8	23.3	10.6	16.9	-1.8	28.9	3	1.1	7	0	0	8.9	62	48	- 48	25	13	7	0	0	1.2	28	15.6	31	1	6	9	16	6.5	
WALLOPS ISLAND	3			20.6	11.7	16.2		28.3	17	5.0	7	0	0			55		35	9		0	0			21.9Y	E	27	8	7	16	6.5	
WASHINGTON																																
OLYMPIA	59	1009.5	1016.8	18.3	6.1	12.2	-0.6	25.0	18+	0.0	7+	0	2	7.2	73	65	14	21	12	2	0	0	1.5	22	13.4	25	4	3	10	18	7.3	
QUILLAYUTE	55	1009.5	1017.1	15.6	6.1	10.8	-0.3	22.8	16	1.7	13	0	0	7.8	83	110	- 2	22	16	0	0	0	0.8	23	8.5	S	20+	2	6	23	8.0	36
SEATTLE TACOMA	122	1000.3	1016.8	18.9	9.4	14.1	1.0	26.7	17	5.0	5+	0	0	6.1	63	42	- 2	22	9	1	0	0	1.4	23	14.3	23	4	3	10	18	7.3	56
SPOKANE	718	930.2	1014.4	19.4	5.0	12.1	-1.3	27.8	19	- 1.1	5+	0	2	1.1	50	29	- 1	18	5	1	T	0	1.7	18	11.6	SW	4	6	12	13	6.0	63
STAMPEDE PASS R	1206	879.1		10.6	2.8	6.5	-0.1	21.1	18	- 3.9	5	0	7			125	17	30	21		320	1270						5	5	21	7.6	
WALLA WALLA U	289			21.7	10.0	15.8	-0.3	29.4	18+	3.3	5	0	0			18	- 20	8	7		T	0			12.1	W	4	6	9	16	6.5	67
YAKIMA	321	976.0	1014.3	21.7	5.6	13.8	-0.9	29.4	18	- 1.1	5	0	2	1.7	44	12	- 2	6	4	1	0	0	1.7	30	10.7	29	4	10	13	8	5.1	
WEST INDIES																																
SAN JUAN P.R.	4	1014.6	1016.8	30.0	23.3	26.6	0.7	33.9	3	21.7	5	4	0	23.3	84	160	- 21	26	19	5	0	0	3.3	8	13.9	NE	6	1	21	9	6.3	68
SWAN ISLAND	9			30.6	25.0	27.7	-0.3	31.7	18	21.1	31	0	0			113	29	39	6		0	0						3	13	15	7.3	

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Date	Temperature: Lowest	Date	No. of days: Max 32.2 °C or above	No. of days: Min. 0 C or lower	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	No. of days: .25 mm. or more	No. of days: With thunderstorms	Snow, Sleet: Total	Snow, Sleet: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Fastest mile (1.6 kilometers): Speed	Fastest mile: Direction	Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
WEST VIRGINIA	M.	Mb.	Mb.	C.	°C.	C.	C.	C.		°C.				C.	%	Mm.	Mm.	Mm.			Mm.	Mm.	M.p.s.		M.p.s.							%
BECKLEY	763	927.2	1014.8	18.9	8.3	13.8	-2.2	26.1	15	-0.6	6	0	2	7.8	70	117	12	47	20	7	0	0	1.7	22	13.9	30	18	2	12	17	7.7	
CHARLESTON	286	980.4	1014.1	22.2	10.6	16.1	-2.1	30.0	3	-1.7	7	0	2	9.4	67	167	73	43	19	6	0	0	1.1	22	13.0	25	29	2	10	19	7.6	
ELKINS	600	944.1	1015.2	19.4	7.2	13.2	-1.9	26.7	15+	-3.9	7	0	4	7.2	73	185	69	47	18	4	0	0	1.5	27	16.5	31	3	2	4	25	8.4	
HUNTINGTON	252	984.4	1014.5	21.7	10.0	15.7	-2.4	27.2	15+	0.0	6	0	1	11.1	78	155	56	44	17	8	0	0	0.9	21	11.6	24	19	3	10	18	7.5	
PARKERSBURG U	187			21.1	10.0	15.6	-2.2	28.9	3	0.6	6	0	0			254	160	63	17		0	0			13.9	W	3					37
WISCONSIN																																
GREEN BAY	208	987.5	1013.2	17.2	6.1	11.4	-1.2	27.2	15	-2.2	5	0	3	5.0	68	79	1	20	15	4	0	0	1.2	11	24.1	SW	8	5	8	18	7.1	51
LA CROSSE	198	988.2	1012.6	19.4	7.8	13.5	-1.6	30.0	15	0.0	5	0	1	6.7	67	81	-14	27	14	4	0	0	0.4	30	16.1	17	15+	5	9	17	7.2	
MADISON	262	981.4	1012.6	18.9	6.1	12.4	-1.0	28.3	15	-1.7	6	0	2	6.1	67	51	-34	19	16	5	0	0	0.4	19	15.2	S	7	5	8	18	7.2	53
MILWAUKEE	205	987.8	1013.3	16.7	6.7	11.8	-0.1	27.2	15+	-0.6	6	0	1	6.1	71	83	3	28	17	4	0	0	0.5	12	16.1	W	16	4	13	14	6.8	56
WYOMING																																
CASPER	1627	835.4	1012.7	16.7	1.1	8.9	-2.8	26.1	29	-8.3	11	0	14	0.0	61	85	34	24	11	9	86	25	0.9	26	19.2	30	24	7	10	14	6.5	
CHEYENNE	1867	810.4	1012.7	16.1	2.8	9.6	-2.1	26.7	29	-1.7	11	0	6	-1.7	52	90	26	39	13	10	56	25	1.8	31	20.6	NW	17	3	17	11	6.6	59
LANDER	1696	826.6	1011.9	16.7	2.8	9.7	-1.9	25.0	29	-4.4	7	0	9	-1.1	51	55	-12	23	7	4	132	102	0.4	24	18.8	W	5	3	15	13	6.7	58
SHERIDAN	1208	877.1	1014.1	16.7	2.8	9.7	-2.3	24.4	29	-5.0	11	0	8	1.1	58	58	-7	23	12	4	15	25	0.8	32	17.9	NW	6	5	11	15	6.8	61

Data from airport unless otherwise specified. U indicates Urban, R indicates Rural, sites.

Precipitation data in column headed "Greatest in 24 hours" are computed on a 24-hour basis without regard to calendar day - data may include precipitation with a measurable amount from the last day of the previous month or the first day of the following month.

Wind directions under resultant direction are in tens of degrees.

Value entered in column "Fastest Mile" is the highest observed 1-minute wind speed when the direction is in tens of degrees. These stations are not equipped with a recording anemometer from which "Fastest Mile" data can be evaluated.

B Number of days maximum 21.1°C. or above for Alaskan Stations.
Y Peak Gust.
\+ And also on an earlier date or dates.
Ø Station pressures apply to elevations shown in the "Elevations - Station Pressure" table of the annual issue of this publication.

Data in this table are obtained by conversion from data in the English Units table.

HEATING DEGREE DAYS

(Base 65°F.)

MAY 1968

State and station	Current season: This month	Current season: Period July through this month	Normals July through this month
ALABAMA			
BIRMINGHAM	30	3175	2551
HUNTSVILLE	35	3693	3070
MOBILE	0	1780	1560
MONTGOMERY	8	2471	2291
ALASKA			
ANCHORAGE	510	9696	10366
ANNETTE	358	6275	6748
BARROW	1333	19614	19217
BARTER ISLAND	1284	19311	18938
BETHEL	721	12406	12794
COLD BAY	682	9014	9289
FAIRBANKS	533	13502	14057
JUNEAU	508	8668	8694
KING SALMON	648	11082	10935
KOTZEBUE	1097	15568	15469
MC GRATH	638	13589	14025
NOME	1106	14135	13598
ST. PAUL ISLAND	954	10180	10473
SHEMYA	821	8945	8991
YAKUTAT	700	9407	8657
ARIZONA			
FLAGSTAFF	453	6841	6972
PHOENIX	0	1331	1765
TUCSON	0	1450	1800
WINSLOW	135	5560	4782
YUMA	0	842	1217
ARKANSAS			
FORT SMITH	22	3468	3292
LITTLE ROCK	30	3593	3219
TEXARKANA	5	2655	2533
CALIFORNIA			
BAKERSFIELD	24	1732	2122
BISHOP	113	3891	4191
BLUE CANYON	407	4882	5312
EUREKA U	384	4100	4358
FRESNO	37	2285	2492
LONG BEACH	25	993	1693
LOS ANGELES	61	1049	1745
LOS ANGELES U	50	815	1331
MT SHASTA R	377	5387	5563
OAKLAND	183	2358	2780
RED BLUFF	45	2223	2515
SACRAMENTO	80	2444	2767
SANDBERG R	340	4315	4152
SAN DIEGO	47	958	1403
SAN FRANCISCO	264	2707	2889
SAN FRANCISCO U	280	2524	2821
SANTA MARIA	212	2336	2802
STOCKTON	84	2584	2676
COLORADO			
ALAMOSA	499	9047	8361
COLORADO SPRINGS	411	6455	6339
DENVER	343	6152	6217
GRAND JUNCTION	218	6259	5620
PUEBLO	182	5852	5447
CONNECTICUT			
BRIDGEPORT	214	5603	5590
HARTFORD	205	6155	6148
NEW HAVEN	247	5872	5852
DELAWARE			
WILMINGTON	171	5244	4924
DIST.OF COLUMBIA			
WASH NATL AP	87	4332	4224
FLORIDA			
APALACHICOLA U	0	1539	1308
DAYTONA BEACH	0	942	879
FORT MYERS	0	338	442
JACKSONVILLE	0	1304	1239
KEY WEST	0	33	108
LAKELAND U	0	706	661
MIAMI	0	239	214
ORLANDO	0	742	766
PENSACOLA	0	1850	1463
TALLAHASSEE	[illegible]	1704	1485
TAMPA	0	820	683
WEST PALM BEACH	0	344	253
GEORGIA			
ATHENS	40	3287	2929
ATLANTA	31	3400	2983
AUGUSTA	19	2790	2397
COLUMBUS	6	2623	2383
MACON	18	2854	2136
ROME	50	3690	3326
SAVANNAH	3	2150	1819
IDAHO			
BOISE	235	5508	5728
LEWISTON	200	4858	5452
POCATELLO	405	7117	6892
ILLINOIS			
CAIRO U	49	4134	3821
CHICAGO O HARE	257	6323	6567
CHICAGO MIDWAY	218	5996	6107
MOLINE	248	6544	6369
PEORIA	229	6259	5992
ROCKFORD	275	6822	6770
SPRINGFIELD	203	5955	5411
INDIANA			
EVANSVILLE	111	4963	4435
FORT WAYNE	298	6784	6166
INDIANAPOLIS	205	5709	5660
SOUTH BEND	311	6636	6379
IOWA			
BURLINGTON	216	6167	6081
DES MOINES	260	6400	6769
DUBUQUE	299	7108	7298
SIOUX CITY	252	6626	6912
WATERLOO	338	7435	7266
KANSAS			
CONCORDIA	233	5557	5461
DODGE CITY	215	4929	4977
GOODLAND	316	5804	6099
TOPEKA	202	5387	5170
WICHITA	153	4787	4614
KENTUCKY			
COVINGTON	151	5285	5241
LEXINGTON	124	5057	4683
LOUISVILLE	98	4786	4651
LOUISIANA			
ALEXANDRIA	3	2644	1921
BATON ROUGE	0	1975	1560
LAKE CHARLES	0	1741	1459
NEW ORLEANS	2	1780	1385
SHREVEPORT	0	2406	2184
MAINE			
CARIBOU	468	9263	9584
PORTLAND	424	7522	7400
MARYLAND			
BALTIMORE	173	5034	4654
MASSACHUSETTS			
BLUE HILL OBS R	316	6569	6299
BOSTON	270	5980	5598
NANTUCKET	364	5962	5762
PITTSFIELD	378	7531	7473
WORCESTER	343	7055	6891
MICHIGAN			
ALPENA	526	8358	8350
DETROIT	259	6104	6190
DETROIT M WAYNE CO	275	6654	6455
DETROIT WILLOW RUN	351	6886	6213
FLINT	375	7147	6810
GRAND RAPIDS	342	6992	6927
HOUGHTON LAKE	438	8280	8204
LANSING	366	7230	6840
MARQUETTE U	501	8267	8216
MUSKEGON	325	6644	6618
SAULT STE MARIE	484	9233	8847
MINNESOTA			
DULUTH	507	9432	9802
INTERNATIONAL FALLS	511	10264	10432
MINNEAPOLIS	358	7867	8301
ROCHESTER	411	8091	8202
ST CLOUD	402	8521	8774
MISSISSIPPI			
JACKSON	12	2826	2203
MERIDIAN	7	2681	2289
MISSOURI			
COLUMBIA	149	5074	5034
KANSAS CITY	131	4794	4711
ST JOSEPH	174	5268	5469
ST LOUIS	137	5121	4885
SPRINGFIELD	154	4735	4555
MONTANA			
BILLINGS	334	6443	6947
GLASGOW	397	8195	8846
GREAT FALLS	472	6976	7564
HAVRE	421	7794	8538
HELENA	472	7616	7934
KALISPELL	468	7431	7984
MILES CITY	361	7545	7624
MISSOULA	379	7137	7906
NEBRASKA			
GRAND ISLAND	227	6131	6485
LINCOLN U	211	5777	5834
NORFOLK	308	6847	6931
NORTH PLATTE	363	6998	6627
OMAHA	228	6100	6188
SCOTTSBLUFF	382	6830	6598
VALENTINE	393	7306	7341
NEVADA			
ELKO	334	6092	7241
ELY	483	7317	7508
LAS VEGAS	[illegible]	2230	2709
RENO	369	5659	6143
WINNEMUCCA	346	5967	6608
NEW HAMPSHIRE			
CONCORD	424	7669	7308
MT WASHINGTON OBS	994	13377	13214
NEW JERSEY			
ATLANTIC CITY	196	5804	4797
ATLANTIC CITY U	156	4715	4717
NEWARK	167	5172	5058
TRENTON U	181	5081	4968
NEW MEXICO			
ALBUQUERQUE	107	4295	4348
CLAYTON	238	5288	5137
RATON	317	6432	6165
ROSWELL	52	3917	3793
SILVER CITY	91	3948	3705
NEW YORK			
ALBANY	304	7011	6830
BINGHAMTON	416	7516	7187
BUFFALO	352	6837	6984
J.F. KENNEDY	245	5675	5207
NEW YORK U	170	5170	4862
NEW YORK LA GUARDIA	176	5205	4805
ROCHESTER	357	6867	6700
SYRACUSE	345	6956	6711
NORTH CAROLINA			
ASHEVILLE	150	4799	4457
CAPE HATTERAS R	70	3028	2612
CHARLOTTE	64	3563	3191
GREENSBORO	69	3761	3805
RALEIGH	87	3717	3393
WILMINGTON	20	2734	2347
NORTH DAKOTA			
BISMARCK	462	9026	8734
FARGO	375	8854	9127
WILLISTON	397	8636	9102
OHIO			
AKRON	246	6225	5998
CINCINNATI OBS	139	5275	4797
CLEVELAND	328	6397	6137
COLUMBUS	205	6017	5633
DAYTON	218	5879	5592
MANSFIELD	292	6435	6343
TOLEDO	284	6706	6434
YOUNGSTOWN	384	7090	6357
OKLAHOMA			
OKLAHOMA CITY	71	3847	3725
TULSA	67	3925	3860
OREGON			
ASTORIA	387	4630	4955
BURNS U	405	6507	6780
EUGENE	287	4030	4591
MEACHAM	556	7060	7535
MEDFORD	218	4417	4930
PENDLETON	174	4536	5064
PORTLAND	261	4201	4530
SALEM	318	4292	4610
SEXTON SUMMIT R	540	5879	5975
PENNSYLVANIA			
ALLENTOWN	266	6299	5786
ERIE	377	6694	6391
HARRISBURG	216	5639	5239
PHILADELPHIA	170	5015	5089
PITTSBURGH	313	6324	5948
PITTSBURGH U	245	5695	5277
READING U	184	5195	4945
SCRANTON	261	6396	6221
WILLIAMSPORT	265	6110	5910
RHODE ISLAND			
BLOCK ISLAND	365	6009	5705
PROVIDENCE	281	6131	5903
SOUTH CAROLINA			
CHARLESTON	4	2530	2033
CHARLESTON U	2	2046	1794
COLUMBIA	20	3047	2484
GNVLE-SPARTANBURG	54	3426	3044
SOUTH DAKOTA			
ABERDEEN	423	8331	8383
HURON	392	7627	8136
RAPID CITY	432	7080	7219
SIOUX FALLS	380	7537	7761
TENNESSEE			
BRISTOL	137	4748	4143
CHATTANOOGA	58	3859	3254
KNOXVILLE	66	4032	3494
MEMPHIS	21	3437	3232
NASHVILLE	64	4273	3578
OAK RIDGE R	70	4149	3817
TEXAS			
ABILENE	15	2884	2624
AMARILLO	109	4164	3985
AUSTIN	1	2068	1711
BROWNSVILLE	0	797	600
CORPUS CHRISTI	0	1325	914
DALLAS	2	2450	2363
DEL RIO	0	1830	1504
EL PASO	[illegible]	2791	2700
FORT WORTH	2	2584	2405
GALVESTON U	0	1362	1235
HOUSTON	0	1483	1396
LUBBOCK	73	3923	3578
MIDLAND	14	2869	2591
PORT ARTHUR	0	1671	1447
SAN ANGELO	1	2497	2255
SAN ANTONIO	0	1897	1546
VICTORIA	0	1481	1173
WACO	0	2174	2030
WICHITA FALLS	23	3046	2832
UTAH			
MILFORD	322	6262	6410
SALT LAKE CITY	276	5824	5968
WENDOVER	199	5657	5727
VERMONT			
BURLINGTON	407	8307	8179
VIRGINIA			
LYNCHBURG	117	4671	4166
NORFOLK	88	4133	3521
RICHMOND	86	4187	3865
ROANOKE	111	4472	4150
WALLOPS ISLAND	137	4906	
WASHINGTON			
OLYMPIA	334	4821	5059
QUILLAYUTE	412	5063	5469
SEATTLE TACOMA	232	4041	4986
SPOKANE	343	6248	6520
STAMPEDE PASS R	653	8149	8800
WALLA WALLA U	156	4186	4760
YAKIMA	253	5331	5872
WEST VIRGINIA			
BECKLEY	249	5993	5352
CHARLESTON	141	5079	4467
ELKINS	279	6371	5627
HUNTINGTON	160	5186	4434
PARKERSBURG U	163	5290	4748
WISCONSIN			
GREEN BAY	378	7930	7930
LA CROSSE	275	7050	7520
MADISON	330	7499	7761
MILWAUKEE	363	6975	7500
WYOMING			
CASPER	518	7647	7281
CHEYENNE	487	7085	7176
LANDER	474	8150	7717
SHERIDAN	477	7751	7533

Data from airport unless otherwise specified.
U indicates Urban, R indicates Rural, sites.

STORM SUMMARY

STATE	TORNADOES NUMBER	TORNADOES DAYS	TORNADOES DEATHS	TORNADOES INJURIES	TORNADOES †DAMAGE	HAILSTORMS DEATHS	HAILSTORMS INJURIES	HAILSTORMS †DAMAGE PROPERTY	HAILSTORMS †DAMAGE CROPS	WINDSTORMS DEATHS	WINDSTORMS INJURIES	WINDSTORMS †DAMAGE PROPERTY	WINDSTORMS †DAMAGE CROPS	LIGHTNING DEATHS	LIGHTNING INJURIES	LIGHTNING †DAMAGE PROPERTY	LIGHTNING †DAMAGE CROPS	‡ HEAVY SNOWSTORMS AND BLIZZARDS DEATHS	‡ HEAVY SNOWSTORMS AND BLIZZARDS INJURIES	‡ HEAVY SNOWSTORMS AND BLIZZARDS †DAMAGE PROPERTY	‡ HEAVY SNOWSTORMS AND BLIZZARDS †DAMAGE CROPS	# ICE STORMS DEATHS	# ICE STORMS INJURIES	# ICE STORMS †DAMAGE PROPERTY	# ICE STORMS †DAMAGE CROPS	ø ALL OTHER DEATHS	ø ALL OTHER INJURIES	ø ALL OTHER †DAMAGE PROPERTY	ø ALL OTHER †DAMAGE CROPS
Alabama	3	3	0	0	5	0	0	3	3	0	0	5	0													4	0	5	3
Alaska N																													
Arizona										0	0	5	0																
Arkansas	6	3	45	416	7					0	0	4	0																
California *																													
Colorado	1	1	0	1	4	0	0	°4	C																				
Connecticut										0	0	4	0													0	0	4	0
Delaware						0	0	0	2	0	1	4	0													0	0	3	0
Florida	5	4	0	0	3	0	0	°5	C	0	0	4	0	1	0	0	0												
Georgia	3	2	0	0	4	0	0	3	4	0	0	5	0													0	0	4	0
Hawaii *																													
Idaho												5																	
Illinois	4	1	8	135	7	0	0	?	?	0	?	6	0	0	1	4	0									1	0	°6	C
Indiana	4	2	1	20	6	0	0	4	4	0	1	4	0	0	1	0	0									0	0	6	5
Iowa	4	1	18	606	8	0	1	6	4	0	0	4	4	0	0	4	0												
Kansas	5	4	0	4	5	0	0	5	6	0	0	5	6	0	1	4	0									0	0	5	5
Kentucky	1	1	0	0	4	0	0	?	?	0	0	?	?	0	3	5	0									0	0	?	?
Louisiana						0	0	4	?	0	1	4	?	0	0	4	0												
Maine										8	0	4	0	0	0	4	0												
Maryland										0	0	4	0													0	0	3	0
Massachusetts						0	0	3	0	0	0	4	0	0	1	3	0												
Michigan						0	0	0	3																	0	0	4	0
Minnesota	6	2	0	1	5	0	0	4	0	0	0	5	0	0	0	0	4									0	0	?	6
Mississippi	3	1	0	7	5	0	0	3	5	0	0	?	0	1	2	4	0									0	0	5	5
Missouri	10	2	0	6	5					0	0	4	0	1	0	0	0												
Montana						0	0	3	4																				
Nebraska	2	2	0	0	0	0	0	0	4																	0	0	4	0
Nevada *																													
New Hampshire										0	0	3	0	0	0	3	0												
New Jersey																												7	
New Mexico	1	1	0	0	0	0	3	°5	C																				
New York											1	4				4												5	5
North Carolina						0	0	4	6	0	0	5	5	0	0	4	0												
North Dakota *																													
Ohio	3	2	0	0	4	0	0	°5	C	0	0	5		0	5	5										4	1	7	6
Oklahoma	26	11	0	1	5	0	0	7	6	0	1	5	5	3	1	5	0									0	0	6	4
Oregon *																													
Pacific Area *																													
Pennsylvania						0	0	0	3	0	0	4	0	0	2	4	0									0	0	5	0
Puerto Rico																										1	0	3	0
Rhode Island																										0	0	4	0
South Carolina	1	1	0	1	3	0	0	0	3	0	1	4	0	0	1	0	0												
South Dakota *																													
Tennessee	7	5	0	0	5	0	0	°6	6	0	0	°5	6	0	0	4	0									0	0	°5	C
Texas	48	15	0	9	6	0	1	7	6	2	11	6	4													5	0	6	5
Utah	1	1	0	0	0					0	0	5	0																
Vermont *																													
U.S. Virgin Is. *																													
Virginia										0	1	5	4	0	0	4	0												
Washington *																													
West Virginia										0	0	3	0	1	0	2	0									0	0	5	?
Wisconsin	2	2	0	0	4	0	0	4	0	0	0	6	5	0	2	0	0												
Wyoming *																													

° Includes crop damage
C Crop damage
N No report received by printing deadline

* No occurrence of storms or unusual weather phenomena.
‡ Includes heavy sleet storm.
# Freezing drizzle and freezing rain, commonly known as glaze.
ø For breakdown of "All Others", and for detailed listing of other storms, see the Environmental Data Service, ESSA, monthly publication <u>STORM DATA</u>.

† Storm damages are placed in categories varying from 1 to 9 as follows:
1 Less than $50
2 $50 to $500
3 $500 to $5,000
4 $5,000 to $50,000
5 $50,000 to $500,000
6 $500,000 to $5,000,000
7 $5,000,000 to $50,000,000
8 $50,000,000 to $500,000,000
9 $500,000,000 to $5,000,000,000

GENERAL SUMMARY OF RIVER AND FLOOD CONDITIONS

MAY 1968

Elmer R. Nelson, Office of Hydrology

The most disastrous floods during May occurred in northern and east-central New Jersey. This flooding was considered the worst since 1936 and in some sections since 1903. The total damages estimated by Small Business Administration were placed at $133 million. Seven children lost their lives while playing in the high water areas. (See the Article "New Jersey Floods" following this summary).

ST. LAWRENCE DRAINAGE

Lake Erie.--Minor flooding occurred on the St. Joseph River at Montpelier, Ohio, on May 28 to June 1. The crest on the 30th was 3 feet above flood stage. Heavy rains in excess of 3 or 4 inches caused extreme flooding of streets, underpasses, and low areas throughout Fort Wayne, Ind., on the morning of the 16th. The Maumee River at Fort Wayne, Ind., rose rapidly to 1.1 feet above flood stage on the 16th.

ATLANTIC SLOPE DRAINAGE

Heavy rains over southwestern Connecticut on the 29th caused minor overflows of small streams and brooks. There were no reports of any damage.

Considerable lowland flooding and small stream flooding occurred in the Catskill region in New York due to 1.5 to 4.5 inches of rain on the 29th. Schoharie Creek at Middleburg, N. Y., was out of its banks for a few hours on the 30th and crested 1.2 feet above flood stage. Rondout Creek at Rosendale, N. Y., rose 1.5 feet above flood stage on the 29th. Some of the lower streets in the village were flooded.

Major flooding occurred in northern and east-central New Jersey on May 29-31. Thousands of residents were left homeless as a record rainfall caused the worst flooding in northern New Jersey since 1903. The Passaic, Ramapo, Elizabeth, and Rahway Rivers rose rapidly out of their banks to record or near record heights. The 7 deaths attributed to the flooding in New Jersey were children who drowned while playing in the high water areas. (See the article "New Jersey Floods" following this summary).

Heavy rains in southeastern Pennsylvania during the afternoon and night of May 28 caused slight overflow of Brandywine Creek at Chadds Ford, Pa. Perkiomen Creek at Graterford, Pa., crested at bankfull stage on the 31st. Some local drainage flooding occurred in the Philadelphia, Pa., metropolitan area. There was one death from drowning in the South Philadelphia area.

Heavy showers and thunderstorms over the eastern half of Pennsylvania on Memorial Day caused flash flooding in some areas. At Quakertown, Pa., in Bucks County, a 3-hour cloudburst caused flooding along Licking Run up to 4 feet deep in some places. More than 100 cars were stranded in what was described as the worst flooding in 50 years. A flash flood near Millerton, Pa., in Tioga County flooded buildings and highways and washed out at least one bridge. In the Hazleton, Pa., area, washouts occurred on several roads. A number of creeks overflowed their banks. There was some minor flash flooding along small streams in the Susquehanna River basin.

EAST GULF OF MEXICO DRAINAGE

Heavy rains (up to 6 inches) from the 9th to the 16th caused up to 7 feet of flooding in the upper Tombigbee Basin in Mississippi between the 12th and 20th. The upper tributaries crested 2 to 3.5 feet above flood stage on the 15th and 18th. The upper Tombigbee River at Amory, Miss., crested 6.8 feet above flood stage on the 17th. At Aberdeen, Miss., the crest was 6 feet above flood stage on the 18th. A survey revealed very little damage.

The Pearl River at Jackson, Miss., was out of its banks from April 30 to May 6 due to 3 to 4 inches of rain on April 30. It crested on the 2d, 4.6 feet above flood stage. Minor flooding occurred at Bogalusa, La., on the 2d-10th. At Pearl River, La., the river was in minor flood on the 13th. Moderate rains beginning on the 8th and continuing for 5 days caused additional flooding at Jackson from the 11th to the 21st and at Bogalusa, La., on the 14-26th. Heavy rains on the 25th resulted in another rise to above flood stage at Jackson on the 27-29th. Flooding was confined to low-level areas in the immediate flood plain and the only damage was to farm and cattle interests.

MISSISSIPPI SYSTEM

Upper Mississippi Basin.--The minor flooding on the Chippewa River at Durand, Wis., on the 18-20th was due to intermittent heavy rains. The rains began on the 13th and continued intermittently for the next 7 days. Flood damage in the Durand area was light and will total less than $15 thousand. The increased flow from the Chippewa River caused the Mississippi River to rise moderately upstream from Alma, Wis., through Red Wing, Minn. There was little or no rise at St. Paul or Hastings, Minn.

Excessively heavy rainfall on the 15th in central Illinois resulted in record flooding on the Sangamon River at Monticello, Ill. The crest of 18.45 feet (flood stage 13 feet) on the 16th equalled the record flood of October 4, 1926. The river was out of its banks from the 16th to the 20th. At Riverton, Ill., the river rose above flood stage on the 20th. Another period of heavy rainfall from the 22d through the 25th in Illinois and Missouri produced rapid rises and some flooding along some of the smaller streams and tributaries. The Sangamon River rose above flood stage at Monticello, Ill., on the 25th for the second time during May and continued in flood to the 27th. The flooding was minor. The flooding moved downstream to Oakford, Ill., by the 28th and continued to June 2 at the downstream points. The crests on the 26th to the 29th ranged from 9 feet above flood stage at Riverton, Ill. to 1 foot above flood stage at Oakford, Ill. The Illinois River at Beardstown, Ill., exceeded flood stage on the 30th and continued in light flood to June 5. Minor flooding occurred on the Big River at Byrnsville, Mo., on the 27th. The Meramec River at Pacific, Mo., exceeded flood stage by over 4 feet on the 28th and was out of its banks from the 26th to the 29th. The Kaskaskia River rose above flood stage at Shelbyville, Ill., on the 21st and at Vandalia, Ill., on the 25th and continued in flood to June 5. The crests on the 27th and 29th were 6.7 and 5.8 feet above flood stage. The Big Muddy River at Murphysboro, Ill., was in flood from April 22 to May 1 and crested 6.7 feet above flood stage on April 26.

Missouri Basin.--The Little Blue River near Lake City, Mo., rose 0.6 foot above flood stage on the 26th and receded within its banks on the same date. It rose above flood stage again on the 31st, cresting 2.5 feet above flood stage on June 1. The Lamine River at Clifton City, Mo., was out of its banks on May 25-27. It crested on the 26th, 5 feet above flood stage. The Blackwater River was in flood at Valley City, and Blue Lick, Mo., between the 23d and 31st. There

were two separate rises at Valley City with the higher crest of 9 feet above flood stage occurring on the 26th. The crest at Blue Lick, Mo., on the 28th was 5.7 feet above flood stage. This flooding was due to moderate to heavy amounts of rainfall on the 22d-26th.

Heavy flooding occurred on the Marmaton River at Fort Scott, Kans., on the 25th and 26th. The crest on the 25th was nearly 6 feet above flood stage. This was the highest stage recorded at this point since September 1961 when it was about 1.5 feet higher. This heavy overflow was due to 4 to 5 inches of rain. Losses were moderate.

Minor flooding occurred on Big Creek at Byrnsville, Mo., on the 27th. The South Grand River at Urick, Mo., rose 1.7 feet above flood stage on the 26th and receded within its banks on the same date. Downstream at Brownington, Mo., the river was out of its banks on the 27-30th. It crested on the 28th, 3.5 feet above flood stage. The Marais des Cygnes at La Cygne, Kans., rose 1.7 feet above flood stage on the 27th and remained out of its banks from the 26th to the 28th. The Osage River at Schell City, Mo., was in flood from the 25th to June 4 and crested on the 30th, 6.4 feet above flood stage. This flooding was due to heavy recurring rains from the 22d to the 25th. Damages were negligible on the Marais des Cygnes and on Big Creek.

Ohio Basin.--Heavy rains on May 23 over the Monongahela Basin in West Virginia and Pennsylvania caused headwater streams and the main stem to rise rapidly to above flood stage. The precipitation ranged from 1.34 to 3.50 inches over the basin. The West Fork rose 2 to 3 feet above flood stage at Weston and Clarksburg, W. Va., on the 24th. It receded within its banks at all points by the 25th. The Cheat River at Parsons, W. Va., rose 0.7 foot above flood stage on the 24th. The main stem of the Monogahela River rose above flood stage from Point Marion, Pa., to McKeesport, Pa., on the 24th and receded within its banks at all points, on the 25th except at Elizabeth, Pa., on the 26th.

Severe flooding occurred on the Hocking River in Ohio between the 24th and 31st. The crests ranged from 6.2 feet above flood stage at Enterprise, Ohio, on the 24th to 7.6 feet above flood stage at Athens, Ohio, on the 25th. The crests of 24.63 feet at Athens was the highest stage recorded at that point since records began in 1916. The river reached a level at least 2 feet higher in 1907 as determined from high water marks. Damages on the Hocking River will total over $1 million.

The Little Kanawha River at Glenville, W. Va., exceeded flood stage by 1.1 feet on the 24th. It receded within its banks on the 25th.

Flash floods occurred on small streams in Jackson County in West Virginia and in Vinton and Meigs Counties in Ohio causing extensive damage. The County Agricultural Agent estimated damages in Jackson County at $1.7 million.

Flash floods developed on all tributaries of the lower Scioto River during the night of the 23d and morning of the 24th. The main stem of the Scioto River began overflowing at and below Circleville, Ohio, on the 24th. There was no flooding in the reach at Columbus, Ohio. Flooding developed at La Rue, Ohio, on the 27th and at Prospect, Ohio, on the 29th. All of the smaller streams receded within their banks by the 30th. The main stem receded within its banks at all points by the end of the month, except at Piketon, Ohio, where it continued in flood until June 2. The flash flooding was due to high intensity rainfall measuring 5 to 6 inches during the 24-hour period ending on the morning of the 24th. The runoff was high as there had been frequent periods of rain for nearly 15 days prior to this storm. The high intensity rain caused normally dry creek beds and small streams to become raging torrents, flowing over highways, railways, and into residential areas. Numerous families had to be evacuated. Many roads were closed and a number of bridges were washed out. Early estimates place damage due to flooding at $8 million to $ 9 million. Damage was extensive to agriculture, commerce, and to the communities involved. Circleville, Ohio, was one of the larger communities affected by the flash flood though many small communities had similar problems.

The East Fork Little Miami River at Perintown, Ohio, rose nearly 6 feet above flood stage on the 24th. Another lower crest occurred on the 27th. The Little Miami River was out of its banks between the 23d and 27th. It crested at Kings Mills, Ohio, on the 24th about 8.5 feet above flood stage and at Milford, Ohio, on the 24th, 6.5 feet above flood stage. Another crest on the 27th was nearly 3 feet above flood stage. The White Water River at Brookville, Ind., rose 3.5 feet above flood stage on the 24th. It receded within its banks on the same date. Minor flooding occurred on the Miami River at Hamilton, Ohio, on the 24th. Many residents of Wilmington and Sabina in Clinton County, Ohio, were forced to evacuate their homes. This flooding was due to heavy rainfall on the 23d and 24th.

The Green River rose above flood stage at Woodbury, Ky., on the 27th and in the reach above on the 28th. It receded within its banks at Munfordville, Ky., on the 29th and at Brownsville, Ky., on the 30th. It rose above flood stage at Calhoun, Ky., on the 30th and continued in flood to June 8. The crests on May 28 - June 3 ranged from 2.5 feet above flood stage in the middle portion to 4.6 feet above flood stage in the headwaters. The total flood damages in the Green Basin were estimated at nearly $1 million.

Extremely heavy rains during the last 8 to 10 days of the month caused major flooding on the East Fork and the lower half of the White and Wabash Rivers in Indiana. More than 5 inches of rain occurred over the East Fork from Shelbyville to Seymour, Ind., and over the White River in the Centerton to Spencer, Ind., area during the 48 - hour period ending at 7 a.m. on the 24th. A smaller area around Greencastle, Ind., reported 7 inches of rain during the same period. The streams rose rapidly to above flood stage on the 24th. Many families were evacuated from their homes along the East Fork in the Columbus and Garden City, Ind., area and along the White River in the Spencer, Ind., area. At Seymour, Ind., the East Fork crested at a stage of 18.9 feet (flood stage 14 feet) for the highest stage since 1961. Downstream near Brownstown, Ind., 50 head of cattle were drowned by the rampaging White Lick Creek. As the crest moved downstream to the Bedford, Ind., area, two men were drowned as their automobile was swept from the road. The crest at Bedford on the 26th was 10.6 feet above flood stage. Several families were evacuated along the White River at Spencer, Ind., as the rising water in the Prospect Park area surrounded their homes. Access to a number of homes was by boat. The crest at Spencer was 23.07 feet (flood stage 14 feet) on the 25th, and ranked within 0.2 foot of the 1950 and 1937 floods. Downstream in the Elnora, Ind., area, sandbagging of the

levees prevented flooding of a considerable area. At Newberry, Ind., the crest of 23.05 feet on the 27th ranked only slightly below those of 1950 and 1937. Much flooding occurred along the Wabash River from Covington, Ind., downstream. Many thousands of acres of planted corn and wheat were inundated and resulted in a great loss to farmers. Many highways were inundated and some were washed out. Damage was reported to bridges on numerous county and state roads. The total loss in the Wabash Basin is estimated at $12 million.

The Tennessee River at Gilbertsville, Ky., rose above flood stage on the 29th and continued in flood to June 12. The crest on June 7 was nearly 5 feet above flood stage.

Flooding developed along the main stem of the Ohio River in the reach from Point Pleasant, W. Va., to Fords Ferry, Ky., on the 26-29th. Flooding was caused by persistently heavy rains amounting to two to three times the normal amounts for the month. It was the wettest May of record for Cincinnati, Ohio, with 10.22 inches, which exceeded the previous record of 9.52 inches in 1905. The heavy rainfall on the 23d, 24th, 26th, and 27th added to the final crests on the Ohio River which crested 2 to 8 feet above flood stage in the reach from Maysville, Ky., to Leavenworth, Ind., on the 30th and 31st. The Ohio River receded within its banks in the reach from Point Pleasant, W. Va., to Anthony Meldahl Dam, Ohio, on the 31st. Flooding continued until June 1 in the reach from Cincinnati to Warsaw-Markland Dam, Ohio. This was the first known occasion of a flood stage in June at Cincinnati. The previous latest season occurrence of flooding at Cincinnati was on May 18, 1933. It crested in the reach from Addison, Ky., to Fords Ferry, Ky., on June 1-6. Crests ranged from 1 foot above flood stage to 15.3 feet above flood stage in the lower portion. Roads and streets were seriously damaged in many places. A 200-foot bridge was swept away in Clermont County, Ohio. Columbia Parkway and other streets in Cincinnati were badly damaged, partly by flash flooding due to a cloudburst in Cincinnati's "East End" on the evening of May 29. Marinas and boats were damaged by the force of high water and large accumulations of driftwood. Preliminary estimates of flood damage along the main stem of the Ohio River by the Corps of Engineers was placed at over $9 million and at over $40 million for the entire basin.

White Basin.--The Kings River at Berryville, Ark., was out of its banks from the 14th to the 17th. It crested on the 16th, 4 feet above flood stage. The Black River was in flood in the beginning of May and receded within its banks at Black Rock, Ark., on May 4. It rose above flood stage again at Black Rock on the 10th and continued in flood until the 28th. It crested on the 14th, 6.3 feet above flood stage. Upstream at Pocahontas, Ark., the river rose above flood stage on the 13th and continued in flood until the 22d. The crest on the 17th was 2.6 feet above flood stage. The Little Red River at Judsonia, Ark., was in flood on the 11-12th and 13-15th. The crests on the 11th and 14th were 3.5 and 4.4 feet above flood stage, respectively. The Cache River at Patterson, Ark., continued in flood from March 13 to June 12. The crests ranged from 1.6 to 2.8 feet above flood stage. The lower White River at Clarendon, Ark., continued in flood from March 26 to June 6. At St. Charles, Ark., the river was out of its banks from April 1 to May 7. It rose above flood stage again on the 14th and continued in flood to June 8. Upstream the river was out of its banks from the 13th to the 27th.

Arkansas Basin.--The Neosho River rose above flood stage at Oswego, Kans., and Commerce, Okla., on the 26th and at Parsons, Kans., on the 27th. It crested on the 27th from slightly over bankfull stage at Parsons, Kans., to 5 feet above flood stage at Oswego, Kans. The river was back within its banks at all points by the 29th. Some lowland fields and county roads were briefly inundated. No other damage was reported.

The Fourche Maline River at Red Oak, Okla., was out of its banks on the 13th and 14th. It crested 2.5 feet above flood stage on the 14th. The Poteau River at Poteau, Okla., and Panama, Okla., rose rapidly to above flood stage on the 13th. The crest of 32.55 feet (flood stage 24 feet) at Poteau was the highest stage since December 1946. At Panama, Okla., the crest of 41.55 feet (flood stage 24 feet) on the 14-15th was the maximum crest of record. It was the highest level that the Poteau River had reached since the high water mark of 44.6 feet recorded in 1935. Heavy rains in the mountainous areas above Wister, Okla., produced about 10 feet of water on their main streets. Lowland flooding was reported on Deer Creek in central Oklahoma on May 24. Brief flash-flooding occurred on Stillwater Creek at Stillwater, Okla., on the 25th. Local flooding of small creeks occurred in north-central Oklahoma at Blackwell. Bois d'Arc Creek, west of Ponca City, was out of its banks most of the 25th. Flood damages resulted to homes, public buildings, furnishings, property, roads, bridges, crops, and cattle and will probably amount to $2 million to $3 million.

Minor flooding occurred on the Mulberry River at Mulberry, Ark., on the 14th. The Petit Jean River in Arkansas was out of its banks on the 13-16th. There were two crests at Booneville, Ark. The first crest occurred on the 13th and was 1.5 feet above flood stage and the second, on the 14th, was 4.2 feet above flood stage. The crest at Danville, Ark., was 5.7 feet above flood stage on the 14th. There were two periods of flooding on the Fourche La Fave River at Houston, Ark. The first occurred on the 12-20th and the second on the 26th. The first crest was nearly 6 feet above flood stage on the 16th and the second rise crested at bankfull stage on the 26th.

Minor flooding occurred on the Arkansas River at Van Buren, Ark., on the 14-16th and at Dardanelle, Ark., on the 14th.

Red Basin.--The Blue River at Blue, Okla., rose out of its banks on the 14th and receded within its banks on the 15th after cresting 4.4 feet above flood stage. It rose out of its banks again on the 16th, cresting 11.1 feet above flood stage on the 17th. It was back within its banks on the 19th. The total damages were estimated at $35 thousand. The Clear Boggy River at Caney, Okla., was out of its banks from May 13 to June 3. It crested on the 17th nearly 5 feet above flood stage. The total damages were estimated at $144 thousand. The Muddy Boggy River rose 2 feet above flood stage at Farris, Okla., on the 17th. It receded within its banks on the 18th. The Kiamichi River at Belzoni, Okla., was in flood on the 13-18th. It crested on the 14th, 8 feet above flood stage. The total flood damages were estimated at $260 thousand. The Glover River at Glover, Okla., rose 4 feet above flood stage on the 13th and receded within its banks on the 14th. The Cossatot River at DeQueen, Ark., rose 6.5 feet above flood stage on the 13th and receded within its banks on the 15th. Record flooding occurred on the Rolling Fork at DeQueen, Ark. The total damages along the Cossatot and Rolling Fork were estimated at $2.2 million. Minor damages occurred along the Little River from Wright

City, Okla., to Horatio, Ark., from the 14th to the 22d. The Sulphur River at Hagansport and Naples, Tex., was in flood in the beginning of May and receded within its banks between the 2d and 6th. It rose above flood stage again between the 10th and 12th and continued in flood until the 29th. The crests ranged from 6.5 feet above flood stage at Hagansport on the 16th to 6 feet above flood stage at Naples on the 21st. Some damage resulted from the heavy rains but none was reported from the stream flooding. Cypress Creek at Jefferson, Tex., was in minor flood from the 16th to the 22d. The Saline River in southwestern Arkansas was out of its banks from the 12th to the 17th. The crests ranged from 7.4 feet above flood stage at Dierks, Ark., on the 13th to 5 feet above flood stage at Silver Ridge, Ark., on the 14th. The total damages were estimated at $421 thousand. This flooding was due to heavy rains during the period from May 8 to 17.

Record flooding occurred on the Caddo River at Glenwood, Ark., on the 13th and 14th. This flooding was due to nearly 14 inches of rain during the 36-hour period ending at 6 p.m. on the 13th. The river rose rapidly (12 feet in a little over one hour's time). It crested on the 13th at a stage of 31.4 feet (flood stage 15 feet). This was nearly 3.5 feet higher than the previous record stage of 27.95 feet recorded in May 1961. The Little Missouri River rose above flood stage three times at Boughton, Ark., during the period from the 11th to the 19th. The highest crest occurred on the 14th and was 3.3 feet above flood stage. Severe flooding occurred on the Saline River at Benton, Ark., on the 13-15th. It crested on the 14th at a stage of 27.8 feet (flood stage 20 feet). This was the highest stage recorded at this point since April 1927 when a stage of 30.5 feet was determined from a high water mark. Major flooding occurred on the Ouachita River from below Remmel Dam to below Camden, Ark., between May 11 and into June. Near record stages were observed at Rockport (near Malvern, Ark.) and at Arkadelphia, Ark. The crest at Rockport on the 14th was 26.05 feet as compared to 30.3 feet, the record stage of May 15, 1923. The crest at Arkadelphia, Ark., on the 14th was 30.1 feet as compared to the record stage of 30.3 feet recorded on March 30, 1945. At Camden, Ark., the river reached a stage of 43.08 feet which was the highest stage since May 5, 1958 when it reached a stage of 43.9 feet. This was the 5th highest stage of record. Persons living north of the river in lower areas were evacuated. The biggest loss was to spring crops and livestock. Several bridges were washed out. At least four counties were declared disaster areas. Estimates of damage are not complete but will run in millions of dollars.

Minor flooding occurred along the lower portion of the main stem of the Red River at Grand Ecore, La., and Alexandria, La., beginning on May 22 and continuing into June. No damages were reported.

Lower Mississippi Basin.--Heavy rains on April 16-20 caused the St. Francis River to rise above flood stage at Fisk, Mo., on April 21 and continue in flood to May 1. The crest on April 24 was 3.6 feet above flood stage. The river began to overflow at St. Francis, Ark., on April 24 and continued in flood to May 5. It crested 2 feet above flood stage on April 27-29. Heavy rains (some over 4 inches) on May 9-16 caused the St. Francis to rise above flood stage at St. Francis, Ark., on May 16 and continued in flood to May 22. It crested 1.2 feet above flood stage on May 17-19. The total damages along the St. Francis River were estimated at approximately $37 thousand.

Minor flooding occurred on the Coldwater River at Sarah, Miss., on the 15th and on the Tallahatchie River at Swan Lake, Miss., on the 20th-23d. The Big Black River rose above flood stage at Pickens, Miss., on the 10th and at Bovina, Miss., on the 11th. It continued in flood until the 27th after cresting on the 16th, 2 to 8 feet above flood stage. Flood damages were light along the Tallahatchie and Coldwater Rivers and moderate along the Big Black in the middle and lower reaches.

WEST GULF OF MEXICO DRAINAGE

The Lake Fork River at Quitman, Tex., rose above flood stage on the 10th and continued in flood to the 21st. It crested on the 19th 2.6 feet above flood stage. The Sabine River rose above flood stage at Mineola, Tex., on the 4th and at other points from Edgewood, Tex., to Logansport, Tex., between the 8th and 20th. Flooding continued into June at all points except at Tatum, Tex., which receded within its banks on the 26th. The crests between the 12th and 28th ranged from 2.5 feet above flood stage at Tatum, Tex., to 9.3 feet above flood stage at Gladewater, Tex.

The Neches River near Alto, Tex., rose above flood stage on the 14th and continued in flood to June 4. It crested on the 17th, 5.8 feet above flood stage. The Trinity River at Moss Bluff, Tex., rose above flood stage on March 14 and continued in flood into June. It rose above flood stage at Liberty, Tex., on May 12 and continued in flood until June 9. In the upper portion between Dallas, Tex., and Long Lake, Tex., the Trinity rose out of its banks between the 10th and 13th. Flooding occurred at Midway, Tex., on the 19-25th. It receded within its banks in the reach between Dallas and Trinidad between the 15th and 23d. The crests ranged generally from 3 to 4.5 feet above flood stage except at Trinidad and Long Lake, Tex., where the crests were over 10 feet above flood stage. The San Jacinto River topped the spillway at Lake Houston, Tex., from April 9 into June reaching 2.5 feet above the spillway on May 13. The Aquilla Creek at Aquilla, Tex., was out of its banks on the 8-11th and on the 17th. The higher crest occurred on the 10th and was 6.6 feet above flood stage. The Navasota River near Easterly, Tex., was out of its banks on the 11-16th and on the 19th-21st. The higher crest occurred on the 12th and was 4.2 feet above flood stage. Minor flooding occurred on Oyster Creek at the Wm. Harris Reservoir on the 13-16th. The only flooding on the Brazos River occurred at the Wm. Harris Reservoir and at East Columbia, Tex., on the 12-16th. The crests ranged from 1 to 3 feet above flood stage, with the higher crest occurring at East Columbia, Tex.

Heavy rainfall (4 to 8 inches) on the 9-12th over the lower Guadalupe, Lavaca, and Navidad River basins in Texas resulted in some flooding on the 11-17th. The Navidad River crested nearly 8 feet above flood stage on the 14th and the Lavaca River at Edna, Tex., crested 4.3 feet above flood stage on the 13th. The Guadalupe River at Victoria, Tex., crested over 8 feet above flood stage at Victoria, Tex., on the 12th. Flooding was limited to grazing land.

Turkey Creek at Crystal City, Tex., was out of its banks on the 12-18th. It crested on the 13th, 8.2 feet above flood stage. This flooding was due to 5 to 7 inches of rain over the lower basin on the 11th. Brief flash flooding occurred on San Miguel Creek on the 8th from heavy rains (2 to 5 inches) on the afternoon of the 7th. Additional flooding occurred at Cross, Tex., on the 12-14th, from 2 to 3 inches of rain on the 11th

and 12th. The Atascosa River at Whitsett, Tex., rose slightly above flood stage on the 10th and 10 feet above flood stage between the 12th and 15th. This flooding was due to heavy rains on the 7th, 11th, and 12th. There were three separate rises on the lower Frio River at and below Tilden, Tex., from the 8th to the 21st. The crests at Tilden, Tex., ranged from 1 foot above flood stage on the 8th to 6.2 feet above flood stage on the 19th. At Calliham, Tex., the crests ranged up to 16 feet above flood stage on the 13th. Above Tilden, the Frio River rose 3.3 feet above flood stage between the 13th and 16th.

Heavy rainfall (5 to 6 inches)during the afternoon of the 7th resulted in flooding along the Nueces River from near Three Rivers, Tex., to near Mathis, Tex., on the 9th. Seven to 10 inches of rain occurred in the south part of Corpus Christi on the morning of the 8th. Amounts up to 11 to 12 inches fell on the coast, northeast of Corpus Christi, in the afternoon. A high intensity rain of 6 inches occurred in 45 minutes at Papalote, Tex. Considerable street flooding occurred in Corpus Christi, Tex., causing extensive damage to automobiles. Stores and homes were damaged by flood waters. Damage was considerable to roads and railroad beds. Minor flooding of homes and vacation cottages occurred along the Nueces below Lake Corpus Christi. Two fatalities occurred by drowning to swimmers in a flooded drainage ditch in Corpus Christi. Considerable flooding occurred in Gulf Drainage streams, including the Aransas and Mission Rivers through the 10th. Two to 3 inches of rain occurred on the extreme upper Nueces and in the Three Rivers area. Very heavy rains (up to 9 inches) occurred again on the coastal plains and on the coast at Corpus Christi, Tex. Five to 7 inches of rain was reported in downtown Corpus Christi, with major street flooding and water up to car tops in one location. Brief flash flooding occurred on the 10th from 1 to 2 1/2 inches of rain on the West Nueces and extreme upper Nueces. Rains of 1 to 3 inches occurred in the lower Atascosa, lower Frio, and in the Three Rivers area. Flooding below Wesley Seale Dam reached Calallen, Tex., on the 11th and became extensive throughout the area below the dam through the 19th. Considerable flooding continued through the 24th. Heavy rains of 5 to 7 inches occurred over the Nueces Basin, immediately above Crystal City and on the lower Turkey Creek on the 11th. Minor flooding moved down the Nueces from Asherton, Tex., on the 13th to near Tilden, Tex., on the 26th. Crests occurred from the 16th to 28th and ranged up to 8.6 feet above flood stage at Asherton. The Nueces receded below flood stage at Asherton on the 20th and at Cotulla, Tex., by the 21st. Flooding continued at Tilden into June. A moderate rise was occurring near Three Rivers at the end of the month. The total flood damages in the Nueces Basin and Gulf Drainage streams (including Corpus Christi) were estimated at nearly $3 million.

FLOOD STAGE DATA

(All dates in May unless otherwise specified)

River and station	Flood stage	Above flood stages -dates From–	Above flood stages -dates To–	Crest * Stage	Crest * Date
ST. LAWRENCE DRAINAGE	Ft.			Ft.	
Lake Erie					
St. Joseph: Montpelier, Ohio	10	28	June 1	13.0	30
Maumee: Ft. Wayne, Ind.	15	16	16	16.1	16
ATLANTIC SLOPE DRAINAGE					
Schoharie Creek: Middleburg, N. Y.	12	30	30	13.2	30
Roundout Creek: Rosendale, N. Y.	12	29	29	13.5	29
Wanaque: Wanaque Raymond Dam, N.J.	5	29	June 1	8.35	30
Ramapo: Mahwah, N. J.	8	29	31	11.8	29
Pompton Lakes, N. J.	1.7	29	31	3.8	29
Pompton: Pompton Plains, N. J.	12	29	June 1	18.6	30
Passaic: Chatham, N. J.	6	29	June 3	7.9	29
Little Falls, N. J.	6	29	June 6	10.7	31
Millstone: Blackwells Mills, N. J.	7	29	30	10.25	30
Raritan: Manville, N. J.	12	29	30	16.6	29
Bound Brook, N. J.	[illegible]	29	30	12.0	30
Assunpink Creek: Trenton, N. J.	5	29	29	6.4	29
Rancocas Creek: Pemberton, N. J.	2.7	30	31	2.9	31
Perkiomen Creek: Graterford, Pa.	11	31	31	11.0	31
EAST GULF OF MEXICO DRAINAGE					
Old Town Creek: Tupelo, Miss.	21	15	15	24.6	15
East Fork Tombigbee: Fulton, Miss.	16	12	18	18.0	15
Tibbee: Tibbee, Miss.	23	18	20	25.0	18
Tombigbee: Amory, Miss.	20	15	19	26.8	17
Aberdeen, Miss.	34	17	20	40.0	18
Pearl: Jackson, Miss.	18	Apr. 30 11 17 27	6 17 21 29	22.6 23.7 22.2 19.0	2 14 19 27
Bogalusa, La.	15	2 14	10 26	15.8 17.5	7 19
Pearl River, La.	12	13	13	#13.4	13
MISSISSIPPI SYSTEM					
Upper Mississippi Basin					
Chippewa: Durand, Wis.	11	18	20	11.8	19
Mackinaw: Green Valley, Ill.	11	17	17	11.1	17
Sangamon: Monticello, Ill.	13	16 25	20 27	18.45 13.3	16 26
Riverton, Ill.	13	20	June 2	21.9	27
Petersburg, Ill.	497	27	June 2	500.0	28
Oakford, Ill.	471	28	June 1	472.0	29
Illinois: Beardstown, Ill.	14	30	June 5	14.9	June 2
Big: Byrnsville, Mo.	16	27	27	16.4	27
Meramec: Pacific, Mo.	11	26	29	15.2	28
Kaskaskia: Shelbyville, Ill.	13	21	June 2	19.7	27
Vandalia, Ill.	18	25	June 5	23.8	29
Big Muddy: Murphysboro, Ill.	16	Apr. 22	1	22.7	Apr. 26
Missouri Basin					
Little Blue: Lake City(nr), Mo.	18	26 31	26 June 1	18.6 20.5	26 June 1
Lamine: Clifton City, Mo.	19	25	27	#24.0	26
Blackwater: Valley City, Mo.	20	23 25	23 27	#23.0 #29.0	23 26
Blue Lick, Mo.	25	25	31	#30.7	28
Marmaton: Fort Scott, Kans.	38	25	26	43.85	25
Big Creek: Byrnsville, Mo.	16	27	27	16.4	27
South Grand: Urick, Mo.	22	26	26	23.7	26
Brownington, Mo.	19	27	30	22.5	28
Marais des Cygnes: LaCygne, Kans.	25	26	28	26.7	27
Osage: Schell City, Mo.	25	25	June 4	31.4	30
Ohio Basin					
West Fork: Weston, W. Va.	17	24	24	19.0	24

River and station	Flood stage	Above flood stages -dates From–	Above flood stages -dates To–	Crest * Stage	Crest * Date
MISSISSIPPI SYSTEM	Ft.			Ft.	
West Fork: Clarksburg, W. Va.	7	24	25	10.0	24
Cheat: Parsons, W. Va.	11	24	24	11.7	24
Monongahela: Lock 8, Pt. Marion L&D, Pa.	26	24	25	29.7	24
Lock 7, Greensboro, Pa.	21	24	25	24.6	24
Maxwell L&D, Pa.	32	24	25	32.5	25
Lock 4, Charleroi, Pa.	26	24	25	33.9	25
Lock 3, Elizabeth, Pa.	20	24	26	25.6	25
Lock 2, Braddock, Pa.	19	24	25	22.5	25
Mekeesport, Pa.	12	24	25	15.8	25
Little Kanawha: Glenville, W.Va.	23	24	25	24.1	24
Hocking: Enterprise, Ohio	12	24	26	18.2	24
Athens, Ohio	17	24	31	#24.6 #22.2	25 29
Tug Fork: Williamson, W. Va.	27	28	28	#27.6	28
Paint Creek: Bourneville, Ohio	10	24	30	18.5 16.3	24 27
Scioto: La Rue, Ohio	11	27	29	12.5	27
Prospect, Ohio	10	29	30	E11.0	29
Circleville, Ohio	14	24	31	20.5 17.3	29 25
Chillicothe, Ohio	16	24 29	25 30	16.6 17.5	24 30
Piketon, Ohio	16	24	June 2	29.6 27.5	25 28
East Fork Little Miami: Perintown, Ohio	17	24 27	24 27	22.9 20.9	24 27
Little Miami: Kings Mills, Ohio	17	(23 (27	25 27	E25.5 21.0	24 27
Milford, Ohio	12	23 27	25 27	18.5 14.9	24 27
Whitewater: Brookville, Ind.	20	24	24	23.5	24
Miami: Hamilton, Ohio	18	24	24	18.3	24
Green: Munfordville, Ky.	28	28	29	32.6	28
Lock 6, Brownsville, Ky.	18	28	30	20.5	29
Lock 4, Woodbury, Ky.	33	27	1/	35.5	28
Lock 2, Calhoun, Ky.	23	30	June 8	26.8	June 3
Vermilion: Danville, Ill.	18	17	18	22.4	17
Embarrass: Ste. Marie, Ill.	18	25	June 1	20.6	26
Lawrenceville, Ill.	T15	25	June 5	18.5	31
Eagle Creek: Zionsville, Ind.	7	24	24	#8.4	24
Eel: Bowling Green, Ind.	17	24	25	20.1	25
Muscatatuck: Austin, Ind.	16	10 24	14 31	21.1 25.6	12 25
East Fork: Columbus, Ind.	10	25	26	15.0	25
Seymour, Ind.	14	24	30	18.9	24
Bedford, Ind.	20	27	June 3	30.6	26
Williams, Ind.	10	27	June 2	18.2	28
Shoals, Ind.	25	28	June 2	29.4	30
White: Anderson, Ind.	10	24	28	12.0	25
Centerton, Ind.	T603	24	28	607.4	24
Spencer, Ind.	14	24	31	23.1	25
Elliston, Ind.	18	24	June 1	28.6	27
Newberry, Ind.	18	25	30	23.05	27
Edwardsport, Ind.	15	25	June 4	24.8	28
Petersburg, Ind.	16	26	June 8	24.9	31
Hazleton, Ind.	16	27	June 10	26.85	June 1
Skillet Fork: Wayne City, Ill.	15	27	27	15.1	27
Little Wabash: Wilcox, Ill.	16	25	June 1	20.1	30
Wabash: Bluffton, Ind.	10	29	30	10.25	29
Covington, Ind.	16	18	21	21.0	18
Montezuma, Ind.	14	17 22	31 28	20.8 21.4	25 20

FLOOD STAGE DATA

(All dates in May unless otherwise specified)

River and station	Flood stage	Above flood stages -dates From–	Above flood stages -dates To–	Crest* Stage	Crest* Date
MISSISSIPPI SYSTEM	Ft.			Ft.	
Wabash: Terre Haute, Ind.	14	19	31	16.8 19.5	20 25
Hutsonville, Ill.	20	24	30	22.4	27
Riverton, Ind.	18	25	31	19.5	29
Vincennes, Ind.	16	25	June 4	20.4	29
Mt. Carmel, Ill.	16	27	June 8	26.6	June 1
New Harmony, Ind.	15	28	June 9	19.4	June 3
Tennessee: Gilbertsville, Ky.	320	29	June 12	324.8	June 7
Ohio: Point Pleasant, W. Va.	40	27	29	41.5	28
Ashland, Ky.	52	28	29	52.8	29
Greenup Dam, Ky.	54	28	30	55.0	29
Portsmouth, Ohio	50	27	31	53.1	29
Maysville, Ky.	50	27	31	E54.2	30
Anthony Meldahl Dam, Ohio	51	27	31	54.3	30
Cincinnati, Ohio	52	27	June 1	56.8	30
Fernbank, Ohio	52	27	June 1	E56.7	30
Warsaw-Markland Dam, Ohio	51	28	June 1	52.8	30
Madison, Ind.	46	27	June 2	48.3	31
McAlpine Dam(U.G.), Louisville, Ky.	23	27	June 3	28.0	31
McAlpine Dam(L.G.), Louisville, Ky.	55	28	June 3	#59.8	31
Dam 43, Evans Landing, Ind.	57	28	June 3	#61.3	31
Dam 44, Leavenworth, Ind.	53	26	June 4	#61.1	31
Dam 45, Addison, Ky.	47	27	June 5	#53.7	June 1
Tell City, Ind.	38	27	June 6	45.0	June 1
Dam 46, Owensboro, Ky.	41	29	June 5	43.7	June 2
Dam 47, Newburgh, Ind.	38	27	June 8	45.5	June 2
Evansville, Ind.	42	31	June 5	43.0	June 3
Dam 48, Cypress, Ind.	38	28	June 9	45.4	June 3
Mt. Vernon, Ind.	35	28	June 10	43.5	June 4
Dam 49, Uniontown, Ky.	37	29	June 10	46.2	June 5
Shawneetown, Ill.	33	28	June 11	46.5	June 5
Dam 50, Fords Ferry, Ky.	34	28	June 12	49.3	June 6
Dam 51, Golconda, Ill.	40	June 1	June 11	44.6	June 6
Dam 52, Brookport, Ill.	37	31	June 12	40.3	June 7
Dam 53, Grand Chain	42	30	June 12	45.6	June 6,7,8
Cairo, Ill.	40	29	June 13	43.9	June 7
White Basin					
Kings: Berryville, Ark.	6	14	17	10.0	16
Black: Pocahontas, Ark.	17	Apr. 22 13	1 22	19.1 19.6	Apr. 26 17
Black Rock, Ark.	14	Apr. 20 10	4 28	20.7 20.3	Apr. 22 14
Little Red: Judsonia, Ark.	30	11 13	12 15	33.5 34.4	11 14
Cache: Patterson, Ark.	7	Mar. 13	June 12	#9.3 9.0 8.6 9.8	Mar. 29 Apr.10,11,12 Apr. 24 17
White: Augusta, Ark.	32	15	20	#32.4	18
Georgetown, Ark.	21	13	20	#23.1	16-19
Des Arc, Ark.	24	14	27	#27.2	17
Clarendon, Ark.	26	Mar. 26	June 6	28.3 30.3	Apr. 3-4 20
St. Charles, Ark.	25	Apr. 1 14	7 June 8	26.3 27.3	Apr.8-10 21-22
Arkansas Basin					
Neosho: Parsons, Kans.	24	27	27	24.35	27
Oswego, Kans.	17	26	28	22.0	27
Commerce, Okla.	15	26	29	19.0	27
Fourche Maline: Red Oak, Okla.	15	13	14	17.5	14
Poteau: Poteau, Okla.	24	13	15	32.55	14

River and station	Flood stage	Above flood stages -dates From–	Above flood stages -dates To–	Crest* Stage	Crest* Date
MISSISSIPPI SYSTEM	Ft.			Ft.	
Poteau: Panama, Okla.	24	13	18	41.55	14-15
Mulberry: Mulberry, Ark.	11	14	14	#11.4	14
Petit Jean: Booneville, Ark.	18	13	14	19.5 22.2	13 14
Danville, Ark.	20	14	16	25.7	14
Fourche La Fave: Houston, Ark.	25	12 26	20 26	#30.75 #25.0	16 26
Arkansas: Van Buren, Ark.	22	14	16	23.0	15
Dardanelle, Ark.	22	14	14	22.4	14
Red Basin					
Blue: Blue, Okla.	21	14 16	15 19	25.4 32.1	15 17
Clear Boggy: Caney, Okla.	19	13	June 3	23.8	17
Muddy Boggy: Farris, Okla.	36	17	18	38.0	17
Kiamichi: Belzoni, Okla.	28	13	18	36.0	14
Glover: Glover, Okla.	16	13	14	20.0	13
Cossatot: DeQueen, Ark.	16	13	15	22.5	13
Little: Wright City, Okla.	32	17	17	32.3	17
Idabel, Okla.	30	14 16	16 20	30.2 32.9	14 17
Horatio, Ark.	27	13	22	32.8	18
Sulphur: Hagansport, Tex.	38	Apr. 22 10	[illegible] 27	44.4 44.5	Apr. 23 16
Naples, Tex.	22	Apr. 28 12	6 29	23.4 28.0	Apr. 30 21
Cypress Creek: Jefferson, Tex.	18	16	22	19.0	18
Saline: Dierks, Ark.	11	12 16	15 17	18.4 12.5	13 17
Silver Ridge, Ark.	16	11 13	11 15	16.0 21.0	11 14
Caddo: Glenwood, Ark.	15	13	14	31.40	13
Little Missouri: Boughton, Ark.	20	11 13 17	12 16 19	22.7 23.3 #22.15	11 14 18
Saline: Benton, Ark.	20	13	15	#27.8	14
Ouachita: Rockport(nr Malvern), Ark.	10	E12	E15	26.05	14
Arkadelphia, Ark.	17	11	19	21.45 30.1	11 14
Camden, Ark.	26	2 12	3 June 2	26.2 43.1	3 17
Monroe, La.	40	28	June 23	44.3	June 5
Red: Grand Ecore, La.	33	22	June 2	35.6	31
Alexandria, La.	32	23	June 3	32.5	26
Lower Mississippi Basin					
St. Francis: Fisk, Mo.	20	Apr. 21	1	23.6	Apr. 24
St. Francis, Ark.	18	Apr. 24 16	5 22	20.0 19.2	Apr.27-29 17-19
Coldwater: Sarah, Miss.	18	15	15	18.2	15
Tallahatchie: Swan Lake, Miss.	26	20	23	26.2	20
Big Black: Pickens, Miss.	16	10	25	17.8	16,21
Bovina, Miss.	28	11	27	36.1	16
WEST GULF OF MEXICO DRAINAGE					
Lake Fork: Quitman, Tex.	16	10	21	18.6	19
Sabine: Edgewood, Tex.	12	8	June 2	14.7	18
Mineola, Tex.	14	4	June 6	18.0	12
Gladewater, Tex.	26	10	June 6	35.3	16
Tatum, Tex.	25	18	26	27.5	20
Carthage, Tex.	25	20	U	U	U
Logansport, La.	25	12	June 16	30.5	28
Neches: Alto(nr), Tex.	16	14	June 4	21.8	17
Trinity: Dallas, Tex.	30	13	15	34.5	14
Rosser, Tex.	26	10	18	29.3	16
Trinidad, Tex.	28	10	23	39.2	11

FLOOD STAGE DATA

(All dates in May unless otherwise specified)

River and station	Flood stage	Above flood stages -dates		Crest *	
		From–	To–	Stage	Date
WEST GULF OF MEXICO DRAINAGE	*Ft.*			*Ft.*	
Trinity: Longlake, Tex.	35	11	29	#45.15	15
Midway, Tex.	40	19	25	#42.25	22
Liberty, Tex.	24	12	June 9	#28.15	27-28
Moss Bluff, Tex.	4	Mar. 14	1/	7.15	Mar.27-28
				8.3	Apr.15-16
				7.9	27-29
San Jacinto: Lake Houston, Tex.	44.5	Apr. 9	1/	45.75	Apr. 13
				47.0	13
Aquilla Creek: Aquilla, Tex.	25	8	11	#31.6	10
		17	17	26.0	17
Navasota: Easterly(nr), Tex.	14	11	16	#18.2	12
		19	21	15.3	20
Oyster Creek: Wm. Harris Res.,Tex.	39	13	16	U	15
Brazos: Wm. Harris Res., Tex.	39	13	16	40.0	15
East Columbia, Tex.	30	12	16	32.85	14
Navidad: Ganado, Tex.	21	12	16	28.8	14
Lavaca: Edna, Tex.	21	12	14	25.3	13
Guadalupe: Victoria, Tex.	21	11	17	29.1	12
Turkey Creek: Crystal City, Tex.	8	12	18	16.2	13
San Miguel Creek: Cross, Tex.	12	8	8	18.5	[illegible]
		12	14	17.4	12

River and station	Flood stage	Above flood stages -dates		Crest *	
		From–	To–	Stage	Date
WEST GULF OF MEXICO DRAINAGE	*Ft.*			*Ft.*	
Atascosa: Whitsett, Tex.	20	10	10	20.1	10
		12	15	30.0	13
Frio: Derby, Tex.	6	13	16	9.3	14
Tilden, Tex.	12	8	8	13.0	8
		12	14	17.3	13
		18	21	18.15	19
Calliham, Tex.	12	8	10	25.4	9
		12	16	28.1	13
		19	21	15.0	20
Nueces: Asherton, Tex.	20	13	20	28.6	16
Cotulla, Tex.	15	19	21	16.45	20
Tilden(11S), Tex.	14	26	1/	17.8	28
Three Rivers(nr), Tex.	25	9	18	37.9	15
Mathis(4SW), Tex.	15	[illegible]	19	29.3	17
		21	22	17.1	22
Calallen, Tex.	7	11	24	9.7	19

* Provisional
\# Highest stage observed
U Unknown
T Tentative
E Estimated
__ Exceeded previous maximun stage of record
1/ Continued at end of month

NEW JERSEY FLOODS

MAY 1968

Elmer R. Nelson, Office of Hydrology

Major flooding occurred in northern and east-central New Jersey on May 29-31. More than 2,000 families were evacuated, as a record rainfall on May 28-30 caused the worst flooding in northern New Jersey since 1936 and in some sections since 1903. Severe flooding resulted in the Passaic Basin and moderate flooding in the Raritan Basin. Preliminary estimates of total flood damage by the Small Business Administration were placed at \$133 million. Seven deaths occurred in New Jersey due to drowning.

Rainfall was especially heavy over the northern third of the state, with much of the precipitation occurring in the storm of May 29. About 7 inches of rain was reported at Chatham, N. J., in 24 hours and nearly 8 inches was measured in some places during the storm period. The rainfall averaged over 3 inches for the 24 hours and more than 4.5 inches during the last 4 days of the month. The daily rainfall for selected stations for the period May 27-31 is shown in Table 2. The location of rainfall stations used in the report is shown in figure 1. The intensity of the rainfall is given for selected stations in Table 3 (Hourly Precipitation for May 28-29).

Northeastern New Jersey was declared a disaster area due to the record and near record flooding that resulted from the excessive rainfall. A comparison of the flood of May 1968 with other major floods in New Jersey is outlined in Table 1 (Comparative Crest Stage Data of Major Floods). A description of the flooding and damages are given for each of main rivers in the text. Typical scenes of the degree of flooding are shown in selected photographs furnished by Star-Ledger, Newark, N. J.

For a study of the meteorological conditions causing the excessive rains, the reader is referred to the publication ,Daily Weather Maps, Weekly Series, issue of May 27-June 2, 1968.

Wanaque River.--The Wanaque River, below the Wanaque Raymond Dam, New Jersey, rose above flood stage on May 29 and continued in flood to June 1. It crested at a stage of 8.35 feet (flood stagé 5 feet) on May 30. This was the highest water at this point since March 31, 1951 when it crested at a stage of 9.12 feet. No widespread damage was reported from the high water. This flooding was due to rainfall averaging about 6 inches.

Pequannock River.--Very high water occurred on the Pequannock River on May 29-31. Heavy damage was reported in Butler, Kinnelon, Bloomingdale, and Riverdale, N. J. At least 70 homes were affected in Riverdale. The United States Engineers' estimate of damage to public and private structures in Butler and Kinnelon was given at \$250 thousand each, Bloomingdale \$200 thousand, and Riverdale \$150 thousand. Rainfall as high as 6.67 inches was reported at Charlotteburg, N. J., during the storm period.

Ramapo River.--The Ramapo River which originates in Monroe and Woodbury Counties in southeastern New York rose to record heights at Mahwah and Pompton Lakes, N. J., on May 29. The crest at Mahwah was 11.8 feet (flood stage 8 feet) and was 0.45 foot higher than the 11.35 feet record stage of August 19, 1955. Urbanization and channel changes contributed to the high stage but it was only the third highest discharge of record. At Pompton Lakes the crest of 3.82 feet (flood stage, 1.7 feet) exceeded the previous record stage of 3.58 feet recorded on Aug. 19, 1955 by 0.24 foot. Although this was the highest flood of record at this point since 1921, it was only the third highest discharge of record. Newspaper stories reported that 40 families were evacuated from Mahwah, 100 families from Oakland, and about 300 families from Pompton Lakes. The United States Engineers' damage estimate (for public and private structures only) list a \$2.5 million loss at Oakland, \$1 million loss at Pompton Lakes, and \$100 thousand loss at Mahwah. This record flooding was due to rainfall in excess of 6 inches on May 29. The runoff was heavy as 4 inches of this rainfall fell in a period of 6 hours on ground already saturated.

Pompton River.--The Pompton River at PomptonPlains, N. J., crested at a stage of 18.62 feet (flood stage 12 feet) on May 30. This was well above the stages in 1955 (15.69 feet) and on June 2, 1952 (16.4 feet). Earlier readings were obtained at another gage further downstream, so are not comparable. The cities of Wayne, Pequannock, and Lincoln Park, N. J., sustained heavy damage from the high waters. At Wayne, 700 homes were evacuated involving 2,000 persons; at Pequannock, N. J., about 800 homes were evacuated or 15% of the city and at Lincoln Park, N. J., 300 persons were evacuated. United States Engineers estimated structural damages at Wayne, N. J., \$5 million; at Lincoln Park, \$2.5 million; and at Pequannock, \$2 million. The rainfall causing this severe flooding was in excess of 6 inches.

Rockaway River.--The Rockaway River below Boonton Reservoir crested at a stage of 8.14 feet on May 29. Flood stage at this point is 4 feet. This was evidently the highest stage since 1903. About a dozen families were evacuated from Lake Hiawatha, N. J., below the reservoir.

The United States Engineers estimated structural damage at Lake Hiawatha at \$0.5 million. In the Parsippany-Troy Hills area on Troy Brook, a tributary of Rockaway River, structural damage was estimated at over \$1 million. The average rainfall over this basin was about 5 inches, ranging from 4 inches in the upper basin to 6 inches or more in the lower basin.

Passaic River.--The Passaic River at Chatham, N. J., reached a stage of 7.9 feet on May 29. This was the highest stage reached at this point since January 9, 1905 when it reached a stage of 8.3 feet. At Little Falls, N. J., the river reached a crest of 10.73 feet (flood stage 6 feet) on May 31. This was the highest stage reached at this point since March 31, 1936 when it reached a stage of 12.50 feet. The heaviest rains evidently occurred on the ridge around Chatham, N. J., (Chatham reported 7.07 inches).

The upper part of the Passaic River flows through the Great Swamp area. In this section of the river about \$2 million structural damages occurred in Chatham, Summit, Millburn, Florham Park, Livingston, East Hanover, Roseland, West Caldwell, Montville, and southern Lincoln Park. Many families were evacuated from along the lower river through the Little Falls and Greater Paterson areas. The United States Engineers estimate of public and private structural damages was \$1.1 million for Little Falls, N. J., \$1 million for Greater Paterson, and \$0.5 million each for East and West Paterson.

Raritan River.--The Raritan River at Manville, N. J., rose 4.6 feet above flood stage on May 29 and receded within its banks on May 30. At Bound Brook, N. J., it crested 4 feet above flood stage on May 30. Floods of this magnitude are not unusual in this basin nor do they do much damage. The flood of March 7, 1967 was 1.4 feet higher at Manville and 0.7 foot higher at

Bound Brook than it was this month. Middle Brook at Bound Brook, N. J., overflowed into the American Cyanamid Company parking lot and inundated 200 to 300 cars in 3 feet of water. The rainfall on May 28-29 averaged about 3.6 inches over this basin. The United States Engineers' estimate of structural damage was about $100,000 for the entire basin.

Assunpink and Rancocas Creeks.--Minor flooding occurred on Assunpink Creek at Trenton, N. J., on May 29 and on Rancocas Creek at Pemberton, N. J., on May 30-31. This flooding was due to rainfall averaging 3 to 3.3 inches.

Other streams in New Jersey.--Heavy damages occurred along several of the other smaller rivers and brooks in northern New Jersey due to this severe flooding. The total loss to private and public structures along the Rahway River was estimated at $4.4 million, of which $2 million occurred at Cranford; $1 million at Springfield; $0.9 million at South Orange; and $0.5 million at Rahway. The South River at Sayreville sustained $0.5 million damage. The Woodbridge River at Woodbridge reported $0.5 million damage. The Elizabeth River at Elizabeth experienced a devastating flood with a $2 million loss in structural flood damage. Losses on the Saddle River at Lodi and Ridgewood were estimated at three-quarter million dollars. A loss of $550 thousand was reported on Goffle Brook at Hawthorne.

Flood Damages and Loss of Life.--The total damages compiled by the United States Corps of Engineers placed the losses at $32 million in the northern half of New Jersey. These damages apply to structural flood damages only. Total losses estimated by the Small Business Administration were placed at $133 million. The seven deaths attributed to the flooding in New Jersey were children who drowned while playing in the high water areas.

Weather Bureau Warnings and Forecasts.--The Weather Bureau issued the first flood warning early on Wednesday morning, May 29, 1968. The initial warning gave most of northern New Jersey several hours notice of the impending high water. Around noon with reports of 6 inches or more of rain already observed and heavy rain still falling, the Weather Bureau issued the following warning: "Heavy rain is still reported over the Ramapo and Passaic River Basins in northern New Jersey. All persons in the area should prepare for a flood equal to that of 1903. Every possible precaution should be taken for a major flood." News media (TV, radio, and newspapers) from New York City and northern New Jersey were briefed on the flood situation. The State Conservation and Economic Development Commissioner for New Jersey stated that these warnings were of great help in avoiding widespread loss of life and in giving merchants sufficient time to move their stock off the flood, thereby reducing their financial losses.

NEW JERSEY FLOODS

COMPARATIVE CREST STAGE DATA OF MAJOR FLOODS

Table 1 May 1968

River and Station	Flood Stage	Above Flood Stages dates May 1968		Crest May 1968		Previous Maximum Crest of Record	
		From	To	Stage	Date	Stage	Date
	feet			feet		feet	
Rockaway: Boonton (below reservoir) N. J.	4	29	June 1	8.14	29		10/10/03
Wanaque:							
Wanaque Raymond Dam, N. J.	5	29	June 1	8.35	30	9.12	3/31/51
Ramapo: Mahwah, N. J.	8	29	31	11.8	29	11.0	10/9/03
Pompton Lakes, N. J.	1.7	29	31	3.82	29	3.56	3/12/36
Pompton:							
Pompton Plains, N. J.	12	29	June 1	18.62	30	14.3	10/10/03
Hohokus Brook:							
Hohokus, N. J.	U	E29	E30	4.31	29	4.71	8/19/55
Saddle: Ridgewood, N. J.	U	E29	E 29	9.84	29	8.88	8/19/55
Lodi, N. J.	U	E29	E30	9.3	29	10.0	7/23/45
Passaic:							
Chatham (nr.), N. J.	6	29	June 3	7.9	29	8.3	1/9/05
Little Falls, N. J.	6	29	June 6	10.73	31		10/10/03
Elizabeth:							
Elizabeth, N. J.	U	E29	E 29	15.24	29	16.19	9/21/66
Robinsons Branch							
Rahway, N. J.	U	E29	E 29	6.00	29	5.36	3/13/53
Rahway:							
Rahway, N. J.	U	E29	E30	6.67	29	6.35	7/24/38
Millstone:							
Blackwells Mills, N. J.	7	29	30	10.25	30	15.29	9/21/38
Raritan: Manville, N. J.	12	29	30	16.6	29	22.10	8/19/55
Bound Brook, N. J.	8	29	30	12.0	30	16.30	9/22/38
Assunpink Creek							
Trenton, N. J.	5	29	29	6.4	29		
Rancocas Creek							
Pemberton, N. J.	2.7	30	31	2.9	31	*10.77	8/21/39

E - Estimated
U - Unknown
__ - Exceeded previous maximum stage of record.

* at gage site and datum then in use

DAILY RAINFALL FOR SELECTED STATIONS MAY 27-31, 1968

Table 2.

Index No.	Station New Jersey	Time of Obsn.	May 28	May 29	May 30	May 31	Total 48-hour rainfall May 29-30 (inches)	Total 96-hour rainfall May 28-31 (inches)
1	Belvidere	7A	.20	2.00	.78	.84	2.78	3.82
2	Bernardsville 2E	7A		3.90	1.55	.23	5.45	5.68
3	Blackwells Mills	7A		2.00	1.40	.30	3.40	3.70
4	Boonton 1SE	8A		3.06	2.96	.22	6.02	6.24
5	Bound Brook	8A		3.13	.48	.57	3.61	4.18
6	Canistear Res.	8A		2.70	2.17	.18	4.87	5.05
7	Canoe Brook	8A	T	4.46	2.81	.69	7.27	7.96
8	Chatham, N. J.	7A	T	4.12	2.95	.52	7.07	7.59
9	Clinton	8A	T	3.00	.75	.25	3.75	4.00
10	Elizabeth	5P	.24	4.26		.16	4.26	4.66
11	Freehold	8A	T	4.54	.21	.40	4.75	5.15
12	High Point Park	8A		2.45	.99	.17	3.44	3.61
13	Hightstown 1N	6P	.53	3.13	T	.07	3.13	3.73
14	Jersey City	12M	.06	2.00	T		2.00	2.06
15	Lambertville	6P	1.03	2.18	.14	.25	2.32	3.60
16	Little Falls	9A		4.60	1.71	.10	6.31	6.41
17	Long Valley	7A		2.30	1.85	.06	4.15	4.21
18	Mahwah	7A		2.41	4.02	.03	6.43	6.46
19	Morris Plains 1W	7A	T	4.60	.80	.23	5.40	5.63
20	New Brunswick Exp. Sta.	5P	.40	5.21			5.21	6.52
21	New Milford	12M	.15	4.57			4.57	4.72
22	New Monmouth	4P	.43	2.96	.01	.11	2.97	3.51
23	Newton	8A		1.79	1.22	.22	3.01	3.23
24	Paterson	8A		3.48	1.49	.04	4.97	5.01
25	Pemberton	5P	.61	2.58		.19	2.58	3.38
26	Plainfield	8P	.34	5.75	.01	.03	5.76	6.14
27	Princeton Water Works	12M	.88	2.33	.27		2.60	3.48
28	Rahway	12M	.51	2.65	.05	.20	2.70	3.41
29	Split Rock Pond	10A		4.02	1.01	.25	5.03	5.28
30	Sussex 1SE	7A		1.31	1.17	.16	2.48	2.64
31	Trenton WB City	12M	.85	2.32	.13		2.45	3.30
32	Wanaque Raymond Dam	8A		2.80	3.16	.02	5.96	5.98
33	Wertsville	7A	.01	2.50	1.00	.33	3.50	3.84
34	West Wharton	7A		2.54	1.80	.24	4.34	4.58
35	Woodcliff Lake	12M	.10	3.36			3.36	3.46
	Average		.18	3.17	1.05	.20	4.22	4.60

*See Climatological Data for New Jersey for May 1968 for additional precipitation stations.

NEW JERSEY FLOODS

*HOURLY PRECIPITATION FOR SELECTED STATIONS, MAY 28-29, 1968

Table 3.

	Date				AM												PM								
May	1	2	3	4	5	6	7	8	9	10	11	Noon	1	2	3	4	5	6	7	8	9	10	11	Mid't	Total
	Station: Wanaque Raymond Dam, New Jersey																								
28																.02	.01	.01					.04	.	.08
29	.06	.06	.25	.35	.45	.30	.25	.25	.55	1.20	.70	.70	.62	.12		.01		.01				.01		.01	5.90
Total																									5.98
	Station: Little Falls, New Jersey																								
28											.01	.02		.01	.04	.02						.02	.07	.12	31
29	.09	.22	.47	.55	.68	.35	.42	.61	.90	.95	.65	.08	.02	.01											6.00
Total																									6.31
	Station: WBO, Trenton, New Jersey																								
28	.01	T	T	T	.01	T		T	.02	.04	T	.07	.09	.05	.04	.08	.07	.02	.05	.03	.07	.03	.11	.06	.85
29	.24	.36	.11	.09	.38	.33	.29	.41	.09	.02	T	T													2.32
Total																									3.17
	Station: WBAS, Newark, New Jersey																								
28				T	T			.01	T	T	.01	.01	T	.02	.01	.01	.01	T	.03	.03	.06	.07	.15	.11	,53
29	.22	.50	.70	.38	.25	.30	.35	.37	.33	.19	.01	T													3.60
Total																									4.13

*Preliminary data

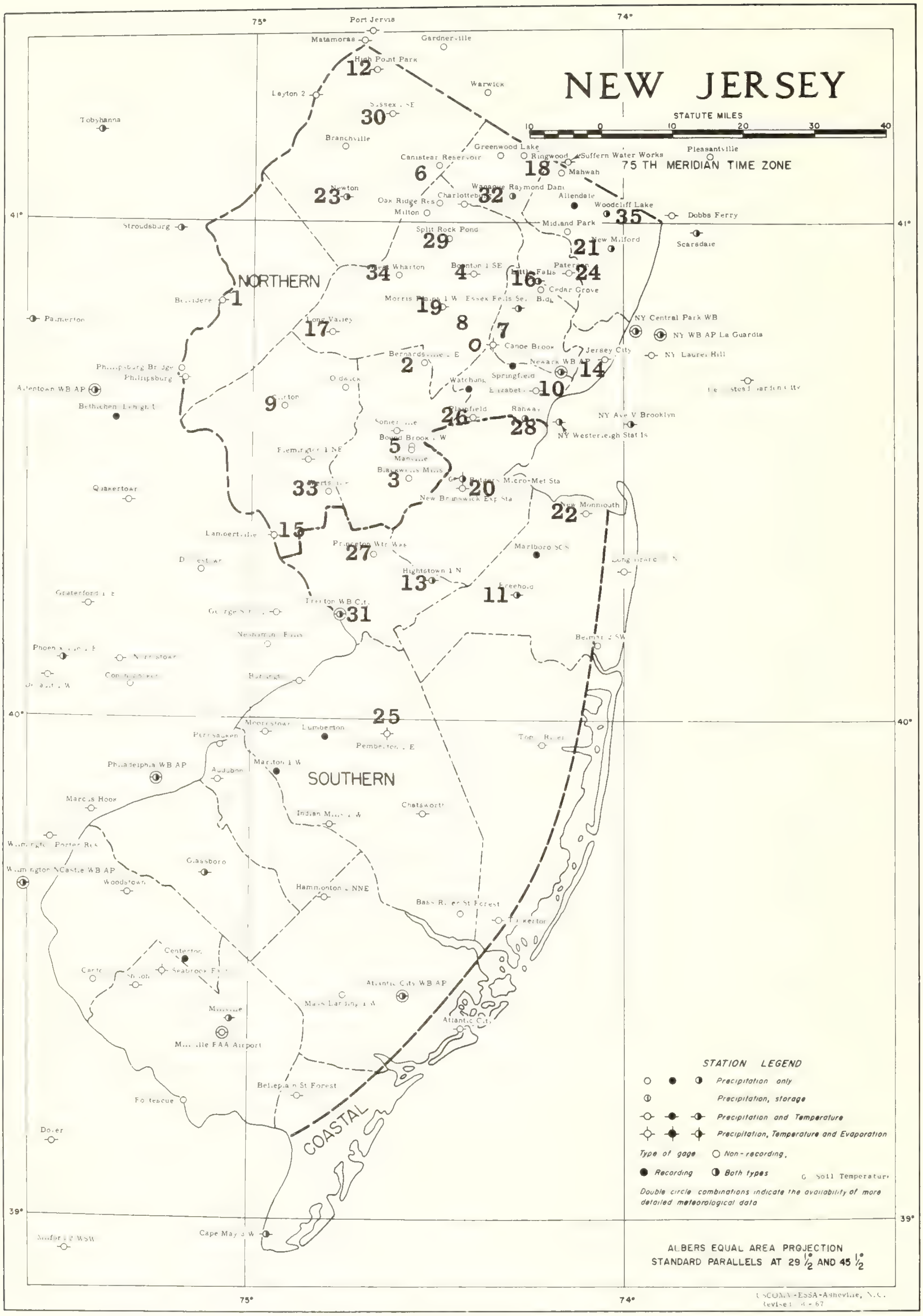

Figure 1. Map showing location of rainfall stations

Pompton River at Lincoln Park, N. J., May 31, 1968. Water is everywhere at the Bloomfield Avenue Junction with Route 46. (Courtesy Star-Ledger, Newark, N. J.)

North Branch Rahway River at Milburn, N. J. (Courtesy Star-Ledger, Newark, N. J.)

Acknowledgments

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4. U. S. Corps of Engineers, New York, New York for information on public and private structural damages.

5. Environmental Data Service for precipitation data and weather maps.

6. Star-Ledger, Newark, New Jersey for photographs used in the report.

References:

1. Climatological Data, New Jersey, May 1968, Volume 73, No. 5 by Environmental Data Service.

2. Daily weather maps, weekly series May 27-June 2, 1968 by Environmental Data Service.

3. ESSA Weather Bureau Technical Memorandum No. 32, "The Meteorological and Hydrological Aspects of the May 1968 New Jersey floods" (to be published at a later date).

RAWINSONDE DATA

Average monthly values

ALBANY, N. Y. 1005 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	86	9.1	6.6	28	.9
1000	31	129			28	.0
950	31	552	8.1	1.5	31	2.7
900	31	999	6.2	-1.5	32	2.2
850	31	1,466	4.1	-4.5	30	2.7
800	31	1,957	1.3	-7.5	29	3.6
750	31	2,475	-1.2	-10.7	28	5.0
700	31	3,022	-4.1	-15.9	28	6.6
650	31	3,603	-7.2	-20.4	28	7.4
600	31	4,224	-11.0	-24.5	28	8.5
550	31	4,885	-15.0	-29.1	28	10.5
500	31	5,602	-19.7	-34.1	29	12.7
450	31	6,372	-25.1	-39.7	28	15.0
400	31	7,222	-31.1	-43.9	28	17.1
350	31	8,155	-37.8	-48.4	28	21.0
300	31	9,202	-44.7		28	24.0
250	30	10,402	-51.2		28	28.2
200	30	11,837	-55.1		28	28.1
175	30	12,688	-55.7		28	25.3
150	30	13,671	-54.9		28	20.7
125	30	14,836	-54.9		28	16.5
100	30	16,258	-56.3		28	12.5
80	30	17,674	-56.1		29	8.5
70	30	18,524	-55.2		29	6.0
60	30	19,511	-54.3		29	3.8
50	30	20,684	-52.6		28	1.7
40	29	22,129	-51.3		28	.7
30	26	24,004	-50.1		24	.6
25	24	25,199	-49.1		22	.4
20	18	26,691	-47.4		02	.8
15	16	28,610	-43.5		05	1.9
10	12	31,378	-38.1		08	3.0
7	5	33,929				
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4						

ALBUQUERQUE, N. MEX. 837 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1,619	10.3	-1.6	09	2.0
1000	31	100				
950	31	539				
900	31	1,001				
850	31	1,484				
800	31	1,992	11.5	-5.3	29	1.5
750	31	2,523	8.3	-7.7	28	4.7
700	31	3,094	4.2	-10.4	29	7.0
650	31	3,685	-.5	-13.2	28	9.1
600	31	4,326	-5.2	-16.8	27	11.4
550	31	4,997	-9.5	-21.4	26	12.9
500	31	5,734	-14.9	-27.4	26	14.7
450	31	6,514	-20.6	-34.4	26	16.0
400	31	7,384	-27.1	-39.7	26	18.1
350	31	8,333	-34.2	-47.0	26	19.8
300	31	9,394	-42.5		26	22.0
250	31	10,601	-51.6		26	26.0
200	30	12,019	-58.5		26	27.6
175	30	12,856	-59.3		26	26.8
150	30	13,821	-59.8		27	21.7
125	30	14,955	-61.9		27	19.2
100	30	16,330	-63.0		27	14.7
80	30	17,704	-61.7		28	6.9
70	30	18,532	-61.2		27	3.2
60	29	19,496	-58.9		31	.8
50	28	20,647	-57.1		08	1.2
40	28	22,067	-54.1		06	1.7
30	28	23,926	-50.7		08	1.9
25	27	25,112	-49.2		10	1.6
20	24	26,578	-46.6		16	.6
15	15	28,502	-43.3		25	2.6
10	5	31,207	-40.6			

AMARILLO, TEXAS 889 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1,095	11.3	6.5	16	1.0
1000	31	98				
950	31	535				
900	31	999				
850	31	1,472	12.5	4.9	20	4.0
800	31	1,981	11.3	1.2	23	6.1
750	31	2,511	8.4	-2.9	25	7.3
700	31	3,085	4.8	-6.2	25	8.9
650	31	3,685	.8	-10.1	26	10.1
600	31	4,324	-3.9	-14.7	26	11.8
550	31	4,998	-9.0	-19.2	26	13.3
500	31	5,736	-14.0	-26.7	26	15.0
450	31	6,522	-19.6	-32.1	26	16.3
400	31	7,393	-25.9	-38.6	27	18.6
350	31	8,347	-33.4	-45.8	27	21.2
300	31	9,412	-41.6		27	24.3
250	31	10,624	-50.7		26	27.1
200	31	12,051	-58.8		26	28.6
175	31	12,885	-60.6		26	27.3
150	31	13,845	-60.6		27	26.1
125	31	14,979	-60.9		27	20.8
100	31	16,362	-61.8		27	14.6
80	31	17,743	-61.9		26	7.8
70	31	18,570	-61.1		26	5.0
60	31	19,533	-59.1		26	2.6
50	31	20,683	-56.5		01	.1
40	30	22,108	-53.8		34	.5
30	30	23,969	-50.7		08	.9
25	29	25,160	-48.9		18	.2
20	27	26,637	-47.0		27	.8
15	19	28,570	-43.7		31	1.4
10	12	31,330	-39.8		31	1.7

* ANCHORAGE, ALASKA 1011 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	45	6.5	1.2	18	1.1
1000	31	132	7.1	.9	17	1.0
950	31	554	5.3	-1.6	17	2.3
900	31	992	2.6	-3.6	17	2.6
850	31	1,452	-.4	-4.9	15	2.1
800	31	1,934	-3.3	-7.5	15	1.5
750	31	2,442	-6.3	-10.5	16	1.6
700	31	2,979	-9.3	-14.2	19	1.8
650	31	3,544	-12.5	-18.0	23	1.6
600	31	4,155	-16.3	-24.4	25	2.8
550	31	4,803	-20.4	-28.5	23	3.3
500	31	5,504	-25.4	-33.9	22	3.9
450	31	6,253	-31.1	-38.4	24	4.0
400	31	7,085	-37.1	-41.4	24	4.8
350	31	7,995	-43.7	-44.9	24	6.2
300	31	9,015	-50.3		25	7.5
250	31	10,194	-54.1		25	7.5
200	31	11,624	-53.6		25	6.2
175	31	12,487	-51.4		24	4.4
150	31	13,490	-50.9		24	3.7
125	31	14,675	-51.4		24	2.7
100	31	16,124	-51.3		21	1.7
80	31	17,574	-50.6		17	1.4
70	31	18,445	-50.1		15	1.8
60	31	19,453	-49.6		13	2.2
50	31	20,649	-48.8		12	2.9
40	31	22,116	-48.1		11	4.8
30	31	24,016	-47.2		10	6.5
25	29	25,222	-46.4		10	8.1
20	29	26,707	-45.1		09	9.7
15	27	28,636	-42.9		09	12.5
10	22	31,370	-38.9		09	17.3
7	13	33,876	-33.7		09	19.8

* ANNETTE, ALASKA 1013 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	37	7.7	3.2	07	.9
1000	31	143	7.8	2.8	08	.8
950	31	563	6.3	-.1	13	1.2
900	31	1,007	3.9	-2.7	16	2.1
850	31	1,470	1.1	-6.0	17	3.0
800	31	1,955	-1.6	-10.7	17	3.3
750	31	2,464	-4.4	-14.4	19	2.7
700	31	3,007	-7.7	-17.0	20	2.3
650	31	3,575	-11.3	-22.0	20	2.6
600	31	4,190	-15.1	-25.8	22	2.3
550	31	4,837	-19.2	-29.9	24	2.8
500	31	5,546	-23.9	-35.3	26	2.5
450	31	6,300	-29.6	-39.5	23	4.1
400	31	7,138	-35.9	-43.1	23	4.2
350	31	8,052	-42.7	-45.8	22	4.8
300	31	9,076	-49.6		23	4.7
250	31	10,255	-54.5		22	6.0
200	31	11,678	-55.1		23	5.3
175	31	12,534	-53.5		24	4.8
150	31	13,528	-52.7		24	4.5
125	31	14,703	-53.5		24	3.6
100	31	16,139	-53.4		22	3.2
80	31	17,576	-52.9		21	2.2
70	31	18,437	-52.4		18	1.5
60	31	19,435	-52.3		15	1.7
50	31	20,615	-51.9		10	2.6
40	31	22,062	-51.2		09	4.0
30	31	23,935	-50.1		08	6.3
25	31	25,128	-49.0		09	8.2
20	30	26,587	-48.0		09	8.9
15	30	28,493	-45.4		08	10.4
10	28	31,220	-40.1		09	13.7
7	21	33,657	-35.6		08	17.3
5	16	35,985	-31.4		08	21.9
4	11	37,503	-29.3			

ATHENS, GEORGIA 987 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	246	14.1	12.2	29	.8
1000	31	135				
950	31	570	16.4	10.2	28	3.4
900	31	1,031	14.1	7.0	27	4.0
850	31	1,511	11.2	3.0	27	4.6
800	31	2,015	8.4	-1.2	26	6.0
750	31	2,544	5.8	-6.6	26	7.0
700	31	3,109	3.0	-12.5	27	8.2
650	31	3,700	-.4	-15.9	27	10.0
600	31	4,342	-4.1	-19.1	27	12.7
550	31	5,014	-8.3	-23.7	27	14.1
500	31	5,757	-13.0	-27.6	27	16.2
450	31	6,545	-18.4	-32.1	27	18.1
400	31	7,422	-24.5	-38.7	27	19.6
350	31	8,382	-31.6	-43.7	27	21.7
300	31	9,453	-39.9	-47.0	27	23.9
250	31	10,674	-49.3		27	28.0
200	31	12,107	-58.3		27	30.6
175	31	12,940	-61.5		27	31.3
150	31	13,894	-61.8		27	26.3
125	31	15,019	-63.1		27	21.9
100	31	16,388	-64.3		27	15.2
80	31	17,756	-62.9		28	10.8
70	30	18,577	-61.7		29	6.3
60	30	19,536	-59.5		32	2.5
50	30	20,686	-56.3		05	1.8
40	30	22,115	-52.8		09	3.4
30	30	23,983	-50.0		09	5.3
25	30	25,177	-48.8		10	3.5
20	28	26,650	-46.5		07	2.5
15	20	28,561	-44.1		02	1.7
10	9	31,304	-38.8			
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* BARROW, ALASKA 1018 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	8	-6.9	-8.2	13	1.8
1000	30	147	-6.5	-8.5	16	2.0
950	30	548	-5.8	-9.3	20	1.7
900	30	972	-6.0	-12.6	21	2.2
850	30	1,419	-7.2	-14.7	22	3.0
800	30	1,890	-9.3	-17.3	22	2.4
750	30	2,387	-11.8	-20.1	24	2.7
700	30	2,913	-14.3	-23.2	24	2.5
650	30	3,469	-17.3	-26.6	26	3.1
600	30	4,068	-20.7	-30.4	26	3.7
550	30	4,703	-24.8	-34.8	27	4.8
500	30	5,394	-29.4	-39.4	27	5.3
450	30	6,129	-35.0	-43.7	27	6.0
400	30	6,948	-40.9	-47.8	28	6.9
350	30	7,844	-46.9		28	7.8
300	30	8,853	-51.7		28	8.8
250	30	10,031	-52.4		28	8.5
200	30	11,481	-49.7		27	6.2
175	30	12,356	-48.6		27	5.4
150	30	13,370	-48.3		27	4.8
125	30	14,570	-48.0		25	3.9
100	30	16,043	-47.0		24	2.6
80	30	17,524	-46.1		19	2.0
70	30	18,412	-45.5		17	2.0
60	29	19,441	-44.6		16	2.4
50	28	20,664	-43.8		13	3.3
40	26	22,142	-43.0		12	5.1
30	25	24,106	-41.8		12	6.5
25	24	25,341	-40.8		11	7.5
20	20	26,852	-39.7		10	10.1
15	10	28,821	-38.4			

BARTER IS., ALASKA 1018 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	15	-6.9	-8.6	24	1.5
1000	30	153	-4.9	-8.3	26	1.7
950	30	556	-3.3	-8.7	26	2.9
900	30	985	-4.0	-11.6	26	4.4
850	30	1,434	-6.2	-15.3	26	4.9
800	30	1,906	-8.5	-17.8	26	4.8
750	30	2,398	-11.1	-20.6	26	4.7
700	30	2,932	-13.9	-23.2	26	4.7
650	30	3,487	-17.1	-25.9	26	4.9
600	30	4,088	-20.6	-30.0	27	6.0
550	30	4,722	-24.8	-34.3	27	6.3
500	30	5,413	-29.5	-39.5	27	6.3
450	30	6,147	-35.0	-44.4	28	6.8
400	30	6,970	-40.8	-48.8	29	8.1
350	30	7,867	-46.6		29	8.0
300	30	8,878	-51.0		28	9.2
250	30	10,062	-51.0		27	9.3
200	30	11,523	-48.0		27	7.6
175	29	12,401	-47.8		27	7.3
150	29	13,418	-47.7		26	6.9
125	29	14,622	-47.4		26	5.1
100	29	16,099	-46.9		25	3.9
80	29	17,579	-46.3		23	2.7
70	29	18,466	-45.6		21	1.9
60	29	19,494	-45.0		15	1.0
50	29	20,714	-44.3		12	2.5
40	28	22,213	-43.4		11	4.5
30	27	24,152	-41.9		10	6.4
25	25	25,386	-41.2		09	8.0
20	24	26,911	-39.8		09	10.3
15	21	28,883	-37.8		08	13.1
10	15	31,690	-34.4		08	14.7
7	7	34,208	-30.3			

BETHEL, ALASKA 1011 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	21	39	1.2	-.6	20	.8
1000	21	126	2.0	-1.6	24	.2
950	21	538	2.1	-5.6	11	2.6
900	21	976	.5	-8.1	15	2.3
850	21	1,433	-1.6	-10.0	19	1.8
800	21	1,913	-4.3	-11.3	22	1.8
750	21	2,415	-7.2	-14.5	20	1.4
700	21	2,954	-10.3	-17.8	20	2.3
650	21	3,514	-13.9	-20.7	21	3.4
600	21	4,125	-17.8	-25.4	21	2.7
550	21	4,763	-22.0	-30.7	22	3.3
500	21	5,466	-26.5	-35.7	22	3.8
450	21	6,211	-31.4	-40.0	24	2.5
400	21	7,044	-36.9	-41.9	25	3.3
350	21	7,956	-42.8	-47.1	25	4.2
300	21	8,981	-49.1		26	4.8
250	21	10,164	-53.5		26	5.2
200	21	11,592	-54.4		27	4.6
175	21	12,451	-52.3		28	3.6
150	21	13,449	-52.0		27	3.0
125	21	14,626	-51.8		26	2.3
100	21	16,072	-52.1		19	2.4
80	21	17,518	-51.4		17	2.6
70	21	18,385	-50.9		16	1.9
60	20	19,389	-50.2		13	2.4
50	20	20,581	-49.3		12	4.0
40	20	22,046	-48.5		11	5.3
30	18	23,938	-47.5		11	7.4
25	17	25,139	-46.4		11	9.1
20	15	26,650	-45.1		09	11.4
15	7	28,601	-43.0			

* BISMARCK, N. DAK. 954 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	505	4.6	.4	36	1.0
1000	31	117				
950	31	539			36	1.5
900	31	983	6.6	-1.3	35	1.0
850	31	1,451	4.5	-4.0	33	2.6
800	31	1,943	2.3	-8.0	33	3.6
750	31	2,460	-.6	-10.0	33	3.7
700	31	3,010	-3.9	-14.3	33	4.6
650	31	3,589	-7.0	-19.2	32	5.1
600	31	4,212	-10.9	-22.7	31	6.0
550	31	4,873	-15.3	-26.9	30	7.0
500	31	5,590	-20.1	-32.1	31	7.8
450	31	6,359	-25.8	-36.6	30	8.5
400	31	7,206	-32.1	-42.8	30	10.3
350	31	8,136	-39.2	-47.7	30	12.0
300	31	9,176	-46.6		29	12.7
250	31	10,367	-53.5		29	13.7
200	31	11,793	-55.5		28	13.7
175	31	12,648	-53.2		28	12.1
150	31	13,644	-52.5		27	11.4
125	31	14,820	-53.5		28	8.7
100	31	16,252	-54.6		28	7.9
80	31	17,676	-55.3		29	5.3
70	31	18,528	-55.2		30	4.3
60	31	19,514	-54.7		29	3.3
50	30	20,682	-53.9		32	1.7
40	30	22,117	-52.9		02	2.2
30	29	23,982	-51.3		07	2.3
25	29	25,169	-50.1		08	2.7
20	29	26,633	-47.8		08	3.0
15	27	28,542	-44.3		09	3.3
10	20	31,297	-38.1		08	4.7
7	14	33,768	-32.5		10	4.7
5	9	36,124	-27.3			

BOISE, IDAHO 915 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	867	8.9	-1.6	16	1.6
1000	31	115				
950	31	548				
900	31	998	10.3	-1.8	19	.8
850	31	1,474	9.5	-2.4	32	1.8
800	31	1,974	6.2	-4.8	31	2.4
750	31	2,495	2.5	-7.4	29	3.8
700	31	3,054	-1.7	-9.8	28	5.6
650	31	3,635	-5.6	-15.3	27	6.8
600	31	4,264	-9.5	-19.5	27	8.1
550	31	4,928	-13.7	-23.0	26	9.3
500	31	5,650	-18.8	-26.6	26	9.5
450	31	6,422	-24.4	-33.6	26	10.5
400	31	7,275	-31.0	-39.1	26	11.4
350	31	8,208	-38.4	-43.8	27	12.4
300	31	9,250	-46.4		27	14.0
250	31	10,440	-53.8		27	15.0
200	31	11,857	-57.8		27	15.6
175	31	12,700	-57.0		27	15.3
150	31	13,678	-56.1		27	13.4
125	31	14,837	-56.3		27	11.0
100	31	16,251	-57.1		27	8.3
80	31	17,665	-56.4		26	5.8
70	31	18,512	-56.2		26	4.3
60	31	19,492	-55.8		27	2.7
50	30	20,651	-55.5		30	1.7
40	30	22,075	-54.8		32	.8
30	29	23,923	-52.8		03	.8
25	29	25,103	-51.3		02	1.4
20	28	26,555	-48.9		02	1.1
15	24	28,454	-44.9		01	1.3
10	11	31,179	-40.0			
7						
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BOOTHVILLE, LA. 1015 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1	21.3	19.4	11	1.0
1000	31	126	21.7	19.0	12	1.8
950	31	569	19.3	14.0	16	3.2
900	31	1,034	16.8	9.1	18	3.5
850	31	1,519	14.3	4.5	20	3.7
800	31	2,030	12.0	-.2	22	3.6
750	31	2,570	9.1	-4.0	25	4.0
700	31	3,136	5.9	-9.1	26	4.9
650	31	3,734	2.0	-12.4	27	6.0
600	31	4,380	-2.0	-16.1	28	7.6
550	31	5,059	-5.9	-22.2	28	9.1
500	31	5,807	-10.6	-26.3	27	10.8
450	31	6,608	-16.0	-30.1	28	12.2
400	31	7,486	-22.2	-36.2	27	13.7
350	31	8,455	-29.2	-42.1	27	16.0
300	31	9,538	-37.6	-49.7	27	18.4
250	31	10,771	-46.9		27	20.7
200	31	12,215	-57.0		27	25.3
175	31	13,051	-61.5		27	26.9
150	31	14,001	-64.0		27	25.0
125	31	15,112	-66.4		27	20.4
100	31	16,456	-67.7		28	14.4
80	31	17,799	-67.0		28	7.1
70	31	18,608	-64.9		30	1.5
60	31	19,553	-62.0		07	2.1
50	31	20,690	-57.9		08	4.1
40	31	22,110	-53.9		03	7.0
30	31	23,970	-50.8		09	8.4
25	31	25,161	-48.9		09	8.8
20	30	26,633	-46.6		09	8.4
15	29	28,552	-43.2		08	8.2
10	22	31,306	-38.1		08	6.2
7	14	33,758	-34.2		09	4.4
5	5	36,055	-34.1			

* BROWNSVILLE, TEXAS 1010 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	7	24.1	22.2	13	3.4
1000	31	98	23.7	21.9	13	4.7
950	31	542	21.2	18.9	15	9.0
900	31	1,014	19.1	14.5	17	8.8
850	31	1,506	17.4	9.8	17	7.8
800	31	2,023	15.2	4.5	18	5.9
750	31	2,565	12.6	-1.0	19	3.4
700	31	3,145	9.2	-5.8	23	1.4
650	31	3,753	5.1	-10.0	29	2.5
600	31	4,404	.5	-14.7	30	4.8
550	31	5,068	-4.3	-18.5	29	7.7
500	31	5,841	-9.4	-22.8	29	8.4
450	31	6,642	-14.9	-29.4	28	9.7
400	31	7,530	-21.1	-35.1	26	12.9
350	31	8,503	-28.3	-41.3	26	14.9
300	31	9,590	-36.6	-49.2	27	17.6
250	31	10,828	-46.2		27	20.6
200	31	12,277	-56.7		27	26.2
175	31	13,113	-61.8		27	27.6
150	30	14,058	-66.0		27	24.8
125	29	15,156	-69.1		27	19.9
100	29	16,481	-71.7		27	11.8
80	29	17,799	-70.0		28	3.7
70	29	18,595	-67.8		11	1.6
60	29	19,534	-63.5		11	5.0
50	29	20,663	-60.0		10	6.9
40	29	22,070	-55.6		09	9.0
30	29	23,920	-51.8		09	12.2
25	29	25,137	-49.6		[illegible]	11.6
20	28	26,573	-46.9		09	11.1
15	26	28,494	-44.0		08	11.3
10	24	31,245	-39.0		09	12.4
7	20	33,711	-35.7		09	12.0
5	6	36,134	-28.8			

BUFFALO, N. Y. 969 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	218	8.6	6.0	18	1.3
1000	31	124				
950	31	550	8.2	2.2	16	1.6
900	31	994	6.5	-.3	21	1.9
850	31	1,462	4.1	-3.0	25	2.6
800	31	1,953	1.4	-6.4	27	3.3
750	31	2,470	-1.1	-11.4	27	4.8
700	31	3,019	-3.9	-16.5	27	5.9
650	31	3,595	-7.1	-21.0	27	7.6
600	31	4,221	-10.8	-24.9	27	9.1
550	31	4,880	-14.9	-28.3	28	11.2
500	31	5,600	-19.6	-32.1	28	12.4
450	31	6,370	-25.0	-37.8	27	13.9
400	31	7,221	-31.1	-42.8	28	16.5
350	31	8,156	-37.4	-47.4	28	20.9
300	31	9,206	-44.1		27	24.9
250	31	10,411	-51.1		27	27.8
200	31	11,844	-55.7		28	26.3
175	31	12,694	-55.5		28	22.4
150	31	13,677	-55.2		28	18.3
125	31	14,840	-55.5		28	14.5
100	31	16,258	-56.5		29	11.5
80	31	17,674	-56.2		29	7.6
70	31	18,523	-55.6		29	5.4
60	30	19,504	-54.8		29	4.2
50	30	20,673	-53.7		29	2.8
40	30	22,113	-51.9		27	1.4
30	29	23,985	-49.8		26	1.4
25	27	25,174	-48.9		27	2.0
20	22	26,637	-47.3		27	2.6
15	14	28,532	-44.4		31	1.9
10	9	[illegible]	-37.9			

CAPE HATTERAS, N. C. 1015 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	4	16.5	13.7	34	1.1
1000	30	133	17.2	11.7	33	1.7
950	30	571	15.0	7.8	29	3.1
900	30	1,027	12.9	4.7	28	4.4
850	30	1,506	10.3	1.4	27	7.1
800	30	2,009	7.5	-3.3	24	8.4
750	30	2,539	5.1	-8.0	27	9.6
700	30	3,099	2.3	-12.4	27	11.6
650	30	3,696	-.6	-16.0	27	13.8
600	30	4,331	-4.2	-19.8	27	14.9
550	30	5,007	-8.5	-23.6	27	15.7
500	30	5,745	-13.3	-27.3	27	18.2
450	30	6,537	-18.4	-32.6	27	20.5
400	30	7,410	-24.3	-39.2	27	22.2
350	30	8,371	-31.1	-45.3	27	24.8
300	30	9,445	-39.2	-51.1	27	27.6
250	30	10,669	-48.6		27	30.1
200	30	12,104	-58.2		27	31.9
175	30	12,938	-61.0		27	31.0
150	30	13,893	-62.4		28	25.9
125	30	15,019	-61.7		27	23.1
100	30	16,397	-62.8		27	15.8
80	30	17,774	-61.6		28	9.5
70	30	18,603	-60.0		29	6.5
60	30	19,569	-57.8		31	2.8
50	30	20,728	-54.5		03	.9
40	30	22,166	-51.9		08	2.2
30	26	24,038	-50.0		11	3.1
25	24	25,236	-48.3		08	2.8
20	22	26,719	-46.3		07	2.2
15	13	28,680	-42.9		08	2.9
10	6	31,441	-39.0			

See reference note at end of table

RAWINSONDE DATA

Average monthly values

MAY 1968

* CARIBOU, MAINE 991 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	191	6.6	2.1	36	.7
1000	31	119				
950	31	539	5.6	-2.5	34	2.4
900	31	980	3.6	-4.6	34	3.2
850	31	1,442	1.0	-7.4	33	4.2
800	31	1,928	-1.9	-9.5	32	5.5
750	31	2,437	-4.8	-11.6	31	6.0
700	31	2,979	-7.9	-15.7	30	6.7
650	31	3,555	-10.7	-21.3	31	8.4
600	31	4,165	-14.2	-25.5	30	9.4
550	31	4,818	-18.3	-29.4	30	10.5
500	31	5,526	-22.9	-34.7	30	10.8
450	31	6,288	-28.2	-39.9	29	10.9
400	31	7,127	-34.0	-44.8	29	12.1
350	31	8,049	-40.7	-48.8	29	14.0
300	31	9,083	-47.5		28	14.9
250	31	10,273	-52.4		28	16.1
200	31	11,713	-52.4		28	16.2
175	31	12,577	-52.2		28	14.0
150	31	13,574	-52.2		28	12.6
125	31	14,753	-52.6		29	10.4
100	31	16,192	-53.2		28	7.1
80	31	17,630	-53.3		29	5.3
70	31	18,490	-52.9		28	3.5
60	31	19,485	-52.5		28	1.9
50	31	20,665	-51.8		26	.9
40	31	22,113	-51.2		03	.5
30	31	23,987	-50.1		13	1.1
25	31	25,179	-49.4		12	.7
20	29	26,641	-48.2		06	1.2
15	27	28,556	-44.3		09	2.6
10	26	31,308	-38.4		08	1.5
7	21	33,783	-32.1		08	2.2
5	7	36,173	-26.7			

CHARLESTON, S. C. 1014 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	13	17.3	14.2	32	.7
1000	31	134	18.4	13.8	31	.6
950	31	577	17.5	10.3	27	2.5
900	31	1,035	15.0	7.2	27	4.2
850	31	1,517	12.2	3.9	27	5.6
800	31	2,023	9.0	-.4	26	6.9
750	31	2,553	6.8	-5.9	26	7.5
700	31	3,120	3.7	-10.6	26	8.4
650	31	3,717	.6	-15.7	26	8.9
600	31	4,358	-3.1	-19.1	26	10.7
550	31	5,040	-7.2	-23.4	27	11.6
500	30	5,781	-11.8	-28.7	27	13.8
450	30	6,576	-16.9	-33.4	27	16.3
400	30	7,458	-23.2	-38.5	26	18.3
350	30	8,421	-30.4	-44.2	27	20.3
300	30	9,499	-38.7	-49.5	27	22.5
250	30	10,727	-48.1		27	24.0
200	30	12,166	-57.5		27	26.2
175	30	13,002	-61.3		27	24.9
150	30	13,955	-62.8		27	24.1
125	30	15,076	-63.3		28	20.1
100	30	16,445	-64.1		28	13.6
80	30	17,810	-63.5		28	8.9
70	30	18,632	-61.8		30	5.9
60	30	19,591	-59.2		35	3.1
50	30	20,742	-55.7		03	1.7
40	30	22,173	-52.6		09	2.9
30	27	24,043	-49.7		09	4.3
25	27	25,240	-48.1		09	4.5
20	24	26,723	-46.1		09	3.0
15	17	28,653	-42.3		07	2.9
10	8	31,420	-37.3			

CHIHUAHUA, MEXICO 855 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1,428	15.2	.7	25	1.0
1000	31	69				
950	31	509				
900	31	980				
850	31	1,479	16.2	1.5	27	1.2
800	31	1,997	16.6	1.5	26	2.9
750	31	2,534	13.2	-1.8	27	4.4
700	31	3,120	9.7	-5.5	26	4.9
650	31	3,722	5.2	-9.1	25	4.9
600	31	4,379	-.3	-12.8	24	6.3
550	31	5,057	-5.5	-18.3	24	9.2
500	31	5,810	-10.5	-24.1	25	11.4
450	31	6,606	-16.2	-29.2	26	12.7
400	31	7,490	-22.8	-35.0	26	14.5
350	31	8,454	-30.3	-40.9	26	17.7
300	31	9,531	-38.8	-48.4	26	21.1
250	31	10,756	-48.3		26	23.4
200	31	12,191	-57.8		26	27.9
175	29	13,029	-61.7		26	28.4
150	28	13,976	-64.0		27	27.0
125	28	15,083	-67.3		26	24.5
100	28	16,420	-69.3		26	19.2
80	26	17,755	-67.7		27	12.1
70	25	18,562	-65.5		27	7.1
60	23	19,508	-62.5		26	.2
50	23	20,645	-58.4		08	2.1
40	20	22,053	-55.1		09	3.8
30	14	23,910	-51.4		09	4.9
25	12	25,108	-49.5		08	5.6
20	11	26,565	-47.7			
15	7	28,502	-42.9			

COLUMBIA, MO. 985 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	238	11.7	8.0	20	.9
1000	31	108				
950	31	536	12.7	5.8	25	3.1
900	31	992	10.9	2.9	27	5.6
850	31	1,468	8.8	-.6	28	6.9
800	31	1,967	6.0	-4.0	28	8.5
750	31	2,489	3.0	-7.8	29	9.0
700	31	3,050	.0	-13.0	28	10.8
650	31	3,635	-3.2	-16.4	28	12.0
600	31	4,270	-7.1	-20.1	28	14.2
550	30	4,938	-11.4	-25.7	28	15.8
500	30	5,667	-16.4	-31.0	28	16.9
450	29	6,442	-22.0	-36.4	28	19.3
400	29	7,305	-28.2	-42.3	28	21.7
350	29	8,249	-35.4	-48.3	27	24.2
300	29	9,305	-43.3		27	25.4
250	29	10,511	-51.3		27	28.3
200	29	11,936	-58.3		27	30.3
175	29	12,775	-58.8		27	28.7
150	29	13,746	-57.0		28	23.3
125	29	14,899	-57.5		27	16.7
100	29	16,304	-59.0		28	12.1
80	29	17,702	-59.2		28	8.3
70	29	18,539	-58.6		29	5.7
60	29	19,509	-57.4		30	3.7
50	29	20,666	-55.6		30	2.1
40	28	22,092	-53.6		31	1.1
30	27	23,959	-50.7		29	1.2
25	25	25,138	-49.5		29	2.1
20	23	26,609	-47.2		28	2.9
15	19	28,536	-42.8		29	2.8

DAYTON, OHIO 979 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	297	10.5	8.6	13	.6
1000	31	116				
950	31	545	10.8	6.3	21	2.0
900	31	995	9.3	2.8	25	4.4
850	31	1,468	7.1	.0	26	6.6
800	31	1,965	4.4	-3.6	26	8.6
750	31	2,486	1.6	-7.4	27	10.8
700	31	3,042	-1.3	-11.1	27	11.4
650	31	3,625	-4.6	-14.3	27	12.4
600	31	4,256	-8.2	-19.2	27	14.8
550	31	4,921	-12.3	-24.2	27	16.1
500	31	5,649	-17.1	-28.6	26	17.1
450	31	6,424	-22.6	-33.4	26	18.5
400	31	7,287	-28.6	-39.0	26	20.1
350	31	8,230	-35.6	-45.0	26	22.9
300	31	9,285	-43.5	-46.6	26	24.7
250	31	10,489	-51.4		27	28.3
200	31	11,915	-57.5		27	30.3
175	31	12,756	-58.7		27	29.2
150	31	13,728	-56.8		27	24.0
125	31	14,881	-57.9		27	18.7
100	31	16,285	-59.2		28	13.0
80	31	17,684	-58.7		28	8.7
70	31	18,523	-58.1		28	5.7
60	31	19,496	-56.6		29	3.8
50	31	20,658	-54.6		31	2.5
40	31	22,093	-52.6		01	1.1
30	31	23,960	-50.4		29	.5
25	31	25,153	-49.1		28	.9
20	26	26,627	-47.4		[illegible]	1.4
15	22	28,538	-44.1		28	2.6
10	18	31,276	-39.7		27	5.1
7	5	33,807	-33.3			

DEL RIO, TEXAS 975 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	314	21.3	18.8	12	3.9
1000	31	89				
950	31	533	20.0	18.1	13	7.2
900	31	1,002	18.2	16.4	16	9.5
850	31	1,492	16.1	12.8	17	8.2
800	31	2,007	14.8	4.8	19	7.1
750	31	2,551	12.6	-1.7	21	5.5
700	31	3,128	9.2	-8.1	25	4.8
650	31	3,736	4.5	-12.0	28	6.0
600	31	4,384	-.8	-16.1	28	8.3
550	31	5,069	-6.3	-19.5	28	10.2
500	31	5,812	-11.2	-26.1	27	11.3
450	31	6,608	-16.7	-31.9	27	13.2
400	31	7,489	-22.9	-38.7	27	15.1
350	31	8,454	-30.2	-45.3	27	18.1
300	31	9,534	-38.6	-51.7	27	21.5
250	31	10,762	-47.8		27	24.4
200	30	12,202	-57.1		27	29.2
175	30	13,039	-60.9		27	29.7
150	30	13,990	-64.2		27	27.0
125	30	15,100	-66.5		27	23.0
100	30	16,445	-68.1		27	16.3
80	29	17,786	-67.3		26	6.2
70	29	18,594	-65.2		24	2.0
60	29	19,540	-61.3		10	2.0
50	29	20,685	-57.0		09	4.5
40	29	22,104	-54.5		08	6.0
30	29	23,963	-50.6		09	7.6
25	29	25,158	-48.0		09	8.6
20	28	26,637	-45.2		08	7.1
15	27	28,570	-42.0		07	7.1
10	18	31,317	-37.4		07	5.1
7	13	33,795	-33.6		12	2.6
5	6	36,148	-30.8			

DENVER, COLO. 836 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1,611	5.8	.9	22	1.7
1000	31	116				
950	31	545				
900	31	996				
850	31	1,472				
800	31	1,972	7.2	-2.5	26	2.4
750	31	2,501	4.8	-5.6	29	3.0
700	31	3,060	1.3	-8.2	28	4.4
650	31	3,649	-2.8	-11.9	29	6.7
600	31	4,282	-7.6	-16.5	29	9.3
550	31	4,947	-12.5	-21.3	28	10.9
500	31	5,674	-17.7	-27.8	28	12.2
450	31	6,450	-23.2	-33.9	28	12.9
400	31	7,306	-29.4	-39.3	28	14.9
350	31	8,246	-36.4	-46.0	27	17.1
300	31	9,297	-44.2		27	18.5
250	31	10,495	-52.8		27	20.2
200	31	11,912	-58.2		27	22.7
175	31	12,754	-57.3		27	21.7
150	31	13,730	-56.8		27	20.2
125	31	14,886	-56.9		27	15.1
100	31	16,292	-58.4		27	10.3
80	31	17,692	-58.6		27	5.8
70	31	18,531	-58.2		27	3.4
60	31	19,504	-57.2		30	2.4
50	31	20,660	-56.0		29	1.4
40	31	22,084	-54.3		33	2.1
30	30	23,942	-50.8		35	.8
25	30	25,134	-49.3		24	1.3
20	30	26,603	-47.2		25	2.4
15	27	28,531	-43.6		29	2.6
10	17	31,257	-38.7		27	3.8

DODGE CITY, KANS. 923 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	791	10.0	6.0	32	.6
1000	31	112				
950	31	545				
900	31	996	11.1	3.4	31	.9
850	31	1,473	10.5	1.2	27	2.8
800	31	1,976	8.7	-1.9	27	5.9
750	31	2,508	5.8	-5.1	27	6.7
700	30	3,072	2.7	-8.7	28	7.9
650	30	3,663	-1.4	-12.9	27	8.9
600	30	4,300	-6.0	-17.2	27	11.0
550	30	4,973	-11.0	-21.3	27	13.9
500	30	5,701	-16.0	-28.1	27	15.5
450	30	6,481	-21.5	-34.3	27	16.6
400	30	7,345	-27.8	-40.7	26	18.6
350	30	8,291	-35.2	-47.2	26	20.6
300	30	9,347	-43.2		26	21.8
250	30	10,552	-51.9		26	24.9
200	30	11,972	-58.8		26	27.9
175	30	12,810	-58.8		27	27.2
150	30	13,780	-58.0		27	24.3
125	30	14,925	-59.2		27	18.6
100	30	16,321	-60.0		27	12.5
80	30	17,711	-60.3		27	7.2
70	30	18,543	-59.6		28	5.1
60	30	19,509	-58.0		29	2.8
50	30	20,663	-56.1		35	1.1
40	30	22,089	-53.8		03	1.4
30	30	23,949	-51.1		32	1.0
25	30	25,139	-49.3		30	2.2
20	26	26,615	-46.4		31	2.4
15	26	28,539	-43.3		30	2.3
10	11	31,346	-37.8			

EL PASO, TEXAS 879 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1,193	16.9	-1.3	27	1.3
1000	31	75				
950	31	519				
900	31	991				
850	31	1,480	18.0	-.4	26	2.5
800	31	1,996	15.0	-2.9	28	6.3
750	31	2,532	11.0	-6.1	27	8.2
700	31	3,110	6.6	-9.8	26	8.6
650	30	3,706	2.1	-13.5	25	9.9
600	30	4,354	-2.6	-17.3	25	10.6
550	30	5,030	-7.3	-22.4	25	13.1
500	30	5,775	-12.3	-27.7	25	15.4
450	30	6,564	-18.1	-33.0	26	16.5
400	30	7,442	-24.9	-38.2	26	18.1
350	30	8,400	-32.3	-44.7	26	20.5
300	29	9,468	-40.9	-53.0	26	23.2
250	29	10,685	-50.0		26	27.0
200	29	12,112	-59.2		26	30.7
175	29	12,943	-61.8		26	30.4
150	29	13,895	-62.7		26	27.4
125	29	15,014	-64.2		26	22.0
100	29	16,374	-65.5		27	14.5
80	29	17,728	-65.8		27	6.7
70	29	18,542	-63.8		25	1.9
60	27	19,492	-61.1		15	.3
50	26	20,635	-57.8		10	2.1
40	26	22,052	-55.1		09	2.9
30	26	23,905	-51.6		11	4.0
25	24	25,084	-49.6		11	3.7
20	23	26,549	-47.2		08	2.9
15	19	28,473	-44.1		10	1.3
10	5	31,219	-40.1			

ELY, NEV. 807 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1,908	1.9	-3.9	19	2.9
1000	31	135				
950	31	560				
900	31	1,009				
850	31	1,483				
800	31	1,978	5.0	-3.1	20	2.6
750	31	2,505	5.4	-5.7	24	.5
700	31	3,067	1.3	-9.3	28	2.5
650	31	3,655	-2.9	-13.6	27	4.7
600	31	4,289	-7.3	-17.4	26	6.9
550	31	4,955	-12.3	-20.7	27	8.0
500	31	5,683	-17.4	-26.2	26	8.4
450	31	6,454	-23.2	-32.4	27	10.1
400	31	7,316	-29.8	-39.2	27	12.0
350	31	8,255	-36.8	-45.0	27	14.8
300	31	9,306	-44.6		27	17.0
250	31	10,504	-52.8		27	19.2
200	31	11,923	-58.9		27	19.4
175	30	12,762	-59.0		27	19.4
150	30	13,732	-58.2		27	17.6
125	30	14,878	-59.0		27	15.0
100	30	16,275	-60.0		26	10.7
80	30	17,667	-59.7		26	7.0
70	30	18,503	-58.6		26	4.3
60	30	19,473	-57.7		28	1.6
50	30	20,625	-56.7		34	.6
40	30	22,041	-55.4		36	.7
30	30	23,886	-52.7		34	1.6
25	29	25,074	-50.4		30	1.3
20	28	26,535	-47.9		29	1.9
15	27	28,437	-44.8		27	2.7
10	19	31,151	-39.4		27	3.5
7	5	33,633	-35.4			

EMPALME, MEXICO 1011 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	12	17.6	8.8	34	.4
1000	30	102	21.2	8.5	34	.5
950	30	546	23.3	3.8	36	.8
900	29	1,017	21.5	-.5	28	1.7
850	30	1,509	18.7	-2.8	24	3.4
800	30	2,026	15.6	-5.5	23	5.0
750	30	2,567	12.6	-9.2	23	6.9
700	30	3,144	9.0	-11.8	24	7.9
650	30	3,750	5.1	-14.8	25	8.2
600	30	4,400	.7	-18.8	25	9.6
550	30	5,086	-3.9	-23.3	26	9.8
500	30	5,837	-9.4	-27.2	26	11.3
450	30	6,637	-15.4	-31.3	27	13.1
400	30	7,520	-22.2	-37.3	27	15.2
350	30	8,485	-30.0	-42.1	27	17.4
300	30	9,563	-38.6	-49.1	27	20.6
250	30	10,790	-47.9		27	24.7
200	30	12,226	-57.7		27	31.1
175	29	13,057	-61.9		27	29.8
150	29	14,005	-64.6		27	26.0
125	29	15,111	-66.9		27	20.4
100	29	16,450	-68.7		26	13.2
80	28	17,787	-67.7		27	5.6
70	28	18,594	-65.3		29	.9
60	28	19,541	-61.7		09	3.0
50	27	20,683	-57.7		10	5.5
40	26	22,103	-54.5		08	7.5
30	25	23,965	-50.5		09	9.7
25	25	25,159	-48.4		09	9.3
20	22	26,629	-45.6		09	10.0
15	14	28,547	-43.2		08	10.0

* FAIRBANKS, ALASKA 999 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	135	5.0	-4.1	33	1.9
1000	31	125			26	2.3
950	31	544	4.3	-4.9	30	1.9
900	31	981	1.5	-6.5	25	2.4
850	31	1,439	-1.5	-8.9	25	4.0
800	31	1,920	-4.9	-10.7	25	5.3
750	31	2,425	-8.3	-13.0	25	5.4
700	31	2,957	-11.5	-16.4	25	6.2
650	31	3,521	-14.6	-21.6	25	6.9
600	31	4,125	-18.4	-26.3	25	7.0
550	31	4,768	-22.6	-30.2	25	8.2
500	31	5,463	-26.9	-35.1	25	9.2
450	31	6,214	-32.1	-40.2	25	10.4
400	31	7,038	-38.1	-43.9	25	11.9
350	31	7,944	-44.8		25	13.7
300	31	8,959	-51.6		25	14.3
250	31	10,131	-54.9		26	11.0
200	31	11,564	-52.0		26	8.7
175	31	12,432	-50.7		25	7.8
150	31	13,437	-50.4		25	6.4
125	31	14,626	-50.5		24	5.4
100	31	16,080	-50.5		25	3.6
80	31	17,537	-49.4		20	2.1
70	31	18,412	-49.1		19	2.1
60	31	19,426	-48.4		13	2.4
50	31	20,628	-47.6		11	2.6
40	31	22,104	-46.8		11	4.6
30	30	24,018	-45.8		11	7.5
25	29	25,234	-44.8		10	7.7
20	29	26,730	-43.4		09	10.9
15	25	28,669	-40.9		09	14.1
10	23	31,445	-36.7		09	17.2
7	19	33,915	-33.3		09	19.5
5	14	36,236	-30.4		10	21.3
4	8	37,789	-30.1			

FLINT, MICH. 986 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	234	7.7	4.9	17	.7
1000	31	114				
950	31	538	8.9	2.7	16	1.2
900	31	985	7.3	-.2	21	1.6
850	31	1,454	4.9	-3.5	26	2.1
800	31	1,947	2.4	-7.5	28	3.4
750	31	2,463	-.3	-9.8	28	4.3
700	31	3,016	-3.3	-12.7	28	5.6
650	31	3,595	-6.5	-18.3	27	7.0
600	31	4,221	-9.9	-23.1	28	8.1
550	31	4,883	-14.1	-26.7	28	9.8
500	31	5,604	-18.6	-31.0	28	12.1
450	31	6,378	-23.9	-35.5	27	13.9
400	31	7,232	-30.0	-41.4	27	15.9
350	31	8,169	-36.9	-45.9	27	18.3
300	31	9,219	-44.4		27	21.9
250	31	10,420	-51.3		27	25.4
200	31	11,854	-55.4		27	25.8
175	31	12,705	-55.7		27	22.7
150	31	13,689	-55.0		28	16.5
125	31	14,854	-55.2		28	14.0
100	31	16,273	-56.4		28	10.8
80	31	17,689	-56.2		28	7.6
70	31	18,537	-55.9		29	5.9
60	31	19,520	-55.2		29	4.5
50	30	20,687	-53.9		30	2.9
40	29	22,122	-52.2		33	1.3
30	28	23,992	-50.4		32	.5
25	28	25,185	-48.8		36	.5
20	24	26,658	-46.9		29	.4
15	14	28,597	-43.7		31	1.7
10	5	31,481	-36.0			

FORT WORTH, TEXAS 992 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	180	18.4	15.6	18	2.0
1000	31	108				
950	31	549	18.7	12.9	19	5.8
900	31	1,013	16.7	9.1	20	6.4
850	31	1,499	14.5	3.7	22	6.1
800	31	2,010	12.3	.2	24	5.1
750	31	2,549	9.2	-3.3	26	5.3
700	31	3,117	5.4	-7.6	28	6.2
650	31	3,715	1.2	-12.1	28	8.2
600	31	4,357	-3.3	-16.8	29	10.3
550	31	5,035	-8.2	-20.8	28	12.5
500	31	5,773	-13.2	-26.8	28	14.2
450	31	6,563	-18.4	-32.4	28	15.8
400	31	7,437	-24.7	-37.4	28	17.9
350	31	8,395	-32.0	-44.4	27	20.5
300	31	9,466	-40.4	-50.2	27	22.3
250	29	10,690	-49.5		27	25.7
200	29	12,121	-58.5		27	29.2
175	29	12,954	-61.2		27	29.4
150	29	13,907	-63.0		27	27.2
125	29	15,025	-64.3		27	21.8
100	29	16,386	-65.0		27	13.7
80	29	17,749	-64.0		26	6.1
70	29	18,565	-63.7		27	2.5
60	29	19,520	-60.2		14	.6
50	29	20,666	-57.1		10	1.4
40	29	22,087	-54.1		07	2.6
30	29	23,948	-50.5		08	4.4
25	29	25,141	-48.6		08	4.2
20	29	26,616	-46.3		07	3.9
15	22	28,539	-43.7		06	3.8
10	19	31,287	-39.3			

GLASGOW, MONT. 933 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	696	5.0	-1.0	06	1.6
1000	31	119				
950	31	543				
900	31	987	6.8	-1.8	31	.6
850	31	1,456	5.1	-4.2	31	2.4
800	31	1,948	2.1	-6.9	30	2.7
750	31	2,464	-.7	-9.2	29	3.1
700	31	3,015	-3.9	-13.5	29	3.3
650	31	3,592	-7.6	-16.3	28	3.7
600	31	4,215	-11.5	-21.9	27	4.6
550	31	4,874	-15.5	-26.7	27	6.3
500	31	5,591	-20.3	-31.9	27	7.7
450	31	6,356	-25.9	-37.1	27	8.6
400	31	7,205	-32.2	-42.9	27	8.5
350	31	8,133	-39.3	-48.0	27	9.3
300	31	9,171	-47.1		27	10.9
250	31	10,357	-54.4		27	12.5
200	31	11,775	-55.9		27	11.8
175	31	12,628	-53.8		27	10.0
150	31	13,620	-53.2		27	9.2
125	31	14,793	-53.4		27	8.2
100	31	16,225	-54.4		27	6.9
80	31	17,654	-54.7		28	4.7
70	31	18,508	-54.6		28	3.5
60	31	19,494	-54.3		30	2.4
50	31	20,664	-53.6		33	1.9
40	31	22,101	-52.8		03	1.2
30	31	23,964	-51.1		07	2.6
25	30	25,153	-49.7		08	4.1
20	28	26,618	-47.8		08	5.6
15	18	28,513	-45.2		07	6.9
10	8	31,267	-38.6			

See reference note at end of table

RAWINSONDE DATA

Average monthly values

GRAND JUNCTION, COLO. 850 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1,474	9.5	-.5	12	2.8
1000	31	94				
950	31	526				
900	31	987				
850	31	1,469			12	2.5
800	31	1,975	10.2	-2.8	14	2.2
750	31	2,505	6.8	-5.5	23	1.7
700	31	3,071	2.4	-7.8	26	4.0
650	31	3,663	-2.4	-10.8	26	5.6
600	31	4,295	-7.3	-14.7	26	7.4
550	31	4,962	-12.1	-19.2	27	9.3
500	31	5,690	-17.1	-25.1	27	11.0
450	31	6,465	-22.4	-32.1	27	12.9
400	31	7,327	-28.5	-38.4	27	14.7
350	31	8,270	-35.8	-44.[illegible]	27	16.0
300	31	9,323	-44.1		27	17.3
250	31	10,522	-52.8		27	19.7
200	31	11,939	-58.0		27	20.2
175	31	12,781	-57.7		27	19.3
150	31	13,755	-57.0		27	17.5
125	31	14,907	-58.0		27	14.6
100	31	16,306	-59.4		27	11.1
80	31	17,702	-59.2		27	5.9
70	31	18,539	-58.5		27	3.9
60	31	19,510	-57.6		27	2.4
50	30	20,663	-56.2		32	1.1
40	29	22,085	-54.5		32	1.2
30	28	23,940	-51.5		33	1.6
25	27	25,125	-49.5		31	.7
20	25	26,586	-47.4		27	1.2
15	22	28,500	-44.5		27	2.9
10	14	31,272	-38.2			

* GREAT FALLS, MONT. 886 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1,123	4.7	-.7	24	1.9
1000	31	121				
950	31	548				
900	31	998				
850	31	1,464	5.6	-4.4	26	5.1
800	31	1,957	2.3	-6.1	28	4.3
750	31	2,477	-1.3	-8.7	30	4.7
700	31	3,023	-4.8	-11.9	29	5.9
650	31	3,600	-8.3	-15.8	28	6.8
600	31	4,221	-11.9	-20.6	28	7.0
550	31	4,884	-15.9	-27.[illegible]	28	7.2
500	31	5,595	-20.8	-31.[illegible]	27	7.9
450	31	6,367	-26.3	-37.0	27	9.0
400	31	7,209	-32.6	-42.2	27	10.7
350	31	8,137	-39.5	-49.1	27	12.1
300	31	9,175	-47.1		27	12.9
250	31	10,362	-54.3		27	13.0
200	31	11,780	-56.3		28	12.9
175	31	12,632	-54.5		27	11.0
150	31	13,623	-53.6		27	9.8
125	31	14,794	-54.2		27	7.6
100	31	16,224	-54.2		26	5.5
80	31	17,651	-54.4		27	5.1
70	31	18,505	-54.4		27	3.3
60	31	19,491	-54.3		29	2.7
50	31	20,660	-53.9		31	1.5
40	30	22,100	-53.0		01	1.5
30	30	23,959	-51.6		06	3.0
25	28	25,142	-50.4		06	3.9
20	28	26,603	-48.5		07	4.8
15	25	28,516	-44.8		07	5.3
10	22	31,259	-38.4		07	6.0
7	18	33,720	-32.4		08	4.1
5	11	36,096	-27.8			

GREEN BAY, WIS. 987 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	210	7.0	4.4	12	.4
1000	31	105				
950	31	529	8.1	1.7	15	2.1
900	31	974	6.7	-.6	17	2.6
850	31	1,442	4.0	-3.2	20	.9
800	31	1,933	1.4	-7.1	20	.4
750	31	2,449	-1.4	-11.[illegible]	23	1.4
700	31	2,998	-4.4	-15.1	25	2.1
650	31	3,574	-7.9	-18.3	25	4.2
600	31	4,197	-11.6	-22.8	26	5.6
550	31	4,855	-15.4	-28.[illegible]	27	7.4
500	31	5,573	-20.2	-33.3	27	8.9
450	31	6,342	-25.3	-38.3	27	11.0
400	31	7,192	-31.3	-43.1	27	12.[illegible]
350	31	8,124	-38.6	-48.8	27	13.4
300	31	9,167	-45.9		27	15.[illegible]
250	31	10,364	-51.9		27	18.4
200	31	11,796	-55.4		27	19.9
175	31	12,649	-54.4		27	17.1
150	31	13,638	-53.8		28	13.9
125	31	14,807	-54.7		28	11.7
100	31	16,228	-56.1		28	9.5
80	31	17,644	-56.6		29	7.3
70	31	18,492	-56.0		29	5.3
60	30	19,474	-55.2		30	4.0
50	30	20,640	-54.4		30	2.[illegible]
40	30	22,074	-53.0		33	2.[illegible]
30	30	23,935	-51.1		01	1.1
25	29	25,127	-49.4		08	.[illegible]
20	26	26,598	-47.5		02	.7
15	18	28,494	-45.5		34	1.[illegible]
10	6	31,203	-39.4			

GREENSBORO, N. C. 984 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	273	13.8	11.7	24	.8
1000	31	136				
950	31	567	14.1	7.9	27	3.0
900	31	1,025	12.4	4.4	29	4.5
850	31	1,502	9.9	1.1	28	6.0
800	31	2,004	7.5	-3.[illegible]	28	7.7
750	31	2,530	4.6	-6.8	27	8.7
700	31	3,093	1.6	-11.1	27	10.0
650	31	3,684	-1.6	-17.1	27	11.2
600	31	4,320	-5.2	-21.5	27	12.5
550	31	4,992	-9.3	-25.6	27	14.7
500	31	5,729	-14.2	-31.1	27	16.8
450	31	6,513	-19.6	-35.4	27	18.4
400	31	7,385	-25.9	-40.7	27	19.5
350	31	8,339	-32.9	-46.6	27	22.0
300	31	9,405	-41.2	-50.2	27	25.1
250	31	10,620	-50.0		27	27.7
200	31	12,049	-58.3		28	30.0
175	31	12,885	-60.6		28	28.8
150	31	13,843	-60.8		28	24.8
125	31	14,975	-61.5		28	21.2
100	31	16,356	-61.9		28	14.9
80	31	17,735	-61.6		28	9.3
70	31	18,565	-59.8		29	6.5
60	31	19,531	-58.1		30	3.9
50	31	20,684	-55.7		31	1.4
40	31	22,113	-52.8		07	.8
30	30	23,980	-50.3		18	.1
25	29	25,168	-48.9		19	.2
20	27	26,636	-46.9		28	.8
15	19	28,539	-44.5		32	1.0
10	5	31,257	-40.5			

* GUAM, MARIANA IS. 999 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	111	24.6	22.[illegible]	09	2.7
1000	31	99				
950	31	550	23.1	20.3	10	6.3
900	31	1,021	20.4	16.1	10	5.7
850	31	1,513	17.7	11.[illegible]	10	4.7
800	31	2,030	15.0	8.7	10	3.7
750	31	2,573	12.6	1.8	10	3.4
700	31	3,151	9.4	-2.2	10	3.0
650	31	3,762	6.2	-7.8	09	2.3
600	31	4,415	2.5	-12.3	07	2.8
550	31	5,109	-1.7	-17.1	06	3.3
500	31	5,865	-6.2	-21.6	04	3.1
450	31	6,680	-11.1	-26.7	01	3.3
400	31	7,577	-17.0	-32.3	35	4.0
350	31	8,566	-24.1	-38.[illegible]	32	4.7
300	31	9,671	-32.6	-46.8	30	6.7
250	31	10,928	-42.7		28	8.3
200	30	12,395	-54.5		28	10.4
175	30	13,237	-61.2		27	9.9
150	30	14,176	-68.4		28	8.7
125	30	15,248	-75.8		31	5.4
100	29	16,519	-80.7		02	3.5
80	28	17,781	-78.0		07	6.3
70	28	18,553	-72.8		08	7.9
60	28	19,469	-68.2		09	8.4
50	28	20,578	-63.3		09	11.5
40	28	21,964	-59.0		09	16.9
30	27	23,791	-53.9		09	23.2
25	27	24,969	-51.2		09	25.7
20	27	26,430	-47.7		09	27.5
15	27	28,348	-43.3		09	27.8
10	24	31,094	-39.0		09	26.6
7	18	33,531	-35.8		09	21.7
5	11	35,868	-32.7			
4	[illegible]	37,488	-30.4			

HILO, HAWAII 1015 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	11	21.3	18.1	24	1.8
1000	31	141	22.1	18.0	26	1.5
950	31	583	18.8	15.8	08	2.0
900	31	1,049	15.5	12.8	09	2.8
850	31	1,533	12.6	10.2	09	2.7
800	31	2,041	11.2	[illegible].7	10	2.6
750	31	2,580	10.2	-6.[illegible]	11	2.3
700	31	3,152	7.8	-10.4	12	1.1
650	31	3,757	4.7	-12.[illegible]	32	.3
600	31	4,408	1.0	-17.[illegible]	29	1.7
550	31	5,097	-3.3	-20.8	27	2.7
500	31	5,850	-8.2	-24.4	27	3.3
450	31	6,658	-13.6	-29.6	28	4.8
400	31	7,547	-19.8	-34.[illegible]	28	6.2
350	31	8,525	-27.0	-41.6	28	8.1
300	31	9,618	-35.4	-48.6	28	10.0
250	31	10,861	-45.4		28	13.5
200	31	12,312	-57.0		28	19.2
175	31	13,145	-63.0		27	20.9
150	31	14,080	-69.0		28	21.1
125	31	15,158	-72.8		29	15.2
100	31	16,459	-74.8		29	8.2
80	30	17,763	-71.5		36	.8
70	30	18,557	-68.2		10	3.7
60	30	19,489	-64.9		09	7.6
50	30	20,612	-60.9		09	11.0
40	29	22,016	-56.9		09	14.5
30	29	23,853	-52.9		09	17.5
25	29	25,036	-50.4		09	19.4
20	26	26,502	-47.2		09	21.3
15	23	28,426	-43.1		09	19.2
10	17	31,163	-40.0		09	14.9
7	5	33,555	-34.9			

HUNTINGTON W. VA. 986 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	246	11.3	9.[illegible]	20	1.1
1000	31	125				
950	31	558	13.0	7.6	22	2.9
900	31	1,009	10.9	5.0	26	6.4
850	31	1,484	8.4	1.8	26	8.6
800	31	1,983	5.6	-1.5	27	10.1
750	31	2,509	2.9	-6.4	27	11.1
700	31	3,066	-.3	-11.1	27	12.0
650	31	3,653	-3.5	-15.1	27	12.2
600	31	4,286	-6.8	-18.4	27	13.4
550	31	4,955	-11.1	-23.2	27	15.1
500	31	5,686	-15.7	-28.3	27	17.2
450	31	6,468	-21.2	-33.3	27	18.5
400	31	7,333	-27.1	-38.4	27	19.4
350	31	8,281	-34.4	-44.8	27	22.4
300	31	9,341	-42.5	-47.7	27	24.4
250	31	10,550	-51.1		27	27.2
200	31	11,979	-57.4		27	29.7
175	31	12,820	-58.6		28	27.9
150	31	13,790	-57.8		27	22.2
125	31	14,936	-58.9		27	17.7
100	31	16,333	-59.5		28	13.8
80	31	17,730	-58.9		28	8.2
70	31	18,569	-58.1		28	5.4
60	30	19,543	-56.8		29	3.4
50	30	20,705	-54.4		31	1.7
40	29	22,139	-51.9		31	.6
30	27	24,012	-49.5		32	.4
25	25	25,217	-47.6		27	.6
20	20	26,698	-45.9		31	.4
15	11	28,616	-43.2			

* INTERNATIONAL FALLS, MINN. 971 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	360	4.8	1.9	06	.6
1000	31	115				
950	31	537	6.5	1.1	12	1.0
900	31	978	4.7	-1.3	14	1.2
850	31	1,442	2.1	-3.4	28	.4
800	31	1,930	-.6	-5.4	30	1.3
750	31	2,441	-3.3	-9.2	33	1.0
700	31	2,987	-6.3	-12.9	33	.5
650	31	3,557	-9.4	-17.6	34	.[illegible]
600	31	4,179	-13.0	-22.4	35	1.0
550	31	4,829	-16.9	-26.6	33	1.9
500	31	5,546	-21.7	-31.8	30	2.4
450	31	6,307	-27.1	-36.5	32	2.3
400	31	7,155	-32.8	-42.1	34	2.6
350	31	8,082	-39.6	-47.1	33	4.4
300	31	9,121	-46.7		31	4.8
250	31	10,313	-52.3		29	7.6
200	31	11,747	-54.0		28	9.1
175	31	12,606	-52.7		28	[illegible].6
150	31	13,603	-52.5		28	8.[illegible]
125	31	14,780	-53.0		28	8.6
100	31	16,214	-54.5		29	6.8
80	31	17,642	-54.8		30	4.9
70	31	18,495	-54.5		30	4.[illegible]
60	31	19,484	-54.0		32	3.2
50	31	20,656	-53.2		35	1.[illegible]
40	31	22,096	-52.3		04	1.6
30	30	23,961	-50.7		07	3.6
25	30	25,151	-49.4		08	4.3
20	29	26,620	-47.6		08	4.8
15	27	28,525	-44.7		08	5.1
10	26	31,273	-38.4		09	6.5
7	18	33,724	-33.7		09	8.6
5	9	36,102	-29.0			

JACKSON, MISS. 1004 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	94	17.0	15.7	17	.9
1000	31	125			17	1.4
950	31	564	17.9	11.3	21	4.6
900	31	1,028	15.5	7.7	23	5.2
850	31	1,512	13.3	[illegible].1	24	5.7
800	31	2,020	10.3	-.8	25	5.7
750	31	2,550	7.4	-5.1	27	6.5
700	31	3,120	3.8	-8.[illegible]	27	8.0
650	31	3,713	.2	-12.9	27	9.5
600	31	4,356	-3.7	-18.5	27	10.8
550	31	5,029	-8.0	-20.9	27	11.2
500	31	5,773	-12.4	-26.4	28	13.4
450	31	6,564	-17.7	-30.9	28	14.9
400	31	7,444	-23.8	-37.6	27	17.0
350	31	8,405	-31.2	-43.4	27	19.4
300	31	9,479	-39.4	-50.9	27	22.5
250	31	10,703	-48.7		27	25.8
200	31	12,136	-58.4		27	29.8
175	30	12,963	-62.1		27	30.7
150	30	13,915	-62.4		27	27.3
125	30	15,037	-64.0		27	21.9
100	30	16,397	-65.7		28	14.7
80	30	17,757	-63.9		27	8.0
70	30	18,577	-62.5		29	4.1
60	30	19,533	-60.6		35	.6
50	30	20,676	-57.0		09	1.1
40	30	22,100	-53.6		08	3.0
30	30	23,962	-50.6		10	4.7
25	29	25,154	-48.7		09	4.4
20	27	26,632	-46.7		09	4.7
15	25	28,554	-43.5		09	3.8
10	11	31,305	-38.3			

JACKSONVILLE, FLA. 1016 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	5	19.5	17.3	28	.9
1000	31	140	19.9	16.0	30	1.0
950	31	584	18.9	12.5	27	1.7
900	31	1,046	16.6	7.[illegible]	26	2.9
850	31	1,531	13.3	5.1	25	3.9
800	31	2,039	10.3	.7	25	5.4
750	31	2,569	7.6	-4.2	25	6.3
700	31	3,140	4.9	-10.[illegible]	26	7.1
650	31	3,735	1.8	-13.[illegible]	26	8.1
600	31	4,382	-1.8	-18.8	27	9.6
550	31	5,060	-5.9	-23.4	27	10.9
500	31	5,810	-10.7	-27.[illegible]	27	12.7
450	31	6,601	-16.1	-32.5	27	13.6
400	30	7,492	-22.1	-38.1	27	16.1
350	30	8,459	-29.3	-43.8	27	18.7
300	30	9,541	-37.6	-49.7	27	21.5
250	30	10,774	-47.2		27	23.1
200	30	12,216	-57.3		27	23.2
175	30	13,051	-61.8		28	23.3
150	29	14,002	-64.8		27	22.2
125	29	15,112	-65.6		28	18.7
100	29	16,464	-67.1		28	13.6
80	29	17,812	-66.0		29	7.3
70	29	18,624	-64.1		29	4.9
60	29	19,574	-61.1		01	2.4
50	29	20,716	-57.0		08	4.4
40	28	22,132	-53.9		09	6.2
30	27	23,994	-50.7		09	7.6
25	24	25,195	-48.4		09	7.7
20	19	26,656	-46.6		08	7.9
15	12	28,568	-43.8		08	6.7

JOHN F. KENNEDY INT. AP NY 1015 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	5	12.3	6.9	34	1.5
1000	31	128	11.7	5.6	35	1.5
950	31	561	10.3	3.6	32	1.7
900	31	1,006	8.4	1.0	29	2.5
850	31	1,477	6.2	-2.0	27	5.2
800	31	1,972	3.7	-5.7	27	6.0
750	31	2,492	.7	-9.[illegible]	27	7.2
700	31	3,045	-2.3	-14.1	28	9.1
650	31	3,629	-5.4	-18.3	27	11.3
600	31	4,254	-8.8	-21.7	28	12.4
550	31	4,920	-13.1	-26.4	28	14.4
500	31	5,642	-17.9	-30.5	28	15.5
450	31	6,418	-23.2	-35.8	28	18.2
400	31	7,275	-29.3	-40.3	28	21.2
350	31	8,215	-36.0	-45.3	28	26.2
300	31	9,270	-43.2	-49.6	28	30.4
250	31	10,478	-50.3		28	33.1
200	31	11,911	-56.8		28	32.3
175	31	12,756	-57.2		28	28.8
150	31	13,731	-56.7		28	24.8
125	31	14,887	-57.0		28	19.3
100	31	16,297	-57.8		28	13.8
80	31	17,705	-57.3		29	9.6
70	30	18,553	-56.3		29	6.3
60	30	19,536	-55.0		29	2.9
50	30	20,705	-53.4		29	1.7
40	30	22,148	-51.3		27	.8
30	29	24,024	-49.9		31	.3
25	26	25,214	-48.7		02	.4
20	24	26,675	-46.7		29	1.0
15	14	28,584	-44.5		07	.4

JOHNSTON IS., PACIFIC AREA 1013 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	3	25.6	22.0	08	6.7
1000	31	119	24.7	21.5	08	7.5
950	31	569	21.2	19.2	08	8.1
900	31	1,036	18.0	15.5	09	8.1
850	31	1,524	16.1	9.8	09	6.6
800	31	2,039	14.2	4.8	10	4.6
750	31	2,583	11.7	-1.0	10	3.3
700	31	3,157	8.6	-5.5	09	2.7
650	31	3,765	5.0	-9.4	11	2.0
600	31	4,415	1.3	-12.7	13	1.4
550	31	5,104	-2.8	-17.6	15	.8
500	31	5,860	-7.0	-23.4	30	.5
450	31	6,678	-12.4	-27.[illegible]	25	1.6
400	31	7,565	-18.3	-32.3	26	2.6
350	31	8,549	-25.5	-38.3	27	4.9
300	31	9,649	-33.9	-45.2	26	8.5
250	31	10,900	-43.9		26	12.1
200	31	12,359	-55.9		26	15.0
175	31	13,196	-62.4		27	16.9
150	30	14,132	-68.7		27	16.9
125	30	15,208	-74.5		27	14.9
100	29	16,497	-77.3		27	8.8
80	26	17,789	-73.9		36	1.3
70	26	18,573	-70.4		08	4.9
60	26	19,498	-66.0		09	8.5
50	25	20,616	-61.8		08	12.9
40	25	22,011	-57.5		09	15.1
30	25	23,845	-53.7		09	20.0
25	24	25,028	-50.4		09	23.7
20	24	26,494	-47.0		09	25.2
15	22	28,414	-43.0		09	23.2
10	16	31,174	-39.1		09	25.2
7	6	33,615	-35.5			

KEY WEST, FLA. 1014 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	24	3	25.0	20.6	13	1.3
1000	24	126	24.2	20.6	13	1.7
950	24	574	21.1	18.5	14	2.4
900	24	1,041	18.4	14.8	16	2.8
850	24	1,530	15.9	9.9	19	2.6
800	24	2,044	12.8	[illegible].4	19	3.2
750	24	2,580	9.8	3.6	20	3.4
700	24	3,155	6.7	.2	22	3.0
650	24	3,755	3.2	-4.9	25	2.7
600	24	4,406	-.5	-8.8	27	3.2
550	24	5,091	-4.3	-15.5	29	4.5
500	24	5,842	-8.9	-20.7	28	5.7
450	24	6,640	-14.1	-26.0	29	6.8
400	24	7,534	-20.0	-32.8	27	9.0
350	24	8,510	-27.2	-39.7	27	11.0
300	24	9,603	-35.4	-49.2	27	12.[illegible]
250	24	10,846	-45.2		27	16.1
200	24	12,298	-56.3		27	21.8
175	24	13,135	-62.0		27	22.2
150	24	14,076	-67.2		27	21.3
125	23	15,168	-70.9		28	17.5
100	22	16,483	-72.2		29	11.7
80	20	17,798	-70.6		32	4.1
70	20	18,593	-68.5		05	2.4
60	20	19,526	-63.9		07	4.3
50	20	20,656	-59.8		08	7.5
40	20	22,066	-55.7		09	11.0
30	19	23,916	-51.7		09	12.0
25	18	25,103	-49.9		09	11.4
20	17	26,565	-47.0		09	12.6
15	17	28,491	-43.3		06	12.5
10	14	31,234	-40.0		08	12.6
7	8	33,652	-38.4			
5	5	36,019	-33.1			

KING SALMON, ALASKA 1011 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	15	3.7	-1.4	13	1.1
1000	30	105	4.8	-1.1	16	.9
950	30	523	3.9	-1.7	15	1.5
900	30	962	2.1	-4.8	13	1.9
850	30	1,423	.2	-7.[illegible]	13	2.1
800	30	1,907	-2.7	-9.7	14	2.3
750	30	2,415	-5.7	-12.[illegible]	13	2.3
700	30	2,954	-8.9	-16.1	13	2.8
650	30	3,522	-12.6	-21.1	13	2.8
600	30	4,131	-16.7	-25.9	13	2.7
550	30	4,772	-21.1	-29.6	15	3.5
500	30	5,477	-26.0	-34.8	15	4.0
450	30	6,227	-31.3	-38.4	16	4.0
400	30	7,057	-36.8	-41.9	17	3.6
350	30	7,969	-43.0	-46.5	19	2.8
300	30	8,993	-49.5		20	2.3
250	30	10,172	-54.5		22	3.2
200	30	11,600	-53.9		21	3.5
175	30	12,460	-52.4		22	2.4
150	30	13,458	-51.8		20	1.9
125	30	14,639	-51.8		19	1.6
100	30	16,085	-51.7		16	1.5
80	30	17,533	-51.4		15	2.0
70	30	18,400	-51.0		14	1.7
60	30	19,404	-50.6		13	2.4
50	30	20,594	-50.0		12	3.1
40	29	22,055	-49.5		11	4.1
30	29	23,942	-48.5		10	6.6
25	26	25,146	-47.7		10	7.4
20	26	26,600	-46.8		09	9.2
15	18	28,519	-45.0		09	13.0
10	7	31,226	-42.3			

+ KOROR, CAROLINE IS. 1007 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	30	28.6	24.7	09	2.2
1000	31	92	27.8	23.7	09	2.3
950	31	542	23.6	19.1	08	4.2
900	31	1,017	20.8	15.3	09	4.8
850	31	1,510	18.0	12.3	09	4.1
800	31	2,028	15.4	[illegible].1	09	4.1
750	31	2,572	12.6	4.8	09	4.3
700	31	3,151	9.8	.6	09	4.5
650	31	3,763	6.3	-3.4	09	5.3
600	31	4,416	2.6	-7.4	08	5.4
550	31	5,111	-1.2	-13.1	09	5.9
500	31	5,870	-5.5	-18.9	09	5.5
450	31	6,686	-10.3	-24.4	09	4.8
400	31	7,589	-15.8	-29.4	09	4.0
350	31	8,583	-22.6	-36.4	07	1.8
300	31	9,695	-31.0	-44.7	11	.7
250	31	10,960	-41.4		25	1.5
200	31	12,433	-53.9		20	2.4
175	31	13,276	-61.1		19	3.2
150	31	14,217	-68.6		20	2.3
125	31	15,287	-76.2		07	.8
100	31	16,554	-81.4		07	5.2
80	31	17,814	-77.8		08	6.5
70	30	18,590	-71.6		09	4.4
60	30	19,510	-67.1		09	4.7
50	30	20,618	-64.1		09	9.7
40	30	21,999	-59.5		09	22.1
30	29	23,822	-54.5		09	29.7
25	27	24,999	-51.0		09	33.3
20	26	26,461	-47.1		09	36.5
15	23	28,396	-40.5		09	36.3
10	16	31,203	-33.9		10	14.4
7	8	33,677	-32.3			

See reference note at end of table

RAWINSONDE DATA

Average monthly values

KOTZEBUE, ALASKA 1018 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	23	5	-2.5	-5.4	22	1.2
1000	23	145	[illegible]	-6.7	23	.7
950	23	551	-1.4	-7.5	23	1.9
900	22	985	-2.8	-11.1	25	2.3
850	23	1,436	-4.2	-15.0	26	2.2
800	23	1,913	-5.7	-17.4	27	3.0
750	23	2,413	-8.0	-19.2	27	4.5
700	23	2,951	-10.7	-21.1	29	5.1
650	23	3,513	-14.0	-23.0	28	5.9
600	23	4,121	-17.6	-27.0	29	6.5
550	22	4,769	-21.4	-30.5	28	7.2
500	22	5,468	-26.3	-34.5	28	8.2
450	22	6,218	-31.7	-38.6	28	9.2
400	22	7,046	-37.4	-43.[illegible]	28	11.6
350	22	7,955	-44.0		28	12.7
300	22	8,975	-49.9		27	15.7
250	22	10,156	-53.6		28	14.2
200	22	11,593	-51.7		27	11.8
175	22	12,462	-50.4		27	8.9
150	22	13,468	-50.1		27	8.8
125	22	14,657	-50.4		27	6.0
100	22	16,115	-49.7		27	4.3
80	22	17,578	-48.9		27	2.3
70	22	18,456	-48.1		27	.1
60	20	19,470	-47.7		09	1.7
50	20	20,676	-47.0		09	2.6
40	20	22,156	-46.2		08	4.6
30	18	24,066	-45.0		08	8.0
25	17	25,283	-43.8		08	9.8
20	16	26,782	-41.8		09	11.5
15	10	28,746	-37.5			
10						
7						
5						

KWAJALEIN, MARSHALL IS. 1011 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	4	26.[illegible]	24.3	08	4.4
1000	31	98	26.3	23.5	08	[illegible]
950	31	550	23.2	21.1	09	6.[illegible]
900	31	1,022	20.4	17.6	09	6.9
850	31	1,515	17.8	14.6	09	[illegible].8
800	31	2,033	15.5	10.8	09	5.[illegible]
750	31	2,580	12.7	6.8	10	[illegible].2
700	31	3,157	[illegible]	2.1	10	4.3
650	31	3,769	5.[illegible]	-2.2	10	3.2
600	31	4,421	1.[illegible]	-4.7	12	[illegible].4
550	31	5,119	-1.[illegible]	-8.[illegible]	12	1.4
500	31	5,872	-6.0	-15.5	18	.9
450	31	6,689	-10.9	-21.2	26	2.1
400	31	7,585	-16.7	-26.9	26	4.2
350	31	8,576	-23.6	-34.1	26	[illegible].6
300	31	9,683	-32.0	-42.6	26	8.0
250	31	10,946	-41.7	-51.[illegible]	27	12.2
200	31	12,417	-54.[illegible]	-62.2	27	14.6
175	31	13,259	-61.4	-70.7	27	15.5
150	31	14,197	-69.0		28	16.5
125	31	15,268	-75.8		27	13.4
100	31	16,540	-80.[illegible]		27	[illegible].4
80	30	17,805	-77.[illegible]		36	.8
70	30	18,578	-73.6		07	2.4
60	30	19,490	-69.5		08	3.7
50	30	20,589	-65.2		08	8.[illegible]
40	28	21,960	-61.2		09	16.9
30	28	23,766	-56.2		09	27.2
25	28	24,933	-53.1		09	30.5
20	28	26,382	-49.4		09	33.0
15	27	28,286	-44.5		09	35.6
10	26	31,042	-38.9		09	26.2
7	20	33,530	-34.3		10	7.6
5	6	35,914	-31.4			

LAKE CHARLES, LA. 1013 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	5	19.5	18.3	11	1.3
1000	31	120	20.6	17.4	13	[illegible].6
950	31	564	18.7	13.4	17	5.5
900	31	1,026	16.2	8.3	19	[illegible].4
850	31	1,512	14.4	3.6	21	4.5
800	31	2,022	12.2	-.7	23	[illegible].4
750	31	2,561	9.3	-5.6	26	5.2
700	31	3,130	6.[illegible]	-9.9	27	5.8
650	31	3,730	2.0	-12.4	28	[illegible].6
600	31	4,374	-2.0	-16.6	27	7.9
550	31	5,054	-6.4	-22.3	28	[illegible].6
500	31	5,800	-11.4	-27.[illegible]	28	12.0
450	31	6,597	-17.0	-34.1	28	14.8
400	31	7,475	-22.[illegible]	-38.7	28	16.9
350	31	8,440	-30.0	-44.7	27	18.6
300	31	9,519	-38.1	-52.1	28	20.4
250	31	10,750	-47.5		27	23.[illegible]
200	31	12,191	-57.7		27	27.[illegible]
175	31	13,024	-62.1		27	28.3
150	31	13,973	-63.7		27	27.8
125	31	15,087	-65.0		27	20.6
100	31	16,440	-66.9		27	13.9
80	31	17,789	-65.9		27	[illegible].9
70	31	18,600	-64.5		28	1.6
60	31	19,549	-61.3		09	[illegible].9
50	31	20,692	-57.4		09	3.6
40	31	22,113	-53.9		08	6.0
30	31	23,974	-50.7		09	7.9
25	30	25,163	-48.7		09	7.6
20	26	26,642	-46.0		09	5.6
15	13	28,555	-43.9		09	5.7
10	6	31,358	-36.9			
7						
5						

LANDER, WYO. 827 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1,696	4.7	-1.5	25	1.5
1000	31	117				
950	30	542				
900	31	995				
850	31	1,471				
800	31	1,968	5.5	-4.0	26	1.3
750	31	2,487	2.5	-6.6	28	1.5
700	31	3,049	-.7	-9.[illegible]	29	4.2
650	31	3,627	-4.5	-13.3	29	5.9
600	31	4,263	-9.1	-18.2	28	8.3
550	31	4,925	-13.7	-23.6	28	9.8
500	31	5,649	-18.7	-29.3	28	11.2
450	31	6,419	-24.6	-34.8	28	11.9
400	31	7,275	-30.9	-40.[illegible]	28	12.8
350	31	8,208	-38.2	-45.5	28	14.6
300	31	9,252	-46.1		27	17.7
250	31	10,443	-53.7		28	19.3
200	31	11,858	-58.4		28	18.2
175	31	12,700	-56.8		28	17.1
150	31	13,681	-55.6		27	16.1
125	31	14,842	-56.1		27	12.4
100	31	16,257	-56.8		27	8.5
80	31	17,668	-57.3		27	5.9
70	31	18,511	-57.0		26	4.0
60	31	19,490	-56.3		24	1.2
50	31	20,650	-55.5		01	.4
40	30	22,072	-54.4		03	1.0
30	30	23,924	-51.8		04	1.5
25	29	25,114	-49.8		03	1.0
20	27	26,580	-47.2		36	.9
15	26	28,500	-43.6		35	1.0
10	12	31,260	-37.8			
7	5	33,742	-35.8			
5						

LITTLE ROCK, ARK. 1004 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	[illegible]	15.4	12.5	20	.9
1000	31	116	15.7	12.2	21	1.2
950	31	554	16.5	9.8	22	3.3
900	31	1,014	14.4	7.1	24	4.7
850	31	1,496	12.0	3.2	25	5.8
800	31	2,002	9.4	.0	26	7.4
750	31	2,532	6.4	-3.3	26	8.7
700	31	3,098	3.0	-7.9	27	9.1
650	31	3,692	-.6	-11.7	28	9.0
600	31	4,331	-4.6	-17.3	29	9.7
550	31	5,005	-8.9	-22.3	28	11.5
500	31	5,763	-13.6	-28.0	28	13.5
450	31	6,527	-19.2	-32.1	27	14.1
400	31	7,403	-25.6	-37.9	27	16.1
350	31	8,358	-32.6	-44.6	28	19.4
300	31	9,427	-40.5	-48.3	28	22.7
250	31	10,645	-49.9		27	25.7
200	30	12,070	-58.4		27	30.6
175	30	12,903	-61.0		27	30.0
150	29	13,863	-60.0		28	25.0
125	29	14,998	-61.3		28	20.3
100	29	16,378	-62.5		27	12.2
80	29	17,754	-62.2		27	7.9
70	29	18,581	-60.6		28	4.6
60	29	19,542	-59.2		32	1.3
50	29	20,691	-56.6		07	.8
40	28	22,113	-53.2		06	.9
30	28	23,979	-50.0		09	.9
25	24	25,179	-48.1		08	1.5
20	21	26,655	-46.2		09	1.5
15	11	28,590	-43.3			
10						
7						
5						

MCGRATH, ALASKA 1002 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	25	103	4.6	-1.2	32	1.0
1000	25	121			30	.5
950	25	537	4.4	-3.4	03	1.3
900	25	978	2.1	-5.0	08	1.2
850	25	1,437	-.6	-7.4	19	.[illegible]
800	25	1,920	-3.4	-10.9	23	2.0
750	25	2,422	-6.3	-13.8	23	3.2
700	25	2,964	-9.4	-16.5	24	3.2
650	25	3,524	-12.7	-20.3	24	3.3
600	25	4,138	-16.8	-24.5	24	3.9
550	25	4,778	-20.9	-28.2	24	4.5
500	25	5,484	-25.5	-33.1	25	4.8
450	25	6,236	-30.7	-37.6	25	5.8
400	25	7,067	-36.8	-43.5	26	5.7
350	24	7,976	-43.4		26	5.8
300	24	8,997	-50.2		27	6.3
250	24	10,174	-54.6		27	5.6
200	24	11,608	-52.6		27	4.1
175	24	12,473	-50.6		27	3.4
150	24	13,479	-50.4		24	3.1
125	24	14,666	-50.8		24	2.8
100	24	16,118	-50.9		20	1.6
80	24	17,575	-50.0		17	2.1
70	24	18,448	-49.5		14	2.5
60	24	19,459	-48.6		14	3.5
50	24	20,660	-48.0		12	4.3
40	23	22,127	-47.2		12	5.4
30	22	24,031	-46.4		10	7.5
25	21	25,247	-45.4		10	9.5
20	20	26,744	-43.6		10	11.6
15	10	28,679	-40.6			
10						
7						

* MAJURO, MARSHALL IS. 1011 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	3	28.6	24.9	09	3.5
1000	31	98	27.0	21.9	09	4.3
950	31	548	23.1	18.6	09	5.6
900	31	1,023	20.5	15.2	10	6.0
850	31	1,516	17.7	12.3	10	6.0
800	31	2,034	15.3	9.2	10	5.4
750	31	2,581	12.8	4.7	10	5.3
700	31	3,158	9.7	.1	10	4.8
650	31	3,770	6.3	-3.2	11	3.6
600	31	4,424	2.6	-7.0	12	3.1
550	31	5,115	-1.[illegible]	-11.9	15	2.4
500	30	5,877	-5.3	-17.3	18	2.[illegible]
450	30	6,694	-10.0	-22.6	21	2.7
400	29	7,599	-15.4	-28.3	21	3.2
350	29	8,595	-22.3	-35.5	25	3.2
300	29	9,711	-30.3	-43.2	26	6.1
250	29	10,982	-40.5	-51.0	28	9.4
200	29	12,464	-52.8		27	12.8
175	29	13,313	-59.8		28	14.4
150	28	14,261	-67.2		28	14.6
125	28	15,341	-74.5		28	13.3
100	28	16,622	-79.3		27	[illegible].6
80	28	17,893	-75.7		29	2.2
70	27	18,674	-71.6		07	2.1
60	25	19,597	-67.0		09	3.4
50	22	20,705	-63.6		10	8.[illegible]
40	22	22,091	-59.1		09	21.0
30	22	23,918	-53.3		09	28.5
25	22	25,100	-50.3		09	31.0
20	17	26,568	-46.6		09	34.0
15	11	28,513	-40.[illegible]			
10	6	31,327	-35.7			
7						

* MARCUS IS., N. PACIFIC 1012 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	[illegible]	26.6	21.5	17	1.8
1000	31	116	24.2	18.2	17	2.4
950	31	565	20.2	13.6	19	3.9
900	31	1,027	17.4	9.8	21	4.1
850	31	1,514	15.2	4.8	22	4.3
800	31	2,026	13.1	.8	23	5.2
750	31	2,571	10.9	-3.6	24	5.8
700	31	3,140	8.1	-6.9	25	6.7
650	31	3,748	4.6	-9.6	25	7.1
600	31	4,396	.7	-13.3	26	7.9
550	31	5,087	-3.2	-19.0	27	8.1
500	31	5,839	-7.5	-23.9	27	9.1
450	31	6,650	-12.5	-29.1	28	10.5
400	31	7,543	-18.2	-34.8	28	12.2
350	31	8,526	-25.3	-41.6	28	13.2
300	31	9,627	-34.0	-49.1	28	14.2
250	31	10,876	-44.3		28	14.4
200	31	12,333	-55.9		29	16.9
175	31	13,172	-61.2		29	17.0
150	31	14,118	-65.9		28	16.3
125	31	15,213	-69.8		29	14.8
100	31	16,531	-72.8		28	8.6
80	31	17,842	-71.1		30	2.9
70	31	18,637	-67.8		07	1.3
60	31	19,572	-63.9		09	5.4
50	31	20,701	-59.8		09	9.0
40	26	22,109	-55.9		10	12.1
30	25	23,962	-51.4		10	12.7
25	24	25,156	-48.6		10	13.8
20	22	26,634	-45.7		09	15.0
15	20	28,567	-42.4		09	15.9
10	16	31,344	-37.2		10	15.1
7	5	33,760	-34.1			

* MEDFORD, OREG. 970 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	401	8.0	4.[illegible]	30	.6
1000	31	144				
950	31	573	9.0	3.9	29	.9
900	31	1,018	7.6	2.4	29	1.1
850	31	1,488	5.2	-.[illegible]	24	1.0
800	31	1,982	2.9	-5.2	24	[illegible].5
750	31	2,499	.4	-9.9	25	[illegible].0
700	31	3,053	-2.8	-14.6	25	[illegible].4
650	31	3,634	-6.0	-17.9	25	7.5
600	31	4,261	-9.9	-23.7	25	8.9
550	31	4,923	-14.2	-28.1	26	10.1
500	31	5,644	-19.1	-31.8	27	11.5
450	31	6,415	-24.6	-36.2	27	12.9
400	31	7,269	-31.0	-42.1	27	14.1
350	31	8,204	-37.9	-45.[illegible]	27	15.0
300	31	9,249	-45.4		27	17.2
250	31	10,445	-53.3		28	18.6
200	31	11,861	-58.5		27	18.6
175	31	12,700	-58.3		27	17.2
150	31	13,673	-57.0		27	15.2
125	30	14,828	-57.4		26	12.1
100	30	16,235	-58.4		26	9.6
80	30	17,643	-57.1		26	6.0
70	30	18,488	-56.5		26	4.5
60	30	19,467	-56.0		26	2.4
50	30	20,627	-55.5		26	1.8
40	30	22,051	-55.2		29	1.6
30	29	23,894	-53.7		33	1.3
25	29	25,070	-52.1		01	1.[illegible]
20	28	26,517	-49.8		34	1.4
15	26	28,415	-46.0		32	1.5
10	18	31,146	-40.1		03	.9
7	5	33,498	-38.6			

MERIDA, MEXICO 1013 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	11	23.[illegible]	22.1	11	3.3
1000	31	120	23.7	22.1	12	5.6
950	31	568	22.4	19.1	14	8.6
900	31	1,040	21.[illegible]	13.2	13	6.9
850	31	1,534	18.5	9.6	13	4.9
800	31	2,052	15.[illegible]	6.3	12	2.9
750	31	2,593	11.9	2.4	10	1.3
700	31	3,170	8.6	-3.3	05	.6
650	31	3,775	5.2	-7.5	36	1.6
600	31	4,429	1.5	-12.5	36	2.8
550	31	5,119	-2.1	-17.7	36	2.9
500	31	5,878	-6.[illegible]	-22.3	34	2.7
450	31	6,684	-12.4	-27.7	33	3.0
400	31	7,582	-18.3	-34.4	30	4.3
350	31	8,566	-25.2	-40.0	28	6.6
300	31	9,667	-33.[illegible]	-48.1	28	9.5
250	31	10,922	-43.1		28	14.1
200	30	12,386	-54.8		28	16.3
175	30	13,227	-61.1		28	16.9
150	29	14,169	-67.[illegible]		27	16.6
125	29	15,253	-72.1		28	13.1
100	28	16,557	-73.3		28	6.3
80	28	17,865	-71.[illegible]		03	2.6
70	28	18,658	-68.[illegible]		08	5.2
60	28	19,587	-64.5		09	7.1
50	28	20,717	-58.7		09	9.8
40	27	22,135	-54.[illegible]		09	13.0
30	26	23,991	-50.[illegible]		09	15.0
25	26	25,188	-47.4		09	16.4
20	25	26,670	-44.1		09	17.6
15	16	28,626	-40.7		08	15.0
10	7	31,366	-36.2			
7						

MIAMI, FLA. 1015 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	4	23.2	21.5	12	.9
1000	31	134	23.1	20.4	14	1.6
950	31	586	20.8	17.0	17	3.3
900	31	1,049	18.4	12.9	18	2.9
850	31	1,537	15.5	10.3	21	2.6
800	31	2,050	12.5	6.4	22	2.9
750	31	2,591	9.4	3.0	22	3.2
700	31	3,160	6.3	-.9	23	3.2
650	31	3,763	2.9	-5.3	24	3.2
600	31	4,410	-.5	-10.7	26	3.9
550	31	5,095	-4.5	-15.7	27	4.8
500	31	5,847	-9.1	-20.3	27	6.2
450	31	6,654	-14.2	-25.6	27	8.1
400	31	7,541	-19.9	-31.3	27	9.6
350	31	8,518	-27.0	-38.7	26	12.0
300	30	9,612	-35.4	-46.6	26	15.1
250	30	10,856	-45.4		26	18.6
200	30	12,307	-56.8		27	22.6
175	30	13,143	-62.1		27	23.9
150	30	14,085	-66.6		28	22.6
125	30	15,179	-69.2		28	18.4
100	30	16,505	-70.9		29	10.6
80	29	17,829	-69.8		33	4.0
70	29	18,629	-67.2		04	2.0
60	29	19,569	-62.8		08	4.3
50	29	20,704	-59.0		09	8.0
40	28	22,113	-55.2		09	10.1
30	28	23,968	-50.8		10	11.5
25	24	25,161	-48.3		09	12.2
20	23	26,642	-45.3		09	12.4
15	19	28,570	-42.1		09	12.1
10	15	31,340	-37.8		09	12.1
7						

MIDLAND, TEXAS 913 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	874	16.4	13.3	15	2.8
1000	31	87				
950	31	526				
900	31	993	16.9	13.3	16	4.5
850	31	1,482	17.1	8.8	20	7.2
800	31	1,999	15.4	.8	23	5.3
750	31	2,538	12.3	-4.2	26	5.6
700	31	3,117	8.1	-8.3	26	6.6
650	31	3,717	3.3	-11.3	27	7.5
600	31	4,366	-1.9	-13.3	26	10.3
550	31	5,045	-7.1	-18.8	26	13.7
500	31	5,788	-12.0	-25.6	26	14.8
450	31	6,579	-17.6	-31.8	26	15.7
400	31	7,458	-24.0	-38.4	26	16.9
350	31	8,419	-31.3	-45.1	27	19.6
300	31	9,493	-39.6	-51.2	26	23.1
250	31	10,716	-49.0		27	26.3
200	31	12,149	-58.8		27	30.6
175	31	12,981	-61.7		26	31.7
150	31	13,933	-62.9		27	29.4
125	31	15,053	-64.2		27	23.5
100	31	16,414	-65.5		27	14.9
80	31	17,772	-64.8		26	6.1
70	31	18,591	-62.9		25	2.5
60	30	19,541	-61.0		17	.9
50	30	20,685	-57.3		08	1.9
40	30	22,105	-54.2		08	3.1
30	29	23,966	-50.9		09	5.2
25	27	25,150	-48.9		08	5.2
20	27	26,623	-46.6		08	5.0
15	23	28,554	-43.6		08	4.4
10	14	31,313	-38.8			
7	5	33,739	-36.3			

MONTERREY, MEXICO 965 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	23	423	21.3	20.5	15	1.7
1000	23	112				
950	23	557	20.9	19.7	13	2.2
900	23	1,026	19.1	16.6	13	3.3
850	23	1,517	17.6	9.9	14	4.9
800	23	2,035	16.9	2.2	17	2.8
750	23	2,583	14.5	-1.9	21	1.1
700	23	3,163	10.5	-6.7	29	2.0
650	23	3,772	5.9	-10.1	29	4.4
600	23	4,425	.6	-12.4	29	6.9
550	23	5,111	-4.7	-15.9	28	8.2
500	23	5,860	-10.0	-22.9	28	9.1
450	23	6,664	-15.2	-30.9	27	9.8
400	23	7,548	-21.4	-36.6	27	11.1
350	23	8,519	-28.8	-42.7	27	13.3
300	23	9,604	-37.3	-50.5	26	16.0
250	23	10,839	-46.6		27	19.9
200	23	12,285	-57.1		26	25.8
175	23	13,120	-62.0		26	26.4
150	23	14,062	-66.7		26	24.5
125	23	15,156	-69.2		26	19.0
100	23	16,482	-71.4		27	10.7
80	23	17,801	-70.1		26	2.9
70	23	18,599	-67.0		11	2.3
60	23	19,539	-62.8		10	5.9
50	23	20,673	-58.6		09	7.2
40	23	22,087	-54.8		08	8.5
30	23	23,942	-50.9		08	11.5
25	23	25,136	-48.2		08	12.7
20	22	26,612	-45.8		09	12.5
15	18	28,545	-41.7		08	12.8
10	10	31,303	-37.5			
7						

MONTGOMERY, ALA. 1009 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	61	16.6	14.9	23	.5
1000	31	136	17.3	14.7	20	1.1
950	31	577	17.9	10.7	22	3.0
900	31	1,037	15.4	7.4	23	3.6
850	31	1,520	12.5	4.7	24	5.3
800	31	2,027	10.0	-1.3	25	5.6
750	31	2,562	7.3	-4.4	27	6.3
700	31	3,126	4.1	-7.9	27	7.6
650	31	3,725	.7	-13.6	27	9.9
600	31	4,364	-3.0	-16.5	27	11.1
550	31	5,046	-7.1	-22.4	27	12.0
500	31	5,785	-11.8	-27.3	27	13.3
450	31	6,581	-17.1	-32.9	27	15.5
400	31	7,458	-23.3	-38.4	27	16.8
350	31	8,421	-30.4	-44.4	27	18.4
300	31	9,499	-38.6	-50.8	27	21.5
250	31	10,727	-47.8		27	23.9
200	31	12,167	-57.6		27	26.2
175	31	13,003	-61.4		27	25.6
150	31	13,955	-62.9		27	23.3
125	31	15,074	-64.1		27	20.6
100	31	16,436	-65.1		27	15.0
80	31	17,798	-64.3		27	8.9
70	30	18,617	-62.7		28	5.5
60	30	19,573	-60.6		30	2.2
50	29	20,715	-56.8		05	.4
40	29	22,141	-53.1		08	2.6
30	27	24,006	-50.1		09	4.8
25	25	25,202	-48.4		08	5.0
20	24	26,678	-46.3		07	4.4
15	24	28,599	-43.2		06	4.4
10	19	31,367	-38.0		05	3.4
7	19	33,877	-33.9			

* NANTUCKET, MASS. 1014 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	14	10.8	8.9	35	1.2
1000	30	131	9.9	5.7	33	1.2
950	30	557	9.4	2.9	30	2.5
900	30	1,004	7.5	-1.0	28	3.3
850	30	1,473	5.2	-3.9	27	5.4
800	30	1,966	2.4	-7.5	28	6.9
750	30	2,483	-.2	-12.0	28	9.2
700	30	3,035	-3.3	-14.6	28	10.5
650	30	3,612	-6.6	-19.0	28	11.7
600	30	4,239	-10.2	-23.2	27	13.7
550	30	4,899	-14.4	-27.2	28	14.4
500	30	5,621	-19.1	-31.8	28	17.0
450	30	6,392	-24.5	-37.5	27	18.0
400	30	7,245	-30.5	-43.1	27	20.2
350	30	8,180	-37.2	-48.1	28	23.1
300	30	9,230	-44.0		28	26.9
250	30	10,435	-50.9		28	31.1
200	30	11,868	-55.9		28	30.6
175	30	12,715	-56.5		28	26.5
150	30	13,694	-56.0		28	22.2
125	30	14,852	-56.4		28	18.3
100	30	16,266	-56.9		28	13.1
80	30	17,679	-56.5		29	9.3
70	30	18,527	-55.8		29	6.5
60	29	19,511	-54.8		28	4.2
50	28	20,675	-53.4		29	3.3
40	28	22,115	-52.1		28	3.3
30	27	23,987	-50.7		29	2.6
25	27	25,177	-49.8		31	2.5
20	26	26,633	-48.7		33	.8
15	24	28,544	-44.9		28	2.3
10	22	31,288	-38.4		27	3.7
7	18	33,765	-33.5		24	4.2

See reference note at end of table

RAWINSONDE DATA

Average monthly values

NASHVILLE, TENN. 994 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	180	14.3	12.4	18	1.4
1000	31	129				
950	31	564	15.2	8.9	23	6.0
900	31	1,021	13.2	5.7	25	8.3
850	31	1,500	10.0	2.6	25	8.9
800	31	2,001	7.0	-1.1	25	9.5
750	31	2,527	3.9	-5.4	26	10.1
700	31	3,087	.8	-10.1	27	11.0
650	31	3,679	-2.2	-14.1	26	12.1
600	31	4,312	-5.9	-18.6	26	13.0
550	31	4,983	-10.1	-23.7	27	13.8
500	31	5,717	-14.6	-28.3	27	16.1
450	31	6,500	-19.9	-33.6	27	17.4
400	31	7,370	-25.9	-39.3	27	19.1
350	31	8,323	-33.0	-45.1	27	20.9
300	31	9,388	-41.5	-49.9	27	22.3
250	31	10,602	-50.1		27	25.9
200	31	12,030	-58.2		27	28.9
175	30	12,864	-59.9		27	27.8
150	30	13,826	-59.8		27	25.1
125	30	14,966	-60.2		27	20.4
100	30	16,352	-61.7		27	14.1
80	29	17,729	-60.5		28	9.0
70	29	18,562	-59.3		29	6.9
60	29	19,529	-58.0		30	4.0
50	29	20,684	-55.5		32	1.6
40	28	22,113	-52.4		34	.4
30	28	23,983	-49.8		15	.3
25	28	25,179	-48.5		21	.8
20	26	26,655	-46.5		24	.5
15	23	28,566	-44.2		33	.6
10	10	31,246	-40.6			
7						
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* NOME, ALASKA 1016 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	5	-2.8	-6.9	27	.4
1000	31	130	-.7	-6.5	27	.2
950	31	542	-1.6	-8.7	21	1.1
900	31	969	-2.0	-11.6	25	.9
850	31	1,423	-3.0	-14.1	26	1.6
800	31	1,902	-4.9	-16.8	27	2.6
750	31	2,406	-7.4	-19.1	27	3.3
700	31	2,942	-10.5	-22.1	28	3.6
650	31	3,506	-13.9	-24.8	28	4.3
600	31	4,113	-17.7	-28.5	29	5.2
550	31	4,756	-22.0	-31.9	28	5.7
500	31	5,455	-26.7	-36.0	28	6.2
450	31	6,205	-32.0	-41.5	28	7.4
400	31	7,031	-37.8	-47.0	28	7.7
350	31	7,940	-43.6		28	8.7
300	30	8,966	-49.3		28	8.6
250	30	10,148	-53.8		28	8.6
200	30	11,583	-52.3		28	5.0
175	30	12,450	-51.1		28	3.9
150	30	13,452	-50.9		25	3.3
125	30	14,639	-50.9		27	3.0
100	30	16,093	-50.4		25	2.4
80	29	17,564	-46.3		22	1.7
70	29	18,439	-49.1		16	1.7
60	29	19,451	-48.7		11	2.6
50	29	20,652	-47.8		12	3.6
40	29	22,127	-47.1		10	4.8
30	28	24,034	-46.0		10	7.7
25	27	25,245	-45.1		10	9.2
20	27	26,739	-43.8		09	11.0
15	26	28,688	-41.6		09	14.0
10	24	31,447	-37.4		09	17.2
7	20	33,937	-33.3		09	17.8
5						

NORTH PLATTE, NEBR. 915 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	848	6.0	1.5	33	1.0
1000	31	116				
950	31	542				
900	31	987	8.0	.8	33	2.2
850	31	1,461	7.5	-1.5	31	3.3
800	31	1,958	5.0	-3.8	30	5.5
750	31	2,483	2.4	-6.0	29	7.3
700	31	3,038	-.1	-10.1	28	8.5
650	31	3,624	-4.0	-15.4	29	9.7
600	31	4,255	-8.4	-19.8	29	11.3
550	31	4,918	-13.0	-24.2	28	13.6
500	31	5,645	-17.8	-29.1	28	14.0
450	31	6,418	-23.5	-36.0	28	15.3
400	31	7,277	-29.8	-42.3	27	16.3
350	31	8,215	-37.1	-47.9	27	18.6
300	31	9,264	-44.9		27	21.5
250	31	10,461	-52.9		27	23.9
200	31	11,881	-57.3		27	22.8
175	31	12,725	-56.6		27	21.3
150	31	13,706	-55.5		27	18.7
125	31	14,865	-56.6		28	14.8
100	31	16,276	-58.0		28	10.2
80	31	17,682	-58.1		28	7.8
70	31	18,523	-57.7		28	5.8
60	31	19,498	-57.0		29	3.4
50	31	20,654	-55.9		31	1.9
40	31	22,079	-54.1		36	1.2
30	30	23,936	-51.4		30	1.0
25	29	25,124	-50.0		27	1.3
20	28	26,592	-47.8		28	2.0
15	22	28,493	-45.0		28	2.3
10	9	31,210	-39.4			
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OAKLAND, CALIF. 1015 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	6	10.9	8.8	25	1.4
1000	31	134	10.3	8.2	26	1.7
950	31	562	10.5	4.2	28	3.2
900	31	1,012	11.5	-2.1	31	4.7
850	31	1,489	9.9	-6.3	30	4.1
800	31	1,990	7.4	-9.6	29	3.9
750	31	2,518	4.7	-13.8	29	5.0
700	31	3,078	1.7	-17.4	28	5.9
650	31	3,667	-1.8	-21.1	28	6.9
600	31	4,303	-5.8	-23.7	28	9.2
550	31	4,975	-10.3	-26.4	28	10.1
500	31	5,706	-15.4	-29.7	28	12.1
450	31	6,488	-21.1	-34.0	28	14.3
400	31	7,353	-27.2	-40.0	28	16.9
350	31	8,300	-34.4	-45.8	28	18.0
300	31	9,358	-42.9		28	20.0
250	30	10,567	-52.0		28	21.7
200	30	11,985	-59.8		28	22.5
175	30	12,818	-60.0		28	21.4
150	30	13,782	-59.1		27	19.3
125	29	14,916	-59.8		27	16.7
100	29	16,310	-59.9		27	12.9
80	28	17,702	-59.5		27	8.0
70	28	18,538	-58.8		27	5.1
60	28	19,507	-57.8		26	3.4
50	28	20,659	-56.7		28	1.6
40	28	22,078	-55.4		34	1.1
30	28	23,920	-53.5		33	.9
25	28	25,097	-51.9		29	1.2
20	27	26,553	-49.4		30	2.8
15	25	28,447	-46.4		29	4.0
10	20	31,156	-42.1		28	7.4
7	13	33,586	-40.1		29	11.3
5	6	35,941	-38.9			

OMAHA, NEBR. 965 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	403	9.1	5.1	01	.4
1000	31	108				
950	31	533	9.9	3.8	34	1.1
900	31	984	9.4	.5	29	3.5
850	31	1,457	7.3	-3.0	30	4.9
800	31	1,953	4.6	-6.0	29	6.0
750	31	2,473	1.7	-8.3	29	8.1
700	31	3,031	-1.2	-11.6	29	10.6
650	31	3,612	-4.4	-15.0	28	12.0
600	31	4,245	-8.5	-19.6	28	13.5
550	30	4,905	-12.9	-25.4	28	15.0
500	30	5,634	-17.8	-30.4	28	16.1
450	30	6,405	-23.2	-36.1	28	18.1
400	30	7,267	-29.3	-41.8	28	20.7
350	30	8,208	-36.5	-47.6	27	22.9
300	30	9,260	-44.2		27	26.1
250	30	10,462	-51.8		27	28.8
200	30	11,889	-56.4		26	29.1
175	30	12,737	-56.1		27	26.9
150	30	13,719	-55.3		27	21.9
125	30	14,881	-56.0		28	14.7
100	30	16,296	-57.6		28	10.6
80	30	17,703	-57.9		28	7.9
70	30	18,544	-57.6		29	5.5
60	30	19,517	-56.7		31	3.3
50	30	20,676	-55.4		34	1.8
40	29	22,102	-53.5		35	1.1
30	29	23,962	-51.1		31	1.2
25	29	25,151	-49.8		29	1.4
20	29	26,616	-47.9		30	1.8
15	22	28,511	-45.1		29	1.9
10	14	31,203	-40.6			
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+ PAGO PAGO, AMERICAN SAMOA 1012 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	5	28.4	24.3	10	3.2
1000	31	108	26.9	21.7	09	3.8
950	31	559	23.0	17.9	08	4.4
900	31	1,029	19.8	14.0	07	4.9
850	31	1,521	17.2	11.0	07	4.1
800	31	2,036	14.7	6.7	06	3.1
750	31	2,576	12.3	1.6	06	2.9
700	31	3,157	9.6	-3.9	03	2.1
650	31	3,765	6.2	-9.4	36	1.8
600	31	4,419	2.3	-14.5	32	1.6
550	31	5,110	-1.7	-18.8	29	2.7
500	31	5,869	-6.4	-22.0	27	3.8
450	31	6,677	-11.4	-27.8	27	4.5
400	31	7,580	-17.4	-33.0	27	5.4
350	31	8,567	-24.3	-39.6	26	7.0
300	31	9,673	-33.0	-47.6	27	8.7
250	31	10,929	-43.2		27	11.5
200	31	12,396	-54.6		28	15.4
175	30	13,239	-61.1		28	16.6
150	30	14,182	-67.6		28	15.4
125	29	15,262	-73.5		28	13.9
100	29	16,550	-77.6		28	9.4
80	29	17,833	-75.7		29	3.5
70	29	18,613	-71.0		10	.2
60	29	19,541	-64.5		09	3.8
50	29	20,670	-59.2		08	5.4
40	28	22,078	-56.2		08	9.9
30	28	23,925	-51.5		09	15.9
25	27	25,114	-48.7		09	17.2
20	25	26,589	-44.8		09	19.8
15	21	28,535	-40.4		09	17.2
10	13	31,318	-36.7		11	5.7
7						
5						

* PEORIA, ILL. 989 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	200	10.0	6.9	18	.6
1000	31	106				
950	31	537	11.0	5.1	25	2.4
900	31	984	8.8	2.6	27	3.9
850	31	1,456	6.4	-.2	27	5.4
800	31	1,951	3.9	-4.2	28	6.2
750	31	2,472	1.4	-7.3	28	8.0
700	31	3,027	-1.8	-11.9	28	10.0
650	31	3,607	-5.1	-16.5	28	11.2
600	31	4,238	-8.9	-21.5	27	12.2
550	31	4,900	-13.2	-26.8	27	13.4
500	31	5,627	-18.0	-31.6	27	15.4
450	31	6,401	-23.6	-36.7	28	16.3
400	31	7,258	-29.3	-42.2	28	18.4
350	31	8,198	-36.3	-48.6	27	21.5
300	31	9,251	-43.8		27	24.6
250	31	10,455	-51.4		27	28.9
200	31	11,882	-57.3		27	29.7
175	31	12,726	-57.3		27	26.2
150	31	13,704	-56.1		28	20.1
125	31	14,863	-56.6		28	15.1
100	30	16,269	-58.7		28	11.5
80	30	17,670	-58.4		28	7.8
70	30	18,509	-58.0		29	5.6
60	30	19,483	-57.2		29	4.2
50	29	20,637	-55.5		30	2.8
40	29	22,066	-53.3		29	1.6
30	29	23,928	-51.0		28	1.4
25	29	25,118	-49.4		29	1.7
20	29	26,586	-47.7		27	1.7
15	28	28,499	-45.0		28	2.3
10	26	31,237	-39.3		26	3.0
7	20	33,686	-33.6		29	5.3
5	6	36,108	-29.5			

* PITTSBURGH, PA. 972 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	359	9.2	6.3	18	1.0
1000	31	121				
950	31	554	9.7	5.0	20	1.7
900	31	997	8.3	2.7	25	3.5
850	31	1,468	6.3	.0	26	5.2
800	31	1,963	3.8	-4.2	27	6.9
750	31	2,488	1.1	-8.2	27	8.9
700	31	3,038	-1.7	-11.3	27	10.0
650	31	3,622	-5.1	-14.1	27	10.8
600	31	4,248	-8.9	-19.0	28	12.3
550	31	4,915	-12.9	-24.4	27	14.5
500	31	5,638	-17.5	-29.2	28	16.6
450	31	6,413	-22.9	-33.5	28	18.6
400	31	7,273	-28.6	-38.8	28	20.7
350	31	8,215	-35.6	-43.9	28	23.0
300	31	9,271	-43.2		28	26.8
250	31	10,476	-51.1		28	29.8
200	31	11,906	-56.8		28	30.0
175	31	12,749	-57.8		28	26.2
150	31	13,723	-57.1		28	20.9
125	31	14,876	-57.1		28	16.3
100	31	16,284	-58.1		28	11.7
80	31	17,688	-58.1		28	7.8
70	31	18,529	-57.2		29	5.7
60	31	19,505	-56.0		29	3.8
50	30	20,670	-54.3		29	2.7
40	30	22,106	-52.2		28	2.6
30	28	23,972	-50.3		27	2.7
25	28	25,165	-49.2		29	2.2
20	27	26,631	-47.9		30	1.4
15	27	28,542	-44.4		29	1.6
10	24	31,286	-39.1		26	2.8
7	15	33,756	-34.0		29	5.2
5	7	36,102	-30.5			

+ PONAPE, CAROLINE IS. 1005 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	39	28.3	24.4	08	2.2
1000	31	84	27.8	23.5	06	2.7
950	31	535	24.1	18.8	10	4.5
900	31	1,009	21.0	15.6	10	5.2
850	31	1,503	18.2	12.3	10	5.6
800	31	2,021	15.7	8.5	10	4.3
750	31	2,567	12.8	4.3	10	3.8
700	31	3,144	9.9	-.4	10	3.2
650	31	3,756	6.7	-3.9	10	2.6
600	31	4,411	3.2	-8.0	09	2.8
550	31	5,107	-.7	-13.3	09	2.0
500	31	5,868	-4.9	-17.7	06	1.2
450	31	6,689	-9.6	-23.5	04	.6
400	31	7,592	-15.4	-29.6	32	1.7
350	31	8,587	-22.2	-36.2	27	2.4
300	31	9,703	-30.3	-44.8	28	3.7
250	31	10,973	-40.7	-53.3	26	6.2
200	31	12,451	-53.2		26	8.2
175	31	13,298	-60.4		27	9.9
150	31	14,242	-67.7		28	11.2
125	31	15,320	-74.5		29	9.7
100	31	16,599	-80.0		28	5.2
80	31	17,869	-76.1		02	1.0
70	31	18,648	-71.2		11	1.1
60	30	19,570	-66.8		11	1.6
50	29	20,681	-63.6		09	7.8
40	29	22,068	-58.8		09	19.9
30	29	23,898	-53.4		09	28.9
25	28	25,077	-50.3		09	31.0
20	27	26,546	-46.6		09	34.3
15	24	28,479	-42.0		09	35.8
10	17	31,284	-34.2		09	22.3
7	11	33,768	-31.5			
5						

PORTLAND, MAINE 1013 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	20	8.6	3.8	31	1.4
1000	31	124	8.9	1.8	33	1.9
950	31	546	8.4	-.9	36	2.6
900	31	994	6.3	-3.7	36	2.4
850	31	1,461	3.6	-6.1	32	2.6
800	31	1,950	.8	-9.1	30	4.4
750	31	2,464	-2.1	-12.7	30	5.8
700	31	3,012	-5.1	-17.1	30	6.4
650	31	3,585	-8.6	-21.0	30	7.5
600	31	4,208	-12.1	-26.2	29	9.0
550	31	4,861	-16.4	-29.5	29	10.9
500	31	5,579	-21.1	-33.7	28	12.4
450	31	6,341	-26.5	-39.0	28	14.1
400	31	7,190	-32.7	-44.8	28	16.2
350	31	8,119	-39.0	-49.9	28	19.5
300	30	9,164	-45.6		28	24.2
250	30	10,361	-51.6		28	27.2
200	30	11,795	-55.1		28	26.8
175	30	12,648	-54.8		28	21.5
150	30	13,633	-54.9		28	19.2
125	30	14,800	-54.7		28	15.0
100	30	16,224	-55.8		29	10.5
80	29	17,643	-55.5		29	6.7
70	29	18,495	-54.7		29	4.0
60	29	19,484	-54.2		30	2.8
50	29	20,656	-52.9		31	1.3
40	29	22,099	-51.7		29	.8
30	29	23,970	-50.6		28	.9
25	29	25,159	-50.1		26	.8
20	28	26,616	-48.1		26	1.0
15	28	28,527	-44.5		26	1.6
10	23	31,276	-38.1		30	1.1
7	18	33,738	-32.6		26	2.5
5	11	36,078	-28.3			

* QUILLAYUTE, WASH. 1010 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	58	7.4	6.7	07	.9
1000	31	139	8.3	6.5	10	1.0
950	31	561	7.5	3.0	19	1.2
900	31	1,008	5.3	.2	22	1.7
850	31	1,473	2.7	-3.3	23	1.8
800	31	1,961	-.1	-6.1	21	2.1
750	31	2,473	-3.0	-11.5	21	2.4
700	31	3,019	-6.3	-15.7	21	2.7
650	31	3,588	-9.5	-19.9	22	3.3
600	31	4,209	-13.2	-22.9	23	4.5
550	31	4,863	-17.3	-26.7	24	4.4
500	31	5,575	-22.1	-32.0	25	5.8
450	31	6,335	-27.6	-37.0	24	7.3
400	31	7,178	-33.7	-43.0	25	9.1
350	31	8,101	-40.5	-46.4	25	9.8
300	31	9,135	-47.6		25	10.2
250	31	10,321	-53.3		26	11.3
200	31	11,748	-55.2		26	11.0
175	31	12,601	-54.5		27	9.5
150	31	13,590	-54.0		26	8.3
125	31	14,758	-54.4		26	6.7
100	31	16,185	-54.9		26	5.0
80	31	17,612	-54.5		26	3.3
70	31	18,467	-54.1		25	2.2
60	30	19,453	-54.2		25	2.1
50	30	20,623	-53.8		25	.5
40	30	22,057	-53.5		05	1.2
30	30	23,912	-52.4		07	3.3
25	30	25,093	-51.3		08	4.1
20	30	26,548	-49.5		08	5.5
15	28	28,441	-46.5		08	6.6
10	24	31,172	-39.7		08	7.1
7	18	33,653	-33.2		08	6.0
5	10	36,052	-28.3			
4						

RAPID CITY, S. DAK. 903 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	966	5.6	1.0	33	2.0
1000	31	117				
950	31	545				
900	31	989			33	2.7
850	31	1,458	6.2	-.7	30	3.1
800	31	1,953	3.9	-3.7	29	4.6
750	31	2,469	1.1	-6.5	29	5.8
700	31	3,027	-2.3	-9.8	30	7.3
650	31	3,604	-5.9	-13.7	30	8.8
600	31	4,235	-9.9	-18.0	30	8.2
550	31	4,892	-14.3	-21.9	29	9.7
500	31	5,618	-19.1	-27.9	29	9.8
450	31	6,387	-24.7	-35.1	29	11.1
400	31	7,241	-31.2	-41.6	29	11.9
350	31	8,172	-38.8	-47.7	28	12.2
300	31	9,212	-46.6		28	13.2
250	31	10,401	-53.8		28	16.1
200	31	11,819	-56.5		28	15.9
175	31	12,668	-55.3		27	15.2
150	31	13,653	-54.3		27	14.5
125	31	14,820	-55.1		27	11.3
100	31	16,239	-56.3		28	8.1
80	31	17,654	-56.5		28	6.1
70	31	18,500	-56.2		29	4.1
60	30	19,480	-56.3		30	2.9
50	30	20,640	-55.3		32	2.0
40	30	22,067	-54.1		34	1.2
30	29	23,924	-51.5		05	1.0
25	28	25,108	-50.0		05	1.4
20	26	26,575	-47.6		06	1.1
15	15	28,461	-44.3		28	1.8
10						
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4						

ST CLOUD, MINN. 975 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	316	6.9	4.0	36	.4
1000	31	104				
950	31	528	8.1	2.0	01	.6
900	31	972	6.1	-.8	35	.8
850	31	1,439	3.9	-3.3	29	1.0
800	31	1,929	1.1	-5.9	28	2.9
750	31	2,445	-1.9	-9.5	29	3.6
700	31	2,993	-4.8	-13.6	30	3.3
650	31	3,571	-7.8	-18.2	29	4.7
600	31	4,192	-11.4	-24.0	28	5.6
550	31	4,850	-15.8	-28.9	29	6.8
500	31	5,566	-20.7	-33.4	29	8.6
450	31	6,329	-26.3	-38.8	29	9.5
400	31	7,180	-32.5	-44.4	28	10.6
350	31	8,108	-38.9	-48.6	28	13.0
300	31	9,151	-45.5		28	15.2
250	31	10,350	-51.7		28	16.7
200	31	11,788	-53.7		28	16.2
175	31	12,648	-52.8		28	13.6
150	31	13,643	-53.0		28	12.4
125	31	14,817	-54.0		28	10.7
100	31	16,245	-55.7		29	8.0
80	31	17,666	-55.7		30	5.8
70	31	18,516	-55.6		31	4.2
60	31	19,499	-55.2		31	3.2
50	31	20,667	-53.7		34	1.9
40	31	22,103	-52.8		03	1.8
30	30	23,968	-50.6		08	1.8
25	29	25,162	-49.3		09	2.1
20	26	26,624	-47.6		07	2.2
15	20	28,538	-44.0		05	1.8
10						
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4						

* ST PAUL IS., ALASKA 1014 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	10	.0	-.6	01	2.9
1000	31	124	-.1	-1.4	36	4.4
950	31	532	2.0	-4.5	05	3.8
900	31	972	1.2	-6.5	06	3.9
850	31	1,431	.1	-9.0	05	3.3
800	31	1,915	-2.3	-11.4	05	2.4
750	31	2,418	-5.1	-15.1	04	2.3
700	31	2,965	-8.1	-17.0	03	2.6
650	31	3,527	-11.4	-20.2	03	2.8
600	31	4,147	-15.1	-23.9	04	2.9
550	31	4,789	-19.1	-28.8	03	3.0
500	31	5,503	-23.9	-33.3	03	4.2
450	31	6,252	-29.3	-38.4	03	3.8
400	31	7,095	-35.4	-42.5	03	4.2
350	31	8,012	-42.1	-45.1	02	4.0
300	31	9,039	-48.9		02	4.6
250	31	10,218	-55.0		03	4.4
200	31	11,640	-54.9		01	2.8
175	30	12,510	-53.0		02	2.1
150	30	13,505	-52.7		02	1.9
125	30	14,681	-52.6		03	1.3
100	30	16,123	-52.4		04	1.9
80	30	17,567	-51.8		07	1.5
70	30	18,433	-51.4		07	2.0
60	30	19,433	-50.9		09	2.3
50	30	20,620	-50.6		11	2.8
40	30	22,077	-49.9		10	4.2
30	30	23,961	-48.9		09	6.2
25	30	25,160	-48.0		10	6.8
20	30	26,634	-47.1		10	7.3
15	29	28,546	-45.1		10	9.5
10	26	31,290	-40.1		09	11.7
7	24	33,747	-35.3		08	13.0
5	18	36,155	-29.4		08	15.6
4	7	37,640	-29.9			

SALEM, OREG. 1010 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	61	7.9	6.2	20	.9
1000	31	142	8.8	6.3	23	.8
950	31	565	7.5	4.2	25	.7
900	31	1,012	6.0	1.6	23	1.4
850	31	1,478	3.5	-1.8	23	2.9
800	31	1,968	1.0	-6.8	24	4.3
750	31	2,480	-1.6	-11.6	24	4.8
700	31	3,032	-4.3	-15.2	24	4.7
650	31	3,608	-7.8	-16.9	24	6.1
600	31	4,232	-11.4	-21.2	25	7.6
550	31	4,889	-15.4	-26.1	25	8.2
500	31	5,609	-20.2	-31.6	25	9.2
450	31	6,373	-25.7	-36.8	25	10.6
400	31	7,224	-31.7	-42.4	25	12.2
350	31	8,155	-38.7	-46.5	26	13.0
300	31	9,195	-46.6		26	14.9
250	31	10,386	-53.1		27	16.5
200	31	11,807	-57.0		27	15.9
175	31	12,653	-56.4		27	14.1
150	31	13,634	-55.4		27	12.7
125	31	14,796	-55.8		27	9.8
100	31	16,213	-56.5		26	7.5
80	31	17,632	-55.5		26	4.8
70	31	18,484	-55.3		26	3.2
60	31	19,467	-54.9		25	2.4
50	31	20,634	-54.6		26	1.0
40	31	22,063	-54.4		34	.2
30	31	23,912	-52.7		04	1.1
25	30	25,090	-51.4		06	2.0
20	29	26,551	-49.4		06	2.9
15	27	28,446	-45.8		07	2.7
10	17	31,168	-40.4		08	3.1
7	9	33,607	-33.9			
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See reference note at end of table

RAWINSONDE DATA

Average monthly values

SALT LAKE CITY, UTAH — 869 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1,288	7.8	1.5	16	2.6
1000	31	112				
950	31	546				
900	31	1,000				
850	31	1,474	11.0	-.9	16	3.6
800	31	1,977	8.4	-4.5	18	2.6
750	31	2,508	4.7	-7.2	24	1.7
700	31	3,066	.7	-9.9	29	3.8
650	31	3,657	-4.0	-13.4	28	6.0
600	31	4,283	-8.5	-18.4	28	7.3
550	31	4,952	-13.0	-22.3	27	8.3
500	31	5,673	-18.0	-26.2	27	10.3
450	31	6,453	-23.6	-32.1	27	11.2
400	31	7,304	-29.9	-38.5	27	12.1
350	31	8,241	-37.3	-45.7	27	13.5
300	31	9,288	-45.4		26	15.6
250	31	10,483	-53.3		27	18.4
200	31	11,897	-58.7		27	18.5
175	31	12,737	-57.8		27	18.9
150	31	13,711	-57.0		27	16.8
125	31	14,863	-57.7		27	13.9
100	31	16,270	-58.7		27	9.6
80	31	17,671	-58.4		26	6.7
70	31	18,511	-57.7		26	4.2
60	31	19,484	-57.1		27	1.9
50	31	20,639	-56.3		29	1.6
40	31	22,060	-54.8		34	1.6
30	31	23,910	-52.3		34	1.0
25	31	25,093	-50.5		31	1.2
20	30	26,554	-47.9		29	1.8
15	29	28,460	-44.7		28	1.9
10	19	31,218	-39.0		27	2.0
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SAN DIEGO, CALIF. — 999 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	124	13.5	11.3	23	.7
1000	31	115			33	.5
950	31	544	12.7	8.3	25	.8
900	31	1,001	11.9	2.5	31	2.2
850	31	1,481	12.7	-4.2	31	4.8
800	31	1,988	11.6	-8.9	29	5.8
750	31	2,525	9.0	-10.7	29	6.1
700	31	3,094	5.5	-13.4	28	6.0
650	31	3,691	1.7	-17.7	28	7.5
600	31	4,336	-2.4	-21.3	27	9.2
550	31	5,013	-7.0	-26.3	27	10.8
500	31	5,759	-12.2	-30.5	27	12.0
450	31	6,551	-18.0	-34.8	27	13.3
400	31	7,427	-24.8	-39.9	27	14.6
350	31	8,384	-32.3	-45.5	27	16.7
300	31	9,452	-41.0	-51.6	27	18.1
250	31	10,668	-50.3		27	20.0
200	31	12,095	-59.0		27	24.2
175	31	12,927	-61.4		27	24.7
150	31	13,883	-60.6		27	24.0
125	31	15,013	-62.1		26	19.1
100	31	16,385	-64.1		26	13.1
80	31	17,751	-63.7		26	6.8
70	31	18,573	-62.0		25	3.1
60	31	19,529	-60.3		33	.5
50	31	20,673	-57.8		08	2.8
40	31	22,091	-54.6		07	3.5
30	31	23,945	-51.6		08	3.9
25	31	25,134	-49.3		08	3.1
20	28	26,604	-46.7		08	2.9
15	24	28,534	-43.3		08	2.7
10	11	31,284	-38.4			
7	6	33,717	-35.6			
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SAN JUAN, P. R. — 1016 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	6	24.8	22.7	11	1.9
1000	31	148	24.1	21.0	10	4.9
950	31	595	21.3	17.3	10	7.2
900	31	1,064	18.5	13.1	11	7.7
850	31	1,552	15.7	9.0	11	7.6
800	31	2,065	13.0	5.0	11	6.8
750	31	2,601	10.8	-1.3	10	5.8
700	31	3,179	7.9	-6.6	10	4.2
650	31	3,777	4.6	-10.4	09	2.9
600	31	4,434	1.0	-14.8	10	2.5
550	31	5,118	-3.3	-19.5	14	1.4
500	31	5,875	-8.2	-24.0	15	1.6
450	31	6,678	-13.2	-29.7	18	.6
400	31	7,572	-19.4	-35.7	28	.9
350	31	8,551	-26.5	-41.3	29	3.0
300	31	9,645	-35.0	-48.6	28	4.9
250	31	10,891	-44.6		29	7.7
200	31	12,347	-56.2		30	13.1
175	31	13,183	-62.3		29	14.3
150	31	14,122	-67.9		29	13.7
125	31	15,204	-72.6		29	10.8
100	31	16,506	-74.7		29	7.8
80	31	17,807	-72.5		33	2.7
70	31	18,596	-69.4		06	3.3
60	31	19,526	-64.6		08	7.4
50	31	20,651	-59.9		08	12.3
40	29	22,063	-55.9		09	14.5
30	29	23,909	-51.9		09	18.9
25	28	25,096	-48.9		09	21.0
20	23	26,570	-44.8		09	22.0
15	20	28,510	-40.8		09	23.0
10	13	31,261	-37.6		10	23.9
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SAN NICOLAS, CALIF. — 993 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	174	11.8	9.3	31	4.9
1000	29	116				
950	29	548	13.7	5.0	31	5.3
900	29	1,004	14.3	-2.3	31	6.1
850	29	1,485	13.2	-6.9	31	6.3
800	29	1,992	10.8	-10.3	30	6.5
750	29	2,527	8.3	-13.5	29	6.8
700	29	3,093	4.8	-15.6	29	7.7
650	29	3,693	1.1	-17.5	29	8.2
600	29	4,331	-3.1	-21.0	29	9.7
550	29	5,014	-7.8	-25.1	29	10.6
500	29	5,748	-13.1	-29.0	28	11.4
450	29	6,541	-19.2	-34.4	28	12.7
400	29	7,406	-26.1	-39.7	28	14.2
350	29	8,357	-33.6	-45.4	28	15.9
300	29	9,419	-42.3	-52.9	27	17.4
250	29	10,627	-51.6	-61.4	27	19.2
200	29	12,046	-59.8	-67.5	27	22.1
175	29	12,876	-61.6	-67.3	27	22.4
150	29	13,832	-61.2		27	22.0
125	29	14,961	-62.7		26	17.5
100	29	16,331	-63.8		26	12.4
80	29	17,701	-63.0		26	6.9
70	29	18,525	-62.1		25	2.9
60	29	19,482	-60.0		12	.5
50	29	20,625	-58.0		08	2.1
40	28	22,036	-55.5		09	3.0
30	28	23,885	-52.3		08	2.9
25	25	25,065	-50.7		07	2.0
20	24	26,530	-48.0		09	2.4
15	23	28,435	-45.3		34	.4
10	19	31,159	-42.2		30	4.4
7	17	33,593	-38.1		27	2.9
5	11	35,887	-36.0			
4	6	37,388	-35.2			

* SAULT STE MARIE, MICH. — 988 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	221	6.0	2.3	08	1.2
1000	31	123				
950	31	545	7.1	-.6	11	3.2
900	31	988	5.5	-2.8	12	2.8
850	31	1,453	2.8	-5.1	12	1.1
800	31	1,942	.3	-8.8	11	1.1
750	31	2,456	-2.6	-12.1	20	.4
700	31	3,001	-5.5	-14.8	28	1.2
650	31	3,576	-8.4	-18.9	29	2.9
600	31	4,196	-12.2	-22.4	29	4.1
550	31	4,849	-16.4	-26.9	29	5.3
500	31	5,566	-21.0	-31.7	29	6.9
450	31	6,330	-26.1	-36.2	29	8.2
400	31	7,179	-32.0	-41.4	29	10.4
350	31	8,109	-38.6	-46.3	29	13.7
300	31	9,151	-45.7		28	14.3
250	31	10,348	-51.6		28	15.6
200	31	11,784	-54.3		27	16.2
175	31	12,641	-53.9		27	14.0
150	31	13,631	-53.6		28	11.9
125	31	14,804	-53.4		28	9.3
100	31	16,237	-54.5		29	7.8
80	29	17,666	-54.8		29	5.7
70	29	18,519	-54.5		30	4.3
60	29	19,509	-53.9		31	3.2
50	29	20,684	-52.6		33	1.4
40	29	22,127	-51.9		35	.9
30	28	23,995	-50.2		04	1.4
25	28	25,189	-48.8		08	1.8
20	27	26,652	-47.3		10	1.7
15	26	28,568	-44.2		10	1.6
10	26	31,320	-38.4		08	3.4
7	20	33,811	-31.9		08	3.7
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* SHEMYA, ALASKA — 1013 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	38	2.[illegible]	1.5	07	1.3
1000	31	145	1.7	.[illegible]	06	1.2
950	31	561	.6	-1.8	06	2.7
900	31	992	.4	-5.3	06	3.0
850	31	1,452	.4	-7.7	07	2.1
800	31	1,938	-.7	-11.4	05	1.[illegible]
750	31	2,452	-3.2	-13.4	02	1.5
700	31	2,995	-6.2	-16.1	36	1.7
650	31	3,568	-9.5	-19.2	35	1.7
600	31	4,186	-13.4	-22.7	32	2.2
550	31	4,841	-17.6	-27.4	34	2.3
500	31	5,550	-22.5	-32.6	33	2.3
450	31	6,314	-28.0	-37.9	34	3.5
400	31	7,152	-33.9	-43.0	34	4.[illegible]
350	31	8,075	-40.6	-44.4	32	5.5
300	31	9,109	-48.2		34	7.[illegible]
250	31	10,289	-56.0		34	8.1
200	31	11,701	-57.6		33	7.6
175	31	12,547	-55.7		33	6.7
150	31	13,532	-54.5		31	6.1
125	31	14,699	-54.5		31	4.8
100	30	16,130	-54.5		31	4.3
80	30	17,559	-54.2		32	2.3
70	30	18,415	-54.0		36	1.6
60	30	19,407	-53.5		34	.[illegible]
50	30	20,582	-52.[illegible]		05	1.0
40	30	22,024	-52.1		10	2.[illegible]
30	30	23,892	-50.7		10	4.0
25	30	25,082	-49.7		10	4.1
20	29	26,549	-48.3		11	4.2
15	28	28,467	-46.0		10	7.1
10	27	31,182	-42.4		09	6.3
7	23	33,628	-38.0		09	9.1
5	14	35,929	-34.9			
4	5	37,652	-30.7			

* SHREVEPORT, LA. — 1004 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	79	17.8	15.5	16	1.6
1000	31	116	18.1	15.1	16	2.0
950	31	561	18.[illegible]	11.1	20	5.3
900	31	1,019	15.9	8.3	21	6.1
850	31	1,504	13.5	4.0	23	5.8
800	31	2,012	11.0	-.4	25	5.7
750	31	2,547	7.[illegible]	-3.4	26	7.0
700	31	3,115	4.2	-7.9	27	7.2
650	31	3,711	.2	-11.7	28	8.4
600	31	4,351	-3.8	-17.3	28	9.7
550	31	5,029	-8.4	-23.0	28	11.8
500	31	5,766	-13.0	-27.8	28	13.4
450	31	6,558	-18.5	-33.2	28	15.2
400	31	7,431	-24.7	-39.1	27	17.2
350	31	8,390	-31.[illegible]	-45.9	28	20.4
300	31	9,463	-39.[illegible]	-51.9	28	23.3
250	31	10,684	-49.1		27	26.4
200	31	12,114	-58.8		27	30.4
175	31	12,946	-62.0		27	31.5
150	31	13,896	-62.8		27	29.7
125	31	15,015	-64.0		27	21.8
100	30	16,379	-65.6		28	13.6
80	30	17,738	-64.6		26	7.2
70	30	18,556	-62.8		27	3.3
60	30	19,510	-60.6		17	.2
50	30	20,654	-57.1		11	.6
40	30	22,076	-54.1		08	1.9
30	29	23,930	-51.1		09	3.8
25	28	25,121	-49.4		08	3.8
20	28	26,589	-47.1		08	4.7
15	28	28,507	-44.1		08	4.5
10	26	31,245	-39.9		06	3.6
7	20	33,707	-35.3		13	1.6
5	8	35,995	-32.2			
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SPOKANE, WASH. — 931 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	717	6.7	.7	16	2.0
1000	31	119				
950	31	545				
900	31	993	8.[illegible]	-.7	19	[illegible].1
850	31	1,465	6.7	-3.[illegible]	22	2.4
800	31	1,960	3.1	-6.1	24	2.7
750	31	2,475	-.[illegible]	-8.3	25	3.0
700	31	3,027	-4.8	-11.5	26	4.2
650	31	3,599	-8.6	-16.1	26	5.3
600	31	4,222	-12.3	-21.[illegible]	26	5.9
550	31	4,877	-16.[illegible]	-27.4	26	7.4
500	31	5,593	-21.1	-31.0	26	8.1
450	31	6,358	-26.4	-36.0	26	10.1
400	31	7,204	-30.5	-39.4	27	11.7
350	31	8,132	-39.4	-43.6	27	12.6
300	31	9,170	-47.2		27	13.2
250	31	10,357	-54.0		28	14.0
200	31	11,779	-56.3		27	12.4
175	31	12,629	-55.0		27	11.2
150	31	13,617	-53.9		26	[illegible].7
125	31	14,787	-54.3		27	7.[illegible]
100	31	16,214	-54.[illegible]		26	5.2
80	31	17,642	-54.4		26	4.3
70	31	18,497	-54.0		26	3.3
60	31	19,486	-54.0		28	1.7
50	31	20,656	-53.6		03	.3
40	31	22,094	-52.7		04	1.4
30	31	23,956	-51.5		07	3.3
25	30	25,147	-50.0		07	4.1
20	30	26,614	-47.5		07	5.1
15	25	28,534	-43.5		08	4.9
10	13	31,322	-35.8			
7	6	33,791	-31.8			
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* SWAN ISLAND, W. I. — 1011 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	10	26.3	23.2	12	4.6
1000	30	107	25.[illegible]	22.5	12	5.5
950	30	566	21.7	19.5	13	8.0
900	30	1,027	19.3	15.0	13	8.0
850	30	1,518	16.7	10.[illegible]	13	7.0
800	30	2,033	14.2	5.4	13	6.1
750	30	2,580	11.4	.7	13	5.3
700	30	3,151	8.3	-3.9	14	4.1
650	30	3,764	5.2	-8.1	15	3.0
600	30	4,410	1.5	-11.4	16	2.6
550	30	5,102	-2.[illegible]	-16.0	19	1.0
500	30	5,857	-7.[illegible]	-20.3	26	1.4
450	30	6,673	-12.2	-25.4	28	2.3
400	30	7,564	-18.0	-31.2	29	2.8
350	30	8,549	-25.1	-37.7	29	3.8
300	30	9,650	-33.7	-45.0	29	6.5
250	30	10,902	-43.8		28	8.9
200	30	12,363	-55.8		29	11.6
175	30	13,200	-62.[illegible]		29	13.0
150	28	14,137	-69.4		30	12.2
125	28	15,209	-74.7		29	9.1
100	28	16,499	-76.2		31	4.6
80	28	17,789	-74.[illegible]		06	2.0
70	27	18,570	-72.1		08	5.2
60	27	19,490	-67.5		09	8.2
50	27	20,603	-61.9		09	10.8
40	27	21,999	-57.[illegible]		09	14.2
30	25	23,830	-54.1		09	19.0
25	24	25,007	-50.8		09	21.5
20	22	26,473	-47.1		09	22.2
15	20	28,391	-42.[illegible]		09	23.0
10	17	31,143	-39.0		10	18.4
7	13	33,571	-37.1			
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TAMPA, FLA. — 1015 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	[illegible]	21.5	19.[illegible]	09	1.0
1000	31	137	21.5	17.8	09	1.9
950	31	585	19.7	13.[illegible]	16	1.7
900	31	1,047	17.1	[illegible]	20	1.8
850	31	1,533	14.5	5.7	22	3.1
800	31	2,044	12.1	.[illegible]	24	4.6
750	31	2,585	9.5	-3.2	24	5.4
700	31	3,152	6.3	-7.6	25	6.1
650	31	3,755	[illegible].8	-12.1	26	6.3
600	31	4,400	-.[illegible]	-16.3	26	6.8
550	31	5,086	-4.[illegible]	-21.[illegible]	27	7.1
500	31	5,835	-9.3	-25.[illegible]	27	8.2
450	31	6,642	-14.5	-30.1	27	9.8
400	31	7,525	-20.[illegible]	-35.4	27	11.9
350	31	8,499	-27.[illegible]	-41.9	27	13.6
300	31	9,589	-36.4	-48.8	27	16.9
250	31	10,829	-45.[illegible]		27	19.9
200	31	12,280	-56.6		27	22.7
175	31	13,118	-61.4		27	23.7
150	31	14,065	-65.1		27	23.7
125	31	15,171	-67.1		28	19.5
100	31	16,511	-68.8		28	12.5
80	31	17,847	-67.6		29	5.4
70	31	18,653	-65.9		33	2.4
60	30	19,598	-62.4		05	2.8
50	29	20,734	-58.5		08	5.5
40	29	22,151	-54.2		09	8.4
30	28	24,012	-50.6		09	10.1
25	27	25,207	-48.6		09	11.0
20	22	26,685	-45.2		08	10.2
15	18	28,613	-42.7		08	9.6
10	11	31,392	-36.5			
7						
5						
4						

TOPEKA, KANS. — 981 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	269	10.6	7.8	28	.3
1000	31	111				
950	31	541	12.5	5.6	30	.7
900	31	995	11.6	3.0	29	2.1
850	31	1,472	9.6	-.3	28	3.2
800	31	1,973	7.1	-3.6	28	5.5
750	31	2,498	4.2	-6.6	28	8.0
700	31	3,060	.7	-9.4	28	10.2
650	31	3,647	-2.9	-13.6	28	11.9
600	31	4,281	-6.8	-18.2	28	13.4
550	31	4,951	-11.4	-23.0	28	14.3
500	31	5,680	-16.3	-27.9	28	16.0
450	31	6,459	-21.7	-34.5	28	18.3
400	31	7,323	-27.9	-40.5	28	19.9
350	31	8,269	-34.8	-46.5	27	22.8
300	30	9,327	-42.8	-47.2	27	25.4
250	30	10,535	-51.1		27	28.0
200	30	11,961	-58.2		26	28.9
175	30	12,800	-58.4		26	26.3
150	30	13,772	-57.1		27	23.7
125	30	14,923	-57.9		28	17.4
100	30	16,326	-59.1		27	11.6
80	30	17,723	-59.6		28	7.3
70	30	18,559	-58.8		29	5.4
60	30	19,530	-57.8		29	3.8
50	30	20,684	-56.0		30	2.1
40	30	22,110	-53.8		31	1.2
30	27	23,965	-51.1		31	.9
25	27	25,154	-49.6		28	1.8
20	23	26,614	-47.6		29	2.7
15	19	26,522	-44.9		30	3.4
10	7	31,268	-40.7			
7						
5						
4						

+ TRUK, CAROLINE IS. — 1010 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	2	28.4	24.5	07	2.7
1000	31	92	27.[illegible]	22.9	07	[illegible].1
950	31	539	23.4	18.6	09	4.6
900	31	1,017	20.6	14.[illegible]	09	5.1
850	31	1,510	17.7	11.3	09	4.7
800	31	2,027	15.1	7.1	09	4.1
750	31	2,574	12.5	3.1	09	3.9
700	31	3,150	9.[illegible]	-.5	09	3.7
650	31	3,762	[illegible].0	-4.7	09	3.6
600	31	4,414	[illegible].5	-9.4	08	3.3
550	31	5,110	-1.4	-14.[illegible]	08	2.6
500	31	5,868	-5.6	-19.0	06	2.3
450	31	6,688	-10.2	-24.4	03	2.2
400	31	7,589	-15.8	-30.2	32	1.7
350	31	8,583	-22.4	-36.8	27	2.2
300	31	9,698	-30.7	-45.1	26	3.1
250	31	10,966	-41.2		24	4.9
200	31	12,442	-53.7		24	7.6
175	31	13,287	-60.8		25	7.8
150	31	14,229	-68.5		28	8.9
125	31	15,301	-76.[illegible]		29	7.9
100	31	16,571	-80.[illegible]		33	3.0
80	31	17,833	-76.[illegible]		07	2.3
70	31	18,616	-71.2		08	2.3
60	29	19,543	-67.3		10	3.1
50	29	20,653	-63.1		09	8.1
40	28	22,041	-58.9		09	17.2
30	27	23,870	-53.4		09	26.0
25	25	25,052	-50.3		09	30.6
20	23	26,518	-46.8		09	34.6
15	16	24,450	-40.8		09	35.8
10	11	31,242	-35.7		09	16.9
7	9	33,739	-32.2			
5						
4						

* TUCSON, ARIZ. — 922 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	789	15.3	-.1	14	3.1
1000	31	86				
950	31	524				
900	31	993	20.2	1.0	19	2.4
850	31	1,483	17.3	-1.6	25	2.1
800	31	1,997	13.6	-4.3	25	2.[illegible]
750	31	2,531	9.7	-8.1	24	4.3
700	31	3,106	5.9	-11.3	24	5.[illegible]
650	31	3,704	2.0	-14.[illegible]	24	7.2
600	31	4,350	-2.1	-19.[illegible]	25	9.2
550	31	5,028	-6.6	-24.[illegible]	25	11.0
500	31	5,775	-11.5	-28.[illegible]	26	13.2
450	31	6,565	-17.4	-33.5	26	15.1
400	31	7,445	-24.5	-38.4	26	17.4
350	31	8,403	-32.1	-43.6	27	19.3
300	31	9,471	-40.6	-50.2	27	21.8
250	31	10,687	-49.9		26	25.4
200	31	12,115	-58.3		26	28.1
175	31	12,949	-60.5		26	28.5
150	31	13,906	-61.7		26	26.2
125	31	15,032	-63.2		26	21.2
100	31	16,396	-65.1		26	13.[illegible]
80	31	17,759	-64.3		26	6.[illegible]
70	31	18,577	-63.1		27	2.0
60	30	19,533	-60.5		10	.4
50	30	20,677	-57.4		08	1.9
40	30	22,097	-54.4		08	3.6
30	30	23,954	-51.3		09	4.3
25	30	25,145	-49.0		09	4.0
20	30	26,616	-46.9		10	4.0
15	26	28,535	-43.7		08	3.6
10	27	31,289	-38.8		07	4.4
7	25	33,758	-34.6		09	3.1
5	18	36,131	-29.4		12	4.4
4	6	37,787	-26.3			

* VANDENBERG AFB, CALIF. — 1004 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	100	9.6	8.6	33	1.2
1000	29	130	9.8	8.5	34	1.8
950	29	564	11.8	4.0	35	6.2
900	29	1,011	12.9	-5.9	35	6.3
850	29	1,490	11.2	-8.2	34	5.9
800	29	1,994	9.1	-11.8	33	5.6
750	29	2,523	6.8	-16.0	32	7.1
700	29	3,090	4.0	-18.3	31	8.3
650	29	3,683	.5	-21.2	30	9.0
600	29	4,326	-3.5	-25.1	30	10.7
550	29	5,001	-8.2	-28.8	29	11.4
500	29	5,740	-13.5	-32.1	28	12.8
450	29	6,523	-19.5	-36.7	28	14.4
400	29	7,397	-26.2	-42.2	28	15.5
350	29	8,348	-34.0	-48.3	28	16.8
300	29	9,408	-42.5	-53.5	28	18.6
250	29	10,615	-52.2		28	20.5
200	29	12,031	-60.0		28	21.0
175	29	12,861	-61.5		27	21.1
150	29	13,818	-60.9		27	20.8
125	29	14,948	-62.0		27	16.6
100	29	16,325	-63.0		27	12.2
80	28	17,698	-61.7		27	10.7
70	28	18,526	-61.1		26	6.6
60	28	19,485	-59.8		27	4.2
50	28	20,628	-58.2		01	1.2
40	27	22,036	-56.4		07	2.0
30	27	23,875	-53.4		05	2.1
25	27	25,053	-51.4		06	1.7
20	27	26,509	-48.9		04	1.3
15	26	28,410	-45.6		34	1.6
10	25	31,132	-42.1		34	1.8
7	23	33,580	-36.4		32	1.2
5	10	35,895	-31.5			
4						

VICTORIA, TEXAS — 1009 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	33	21.[illegible]	19.8	14	3.0
1000	31	106	21.6	19.7	14	4.1
950	31	550	20.2	16.4	16	7.9
900	31	1,018	18.0	12.8	17	7.8
850	31	1,507	16.2	6.5	19	6.6
800	31	2,021	13.[illegible]	1.[illegible]	21	5.4
750	31	2,564	11.1	-3.3	23	3.5
700	31	3,134	7.4	-7.3	28	4.4
650	31	3,738	[illegible].5	-12.[illegible]	29	6.1
600	31	4,385	-1.0	-17.[illegible]	28	8.2
550	31	5,068	-6.0	-21.4	28	9.0
500	31	5,812	-10.9	-27.1	28	10.2
450	31	6,608	-16.3	-33.0	28	11.7
400	31	7,490	-22.6	-36.[illegible]	28	13.9
350	31	8,457	-29.7	-43.2	28	16.8
300	31	9,538	-38.0	-50.7	28	19.2
250	31	10,770	-47.2		27	23.8
200	31	12,212	-57.4		27	26.5
175	31	13,047	-61.9		27	26.6
150	31	13,992	-65.4		27	26.7
125	31	15,097	-66.8		27	21.7
100	31	16,440	-68.4		27	13.8
80	30	17,778	-67.[illegible]		27	6.2
70	30	18,583	-66.1		27	1.7
60	30	19,526	-62.1		11	2.8
50	30	20,664	-58.1		09	4.8
40	29	22,083	-54.8		08	7.3
30	28	23,939	-50.[illegible]		09	8.3
25	27	25,130	-49.2		09	9.0
20	23	26,606	-46.9		10	9.3
15	19	28,526	-43.7		08	8.4
10	11	31,258	-40.1		05	6.4
7						
5						
4						

See reference note at end of table

RAWINSONDE DATA

Average monthly values

MAY 1968

* WAKE IS., PACIFIC AREA — 1014 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	5	28.9	22.3	09	3.7
1000	30	123	24.8	21.7	09	4.2
950	30	573	21.3	18.9	09	4.9
900	30	1,046	18.3	15.1	10	4.5
850	30	1,535	15.7	11.1	09	4.1
800	30	2,049	13.8	4.2	09	3.1
750	30	2,586	11.2	-1.2	09	2.9
700	30	3,164	8.1	-6.2	09	2.1
650	30	3,769	4.6	-10.7	09	1.5
600	30	4,421	.8	-15.2	12	.9
550	30	5,113	-3.3	-19.6	31	.5
500	30	5,863	-7.8	-24.5	29	1.1
450	30	6,674	-13.2	-27.7	29	2.4
400	30	7,563	-19.2	-33.8	28	3.0
350	30	8,543	-26.3	-40.0	29	4.7
300	30	9,640	-34.9	-48.0	29	5.6
250	30	10,886	-45.1		29	7.3
200	30	12,340	-56.4		28	11.5
175	30	13,176	-61.5		28	13.5
150	30	14,122	-66.7		28	13.9
125	30	15,211	-71.4		29	10.8
100	29	16,521	-75.1		30	5.2
80	28	17,819	-72.8		05	1.6
70	28	18,609	-69.1		08	4.1
60	27	19,540	-65.1		09	6.9
50	26	20,662	-60.5		09	7.8
40	26	22,063	-57.3		09	14.0
30	26	23,900	-52.9		09	18.0
25	26	25,084	-50.0		09	19.6
20	26	26,552	-47.1		09	20.9
15	26	28,469	-44.1		09	20.6
10	22	31,215	-40.0		09	17.0
7	14	33,688	-36.1		09	18.7
5	6	36,050	-32.9			

* WALLOPS IS., VA. NASA — 1015 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	3	14.2	11.1	02	.5
1000	30	132	14.4	7.9	28	.6
950	30	563	12.9	3.8	30	3.0
900	30	1,018	10.9	1.5	28	4.2
850	30	1,493	8.3	-1.1	27	5.9
800	30	1,992	5.5	-4.3	26	7.2
750	30	2,517	2.7	-8.0	26	8.3
700	30	3,073	-.4	-11.7	26	9.5
650	30	3,659	-3.5	-16.2	27	12.0
600	30	4,292	-6.9	-20.1	27	14.3
550	30	4,960	-10.9	-24.5	27	16.3
500	30	5,694	-15.4	-28.7	27	18.3
450	30	6,476	-20.9	-33.7	27	21.1
400	30	7,342	-27.0	-39.2	27	23.6
350	30	8,292	-34.1	-45.3	27	25.9
300	30	9,355	-41.8	-49.0	27	27.7
250	30	10,566	-50.2		27	29.9
200	30	11,999	-57.6		27	30.9
175	30	12,838	-59.6		27	28.4
150	30	13,802	-59.7		27	24.7
125	29	14,944	-59.7		27	19.9
100	29	16,337	-60.5		28	15.0
80	29	17,728	-59.7		29	10.1
70	29	18,564	-58.4		29	7.1
60	29	19,537	-56.6		29	4.8
50	27	20,698	-54.6		28	2.7
40	26	22,125	-52.6		26	1.7
30	26	23,993	-50.3		34	.8
25	26	25,186	-48.8		15	.2
20	25	26,661	-46.7		27	1.9
15	24	28,591	-43.8		27	4.1
10	19	31,323	-38.9		25	4.8
7	14	33,768	-33.2			

WASHINGTON DULLES INT. AP — 1006 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	85	11.2	8.5	23	.4
1000	31	130			23	.7
950	31	561	11.9	3.1	28	3.1
900	31	1,012	9.8	.6	28	4.3
850	31	1,485	7.7	-2.5	29	5.3
800	31	1,982	5.0	-4.5	28	6.9
750	31	2,506	2.3	-8.1	27	8.8
700	31	3,062	-.7	-12.9	27	10.0
650	31	3,648	-3.8	-16.2	27	12.1
600	31	4,279	-7.3	-19.0	27	14.6
550	31	4,946	-11.4	-22.9	27	15.4
500	31	5,677	-15.9	-28.7	27	17.3
450	31	6,456	-21.2	-33.2	27	19.6
400	31	7,324	-27.3	-39.3	27	21.6
350	31	8,273	-34.4	-45.1	27	23.5
300	31	9,334	-42.2	-49.3	27	26.4
250	31	10,546	-50.2		27	29.5
200	31	11,978	-57.4		28	30.3
175	31	12,819	-58.1		28	29.1
150	31	13,790	-58.0		27	24.5
125	31	14,939	-58.3		28	18.8
100	31	16,339	-59.1		27	14.8
80	31	17,737	-58.5		28	9.4
70	31	18,577	-57.4		29	6.2
60	31	19,554	-56.1		30	3.9
50	31	20,718	-54.1		28	2.4
40	30	22,154	-51.6		27	1.5
30	29	24,027	-50.3		28	1.9
25	29	25,219	-49.3		28	1.5
20	25	26,690	-47.5		29	1.9
15	15	28,590	-45.1		31	2.3

WINNEMUCCA, NEV. — 868 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	1,312	6.0	-4.3	23	.6
1000	30	129				
950	30	562				
900	30	1,014				
850	30	1,484	9.1	-3.3	34	.7
800	30	1,985	6.9	-5.4	27	1.8
750	30	2,510	3.4	-7.5	27	3.1
700	30	3,069	-.7	-10.7	26	5.0
650	30	3,654	-4.9	-14.5	25	6.9
600	30	4,282	-8.9	-18.9	25	8.4
550	29	4,943	-13.3	-24.5	26	8.8
500	29	5,668	-18.3	-28.3	26	9.7
450	29	6,442	-23.8	-34.6	27	10.1
400	28	7,304	-30.1	-40.6	27	12.2
350	28	8,240	-37.6	-44.7	27	12.9
300	28	9,285	-45.3		27	14.3
250	28	10,480	-53.3		27	14.3
200	28	11,895	-58.6		27	15.9
175	26	12,740	-58.8		27	15.6
150	25	13,701	-57.6		27	14.7
125	25	14,853	-57.7		27	11.2
100	25	16,258	-58.3		26	8.7
80	23	17,650	-57.9		26	6.9
70	23	18,492	-57.3		26	5.1
60	23	19,467	-56.6		27	3.2
50	23	20,625	-55.9		35	.6
40	21	22,051	-54.9		14	.1
30	20	23,897	-53.2		31	1.8
25	18	25,083	-51.7		32	2.8
20	17	26,549	-48.6		28	2.9
15	13	28,474	-44.5			
10	5	31,322	-38.2			

WINSLOW, ARIZ. — 849 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1,492	9.1	-5.0	17	1.2
1000	31	101				
950	31	539				
900	31	995				
850	31	1,477			15	.6
800	31	1,985	12.2	-3.8	25	2.8
750	31	2,518	8.5	-6.6	26	3.6
700	31	3,088	4.2	-9.6	25	5.7
650	31	3,682	-.2	-13.2	25	6.4
600	31	4,322	-4.7	-17.3	25	7.8
550	31	4,997	-9.1	-22.1	26	9.3
500	31	5,733	-14.1	-27.6	26	11.3
450	31	6,520	-19.9	-33.0	26	12.7
400	31	7,387	-26.6	-38.4	27	14.7
350	31	8,338	-34.0	-44.7	27	17.3
300	31	9,399	-42.5	-51.2	27	20.3
250	31	10,608	-51.3		27	22.0
200	30	12,033	-58.3		27	25.1
175	30	12,871	-59.7		27	25.1
150	30	13,834	-60.1		27	22.2
125	30	14,968	-61.3		26	19.0
100	30	16,345	-63.1		27	12.8
80	29	17,713	-62.2		26	7.8
70	28	18,543	-61.4		26	3.4
60	28	19,501	-59.8		29	.2
50	28	20,646	-57.6		03	1.1
40	28	22,062	-55.2		06	.9
30	28	23,913	-51.5		08	1.2
25	26	25,102	-49.4		09	1.5
20	24	26,573	-46.8		15	.9
15	15	28,515	-44.2		06	.9

YAKUTAT, ALASKA — 1014 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	27	12	2.5	1.7	11	1.2
1000	27	127	5.3	2.3	11	1.6
950	27	544	5.2	-.5	13	2.6
900	27	987	2.6	-3.5	15	2.8
850	27	1,448	-.2	-5.6	16	3.3
800	27	1,931	-2.8	-9.7	16	2.8
750	27	2,439	-5.6	-12.3	18	2.2
700	27	2,979	-8.6	-16.3	21	1.8
650	27	3,546	-12.1	-20.1	23	1.7
600	27	4,159	-15.6	-25.2	26	2.0
550	27	4,806	-20.1	-29.3	26	2.5
500	27	5,511	-25.1	-33.1	27	2.3
450	27	6,266	-30.5	-37.7	28	2.9
400	27	7,097	-36.3	-42.4	27	3.9
350	27	8,010	-43.3	-46.2	27	4.8
300	27	9,032	-49.7		27	5.6
250	27	10,212	-53.7		28	6.0
200	27	11,643	-53.6		27	6.2
175	27	12,505	-51.5		26	4.7
150	27	13,506	-51.4		26	4.0
125	27	14,688	-52.1		25	3.8
100	27	16,131	-52.2		24	1.8
80	26	17,576	-51.2		21	1.1
70	26	18,443	-50.7		16	1.1
60	26	19,449	-50.2		13	1.8
50	26	20,641	-49.5		12	2.9
40	26	22,104	-49.0		10	3.6
30	26	23,996	-47.9		10	6.7
25	26	25,201	-46.9		10	7.6
20	25	26,681	-45.7		09	9.6
15	22	28,599	-42.9		09	12.1
10	10	31,327	-38.4			

\+ YAP, CAROLINE IS. — 1008 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	17	29.3	24.4	09	3.7
1000	31	87	28.0	22.5	09	4.6
950	31	533	23.2	17.5	08	6.2
900	31	1,011	20.4	13.6	08	5.8
850	31	1,503	17.8	[illegible]	09	5.4
800	31	2,020	15.1	5.4	09	4.7
750	31	2,562	12.7	.9	09	4.7
700	31	3,142	10.1	-4.5	08	5.2
650	31	3,753	6.8	-8.5	09	4.7
600	31	4,409	3.0	-12.5	09	4.4
550	31	5,104	-.8	-18.0	08	4.3
500	31	5,865	-5.2	[illegible]	08	4.3
450	31	6,680	-10.1	-27.5	08	4.1
400	31	7,585	-16.1	-32.6	08	2.3
350	31	8,577	-23.1	-39.0	10	.9
300	31	9,688	-31.4	-46.0	25	1.3
250	31	10,952	-41.3		25	3.8
200	31	12,427	-53.9		25	5.4
175	31	13,271	-60.9		26	5.1
150	31	14,212	-68.4		27	3.5
125	31	15,284	-75.9		34	[illegible]
100	31	16,555	-80.9		06	5.1
80	31	17,816	-78.2		08	5.7
70	31	18,587	-72.8		08	5.9
60	31	19,504	-67.0		09	[illegible]
50	31	20,617	-62.6		09	11.6
40	31	22,005	-59.0		09	18.6
30	29	23,831	-54.1		09	26.6
25	28	25,010	-50.7		09	29.3
20	24	26,478	-46.8		09	33.2
15	21	28,407	-41.1		09	34.3
10	17	31,190	-35.0		09	25.1

YUCCA FLAT, NEV. — 878 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1,196	9.3	-6.2	29	1.2
1000	31	93				
950	31	531				
900	31	988				
850	31	1,468	14.6	-2.6	32	2.2
800	31	1,978	11.4	-4.9	26	1.3
750	31	2,509	[illegible]	-7.7	25	3.0
700	31	3,077	3.2	-10.7	24	4.5
650	31	3,666	-1.3	-13.6	24	4.9
600	31	4,305	-6.4	-17.1	25	5.4
550	31	4,973	-11.0	-22.1	26	7.5
500	31	5,705	-15.7	-27.4	26	9.5
450	31	6,484	-21.1	-33.4	27	12.6
400	31	7,351	-27.6	-38.9	27	14.6
350	31	8,297	-35.1	-45.4	27	17.2
300	31	9,353	-43.4		27	19.6
250	31	10,555	-52.2		27	21.3
200	31	11,974	-59.0		27	22.1
175	31	12,809	-59.3		27	20.9
150	31	13,775	-59.0		27	19.2
125	31	14,916	[illegible]		27	17.2
100	31	16,306	-61.1		26	13.8
80	30	17,694	-60.7		27	6.9
70	30	18,527	-59.6		26	4.3
60	30	19,492	-58.3		28	1.5
50	30	20,644	-56.8		05	.5
40	29	22,065	-55.2		07	.6
30	27	23,912	-52.5		35	1.1
25	22	25,077	-50.7		30	2.1
20	20	26,544	-48.4		27	2.2
15	12	28,454	-45.6			

YUMA, ARIZ. — 993 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	22	131	17.9	3.6	30	.3
1000	22	71				
950	22	510	21.0	[illegible]	27	3.2
900	22	980	19.3	-.7	28	5.4
850	22	1,469	16.7	-4.5	26	4.8
800	22	1,981	13.1	-7.4	26	3.9
750	22	2,513	9.6	-10.5	26	3.1
700	22	3,088	5.6	-13.9	25	4.2
650	22	3,682	1.7	-17.0	25	6.0
600	22	4,330	-2.8	-21.8	26	7.2
550	22	5,005	-7.4	-25.9	26	10.6
500	22	5,749	-12.3	-30.5	26	12.7
450	22	6,536	-18.5	-34.1	26	14.4
400	22	7,413	-25.1	-38.8	26	18.3
350	22	8,367	-33.1	-45.7	26	21.3
300	22	9,431	-41.8	-50.3	26	23.6
250	22	10,641	-50.8		26	26.5
200	22	12,065	-59.1		26	[illegible]
175	20	12,897	-60.9		26	29.0
150	20	13,856	-60.7		26	26.5
125	14	14,980	-62.6		26	20.9
100	13	16,355	-64.5		26	15.1
80	11	17,714	-62.3		26	9.3
70	11	18,539	-61.3		27	5.0
60	10	19,503	-59.4		26	2.7
50	9	20,642	-57.3			
40	6	22,076	-53.6			
30	6	23,954	-51.5			
25	6	25,144	-49.5			
20	5	26,605	-46.6			

Note: All observations scheduled at 1200, G.C.T. Pressures shown under station names are the average monthly station pressures for the month of record, corrected to the height of the floors of the instrument shelters used for rawinsonde purposes. "Number of observations" refers to those of dynamic height only. Although the number of temperature observations at any given pressure surface is usually the same as for height, it is possible for temperature to be missing for one or more pressure surfaces of some observations. Dew Point averages are limited to those observations with temperatures warmer than -40°C. Observations of wind speed and direction are sometimes lost due to limiting angles, i.e., elevation angles less than 6° above the horizon, or any obstruction above the horizon.

The temperature and wind values are based on 15 or more observations at the surface or 5 observations at a standard pressure level for temperature and 10 for wind. Dew Point data are not published for standard pressure surfaces for which less than 5 observations are available. Dew Point data are computed and expressed on the basis of vapor pressure over water. Unless otherwise indicated, they are obtained from carbon hygristors.

These average values for standard pressure surfaces were obtained by rawinsondes; dynamic height (geopotential) in units of .98 dynamic meter, temperature and dew point in degrees Celsius, and resultant winds in tens of degrees and meters per second.

* Rawinsondes at this station were equipped with hypsometers to permit more accurate evaluations of pressure, and consequently height, at pressures lower than 50 mb. These rawinsondes were carried aloft by special high altitude balloons, in an effort to consistently reach higher altitudes.

\+ Observations for these stations are scheduled at 0000 G.C.T.

† Dew Point temperatures are based on a minimum of 5 observations. Therefore, due to the lesser number of Dew Point observations at the higher levels comparison with dry-bulb temperatures should be made with care. Dew Point temperatures replaced Relative Humidity January 1967.

SOLAR RADIATION DATA

Solar radiation intensities, tabulated in langleys per minute on a surface normal to the direction of the sun.

MAY 1968

Date	Sun's zenith distance								
	A. M.				*	P. M.			
	78.7°	75.7°	70.7°	60.0°		60.0°	70.7°	75.7°	78.7°
ALBUQUERQUE, N. MEX.									
	Air mass								
	4.19	3.35	2.51	1.67	*	1.67	2.51	3.35	4.19
May									
1-----	0.65	0.74	0.88	1.08	1.36	----	----	----	----
4-----	----	----	.79	1.00	----	----	----	----	----
6-----	.49	----	.88	1.10	1.41	1.10	----	----	----
7-----	.71	.83	1.04	1.25	1.53	----	----	----	----
8-----	----	----	----	----	----	1.12	----	----	----
10----	.65	.75	.88	1.07	----	----	0.94	----	----
11----	.77	.88	1.00	1.18	----	----	----	----	----
12----	----	----	----	----	----	1.14	.95	0.78	----
13----	.73	.78	1.01	1.19	1.42	1.23	1.05	.94	0.83
15----	.90	1.01	1.14	1.30	1.49	1.26	1.10	.96	.86
16----	.90	1.01	1.12	1.28	1.44	1.20	1.01	.84	.72
17----	.78	.89	1.01	1.21	1.42	1.29	1.14	.99	.89
18----	.91	1.02	1.12	1.28	----	----	----	----	----
19----	.80	.89	1.02	1.17	1.41	1.12	.87	.73	.59
21----	.68	.96	1.07	1.23	1.41	1.20	1.02	.91	.83
22----	.92	1.02	1.13	1.26	1.47	----	1.01	.84	.75
23----	.79	.89	1.00	1.16	1.41	1.14	.95	.81	.72
24----	.83	.93	1.04	1.20	1.38	1.11	.90	.76	.63
25----	.84	.93	1.04	1.18	----	----	----	----	.70
26----	.87	.97	1.06	1.19	1.42	1.19	1.02	.88	.77
27----	.92	1.00	1.09	1.24	1.45	1.22	1.08	.97	.90
28----	.93	.99	1.09	1.24	1.40	----	----	----	----
29----	.85	.93	1.04	1.17	----	----	----	----	----
30----	----	----	----	1.12	1.43	1.20	.99	----	----
31----	----	.92	1.03	1.20	1.42	----	----	----	----
Averages	0.81	0.91	1.02	1.19	1.43	1.18	1.00	0.87	0.77
OMAHA, NEBR.									
	Air mass								
	4.78	3.82	2.87	1.91	*	1.91	2.87	3.82	4.78
May									
3-----	----	----	----	----	HM1.27	----	----	----	----
4-----	----	----	----	----	HM1.26	HS1.06	HS0.85	HS0.71	HS0.62
5-----	----	----	----	1.11	HM1.21	HM .95	----	----	----
8-----	HS0.73	HS0.83	----	----	----	----	----	----	----
11----	----	----	----	----	----	----	HS .95	HS .79	HS .72
12----	HS .73	HS .82	HS0.92	HS1.14	HS1.30	----	----	----	----
14----	----	----	HS .95	HS1.12	----	----	----	----	----
15----	HM .58	HM .71	HM .87	HS1.07	----	----	----	----	----
17----	HS .77	HS .88	HS .98	HS1.17	----	----	----	----	----
21----	HM .68	HS .77	HS .92	HS1.11	HS1.46	----	----	----	----
24----	HS .69	HS .80	HS .94	HS1.10	HS1.34	----	----	----	----
29----	HS .68	HS .79	HS .86	----	----	----	----	----	----
30----	----	----	----	----	----	----	HS .76	HM .60	----
Averages	0.69	0.80	0.92	1.12	1.31	1.01	0.85	0.70	0.67
GUAM, M. I.									
	Air mass								
	4.92	3.93	2.95	1.97	*	1.97	2.95	3.93	4.92
May									
7-----	----	----	S 0.88	----	----	----	----	----	----
8-----	S 0.66	S 0.75	S .89	----	----	----	----	----	----
9-----	----	----	S .94	M 1.03	----	----	----	M 0.77	----
Averages	0.66	0.75	0.90	1.03	----	----	----	0.77	----

S Slight haze - indeterminable
M Moderate haze - indeterminable
* Values corresponding to true solar noon

HS Slight haze
HM Moderate haze

Date	Sun's zenith distance								
	A. M.				*	P. M.			
	78.7°	75.7°	70.7°	60.0°		60.0°	70.7°	75.7°	78.7°
MADISON, WIS.									
	Air mass								
	4.69	3.75	2.81	1.88	*	1.88	2.81	3.75	4.69
May									
1-----	S 0.72	S 0.83	S 0.99	S 1.19	S 1.54	S 1.16	S 0.93	M 0.77	M 0.67
6-----	S .76	S .85	S .98	----	----	----	----	----	----
8-----	----	S .86	----	----	----	----	----	----	----
21----	----	----	----	S 1.14	----	----	----	----	----
Averages	0.74	0.85	0.99	1.17	1.54	1.16	0.93	0.77	0.67
BLUE HILL OBS., MASS.									
	Air mass								
	4.89	3.92	2.94	1.96	*	1.96	2.94	3.92	4.89
May									
7-----	0.70	0.84	0.96	1.15	1.36	1.10	0.84	0.77	0.67
8-----	.77	.87	1.04	1.18	1.36	----	----	----	----
9-----	.54	.65	.74	.98	----	----	----	----	----
14----	.60	.70	.82	1.01	1.30	.96	.70	.58	----
15----	.72	.79	.91	1.13	----	----	----	----	----
22----	.60	.70	.83	1.00	----	----	----	----	----
23----	.70	.79	.91	1.10	----	----	----	----	----
26----	.48	.59	.75	.91	----	1.08	.94	.79	.70
Averages	0.64	0.74	0.87	1.06	1.34	1.05	0.83	0.71	0.69
TUCSON, ARIZ.									
	Air mass								
	4.56	3.65	2.74	1.83	*	1.83	2.74	3.65	4.56
May									
1-----	0.71	0.82	0.94	----	----	----	----	----	----
2-----	----	.89	----	1.14	----	----	----	0.84	0.73
3-----	.69	.79	.90	1.07	1.24	1.00	0.84	.68	----
4-----	----	----	----	----	1.21	.99	.80	.61	.51
5-----	.64	.76	.88	1.03	1.29	----	----	----	----
6-----	.77	.85	.99	1.13	1.40	1.17	.99	.88	.78
7-----	.68	.78	.92	1.11	1.30	----	----	----	----
8-----	.70	.80	.94	1.12	----	----	1.00	.89	.80
9-----	----	----	----	----	----	----	----	.83	----
10----	.79	.88	1.00	1.14	1.37	----	----	.84	.73
12----	.76	.84	----	----	----	1.09	.88	.77	.64
13----	.70	.82	.97	1.16	1.37	1.09	----	----	----
14----	----	----	----	----	----	1.19	1.01	.89	.79
15----	.80	.87	1.00	1.13	1.36	1.11	.98	.89	.77
16----	.77	.88	.99	1.16	1.34	1.14	.97	.87	.73
17----	.78	.89	1.00	1.18	1.39	1.19	1.01	.90	.81
18----	.82	.91	1.01	1.18	1.32	1.10	.97	.87	.77
19----	.78	.88	1.00	1.16	1.32	1.14	.98	.86	.74
20----	.74	.84	.96	----	1.25	1.10	.93	.81	.70
21----	.81	.91	1.02	1.16	1.32	1.14	1.00	.90	.80
22----	----	----	----	----	1.34	1.12	1.00	.90	.80
23----	.80	.89	1.00	1.13	1.32	1.13	.97	.83	.72
24----	.79	.87	.99	1.14	1.36	1.15	1.00	.88	.78
25----	.78	.88	1.00	1.15	1.32	1.11	.92	.83	.73
26----	.77	.86	.99	1.14	1.30	1.12	.99	.83	.70
27----	.79	.89	1.00	1.14	1.34	1.13	1.00	.88	.79
28----	.80	.88	.99	1.13	1.32	1.11	.92	.80	.71
29----	----	----	----	----	----	----	----	.90	.81
30----	.81	.90	1.02	1.18	1.31	1.12	.99	.89	.80
31----	.77	.87	.99	1.13	1.32	1.11	.95	.84	.71
Averages	0.76	0.85	0.97	1.13	1.32	1.11	0.95	0.84	0.74

Langley is the unit used to denote one gram calorie per square centimeter. An explanation of the formula used in computing the air mass values for each station listed above appears in the February 1957 issue, Vol. 8, No. 2, page 63, of this publication.

SOLAR RADIATION DATA

Daily totals and monthly averages of solar radiation (direct and diffuse) received on a horizontal surface, tabulated in langleys. MAY 1968

Station	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
ALBUQUERQUE N.M.	750	490	410	662	589	747	756	—	448	518	625	658	777	524	795	834	787	714	787	744	761	766	792	760	775	780	787	776	686	786	629	697
AMES IOWA	571	547	618	579	649	349	113	537	365	626	378	652	361	615	443	460	617	309	590	411	515	123	495	678	68	64	547	344	477	607	140	447
ANNETTE ALASKA	193	373	527	655	323	435	595	666	663	670	649	670	681	684	122	426	687	476	332	127	417	352	—	—	262	—	—	481	456	548	488	480
APALACHICOLA FLORIDA	712	689	685	370	703	748	643	614	685	543	504	670	680	679	704	645	666	—	609	724	719	720	705	607	382	450	671	433	688	701	672	634
ARGONNE NAT. LAB.	723	643	574	511	765	689	690	735	533	612	431	593	572	404	343	203	534	393	364	479	549	438	103	638	232	226	143	181	275	470	581	472
ASTORIA OREGON	514	656	679	396	290	505	657	697	620	190	314	203	402	529	—	738	461	538	129	563	617	602	575	501	385	479	507	575	595	722	231	496
ATLANTA GEORGIA	696	686	550	331	709	710	637	394	547	520	366	436	492	272	261	430	271	449	700	693	540	666	694	621	595	123	601	405	449	625	683	521
BARROW ALASKA	426	—	465	429	489	423	610	583	585	497	429	—	468	643	724	601	617	729	900	776	13	757	811	738	237	273	978	531	514	564	399	662
BETHEL ALASKA	559	370	170	203	458	452	587	553	318	112	224	558	565	590	654	249	292	483	503	566	670	667	657	646	591	531	620	275	146	217	373	447
BISMARCK N.DAK.	669	361	671	597	410	49	113	167	754	140	761	736	481	393	400	743	484	98	208	769	788	625	799	571	557	652	674	742	759	551	537	524
BLUE HILL MASS.	443	570	584	372	465	285	705	678	620	395	549	82	606	667	665	350	449	186	324	200	522	506	549	371	584	619	601	585	122	384	405	466
BOISE IDAHO	457	659	646	323	401	580	652	667	612	472	518	304	222	279	545	681	686	668	443	532	589	—	644	680	504	494	653	643	673	719	677	554
BOSTON MASSACHUSETTS	350	494	567	393	513	278	681	621	597	433	545	56	657	651	625	353	261	143	315	194	497	472	483	368	564	576	460	564	103	580	292	442
BROWNSVILLE TEXAS	521	572	327	478	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
BURLINGTON VERMONT	244	382	565	226	385	645	669	579	254	464	566	121	542	643	575	493	85	228	228	111	416	515	560	659	650	670	686	676	180	553	330	448
CAPE HATTERAS N.C.	584	729	—	539	147	561	726	681	642	659	580	575	418	615	301	449	690	472	613	734	663	706	711	677	619	305	169	339	463	585	650	553
CARIBOU MAINE	727	413	718	93	340	556	572	704	433	556	724	560	773	696	623	632	174	—	—	—	421	428	523	—	810	—	—	756	751	219	218	537
CHARLESTON S.C.	715	646	699	668	430	—	596	673	569	521	532	575	505	273	221	512	599	465	523	759	736	753	720	708	649	124	723	97	674	623	689	566
CLEVELAND OHIO	704	601	241	513	584	682	672	397	408	600	70	117	576	162	370	416	575	420	315	580	520	656	155	253	709	102	123	628	366	411	403	430
COLUMBIA MISSOURI	682	668	589	699	711	572	139	703	667	346	198	701	370	549	419	720	560	427	567	451	762	35	82	458	176	111	626	688	506	598	196	483
DAVIS CALIFORNIA	700	700	710	701	652	748	704	692	732	658	582	608	182	692	744	736	656	656	477	556	632	592	708	487	758	764	792	782	749	732	734	665
DODGE CITY KANSAS	723	661	634	680	382	366	763	573	96	128	474	239	442	771	773	647	754	701	773	79	76	313	145	83	469	573	750	704	774	740	473	508
E. LANSING MICHIGAN	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	459	632	74	96	141	220	305	567	—
EL CENTRO CALIF. NPF	633	581	648	648	621	675	631	532	674	652	662	650	697	694	672	695	695	695	662	682	715	702	703	714	688	694	689	682	695	712	692	670
EL PASO TEXAS	758	722	729	730	768	789	791	716	652	763	633	767	794	747	775	792	809	807	793	766	800	801	817	806	825	808	812	793	688	794	802	769
ELY NEVADA	741	609	444	466	650	727	791	540	405	531	357	555	435	518	666	819	802	650	581	671	560	408	600	679	751	791	823	699	621	546	794	620
EPPLEY NEWPORT R.I.	470	469	555	360	381	685	650	665	614	405	518	165	613	673	634	333	519	227	386	354	449	534	483	181	593	578	645	545	100	484	412	474
FAIRBANKS ALASKA	563	531	595	589	533	368	459	388	566	169	146	636	626	640	680	446	312	—	—	—	—	323	—	—	470	596	648	596	576	644	657	401
FLAMING GORGE UTAH	641	619	783	698	329	290	624	760	648	672	704	380	680	528	314	520	661	692	786	621	715	299	335	480	539	508	819	819	494	604	784	592
FORT WORTH TEXAS	753	628	338	708	621	521	237	434	217	389	348	250	385	643	297	305	125	793	629	762	282	605	579	587	708	654	373	672	763	490	491	503
FRESNO CALIFORNIA	682	685	670	688	705	718	532	597	671	705	667	270	274	663	733	724	675	704	523	726	675	737	725	732	738	735	726	726	761	720	740	665
GAINESVILLE FLORIDA	653	679	645	567	542	688	559	570	444	460	408	532	660	556	—	—	644	626	446	730	655	640	—	—	329	368	742	165	725	690	588	567
GLASGOW MONTANA	659	510	600	707	577	374	384	699	748	686	775	703	555	469	414	611	524	379	700	683	762	449	630	523	564	621	509	739	690	662	692	564
GRAND JUNCTION COLO.	692	665	721	533	238	306	759	704	407	425	625	337	317	517	766	552	731	622	766	630	683	572	493	368	715	748	760	775	691	522	743	593
GREAT FALLS MONTANA	518	650	691	526	322	456*	—	446	673	712	754	353	—	330	418	516	372	770	778	674	566	211	505	271	590	659	535	578	537	621	810	546*
GREENSBORO N.C.	633	634	524	447	500	681	654	637	515	544	330	355	408	79	462	329	496	468	658	699	521	652	585	595	135	242	217	232	602	504	615	482
INDIANAPOLIS INDIANA	656	697	387	588	695	676	603	425	429	259	128	513	566	542	202	508	220	626	288	442	728	456	156	194	380	146	150	172	172	465	680	424
ITHACA NEW YORK	157	371	427	114	422	693	705	656	183	561	322	76	153	585	297	202	455	169	431	134	390	664	294	571	661	496	612	217	169	223	223	375
LAKE CHARLES LA.	654	459	538	575	633	633	535	270	135	108	336	341	404	628	624	621	487	343	697	698	670	600	577	359	519	510	116	699	687	653	683	509
LAKELAND FLORIDA	698	707	620	406	577	658	610	582	575	425	526	587	511	543	697	675	634	722	508	747	604	739	721	297	327	519	635	635	751	768	734	604
LANDER WYOMING	600	649	750	715	462	370	639	710	735	245	676	469	630	556	450	675	491	717	753	519	280	596	287	448	580	608	799	777	573	755	699	587
LARAMIE WYOMING	629	296	660	545	309	311	511	657	555	604	663	402	474	655	387	448	461	569	659	492	514	634	332	228	461	366	582	717	526	403	693	508
LAS VEGAS NEVADA	606	693	685	629	615	764	669	516	671	675	658	556	710	758	786	783	733	725	726	718	786	789	791	776	784	801	794	802	790	795	777	721
LITTLE ROCK ARKANSAS	696	672	—	712	706	649	579	501	202	74	310	202	42	610	383	643	768	748	742	763	480	—	—	626	401	579	641	741	690	598	604	549
LOS ANGELES CALIF.	477	385	462	572	364	678	534	390	707	563	442	658	615	774	762	728	714	732	677	722	682	750	728	767	762	769	761	736	650	293	657	629
MADISON WISCONSIN	701	597	606	412	746	594	547	709	319	491	552	662	677	437	526	220	681	334	444	373	583	219*	219	633	260	82	165	146	223	522	537	459*
MANHATTAN KANSAS	601	596	610	602	545	82	474	602	477	323	343	569	266	618	604	602	640	441	670	522	660	25	63	373	96	404	344	651	639	419	390	460
MATANUSKA ALASKA	304	393	605	192	292	193	392	301	401	548	536	629	651	273	136	144	622	561	666	676	617	192	232	216	—	310	362	526	527	226	411	405
MAUNA LOA OBS.HAWAII	554	782	690	676	794	772	642	371	493	599	711	391	374	345	788	554	632	701	469	751	783	827	767	797	804	792	581	730	666	791	773	658
MEDFORD OREGON	705	722	709	724	590	723	720	728	744	720	355	608	656	683	774	766	376	542	202	485	530	740	581	336	640	630	667	670	700	813	625	628
MIAMI FLORIDA	559	646	412	540	346	526	268	431	293	274	219	508	593	—	666	656	712	622	670	469	399	323	284	261	368	234	675	482	286	409	216	445
MIDLAND TEXAS	638	561	614	593	600	641	671	566	94	231	340	163	678	631	631	686	626	697	378	553	666	677	695	660	693	—	—	579	641	677	668	571
NASHVILLE TENNESSEE	683	656	521	—	734	735	—	291	430	—	—	288	248	386	580	693	305	585	679	548	580	580	629	544	579	206	507	649	352	596	631	526
NEW YORK N.Y. U	452	656	555	382	614	324	727	681	554	435	277	122	238	597	534	98	683	199	718	422	590	560	218	121	674	609	487	163	226	540	292	443
NORTH OMAHA NEBRASKA	597	619	725	741	735	111	274	749	703	664	651	749	415	766	586	593	631	358	691	579	774	102	536	744	90	320	563	679	703	614	246	558

Note. --Langley is the unit used to denote one gram calorie per square centimeter.
Values with an asterisk are interpolated.

U Indicates Urban sites

SOLAR RADIATION DATA

Daily totals and monthly averages of solar radiation (direct and diffuse) received on a horizontal surface, tabulated in langleys. MAY 1968

Station	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
OAK RIDGE TENNESSEE	697	627	602	374	606	739	614	516	290	317	141	344	444	349	577	510	327	479	537	461	549	656	657	594	650	169	651	404	371	536	679	499
OKLAHOMA CITY OKLA.	697	667	366	711	684	397	420	440	193	312	108	219	168	676	538	415	687	726	674	484	71	532	480	158	245	605	595	734	704	474	225	465
PAGE ARIZONA	---	690	743	494	501	---	752	609	585	640	495	593	745	797	809	782	804	737	781	711	782	788	702	717	763	798	799	778	763	734	797	713
PALMER AAES ALASKA	267	421	524	220	246	221	361	294	374	483	486	586	562	221	140	180	286	592	621	616	517	193	212	264	529	384	369	517	527	207	357	392
PHOENIX ARIZONA	678	607	705	699	631	730	694	634	719	711	625	637	---	746	773	767	759	766	760	727	746	763	760	753	766	761	765	745	727	767	760	723
PORTLAND MAINE	554	459	640	411	540	614	725	676	---	---	---	---	---	---	---	---	---	---	---	53*	624	420	530	683	642	622	760	724	349	601	432	---
PROSSER WASHINGTON	610	664	665	585	577	678	673	646	581	654	570	285	462	455	689	710	670	663	295	460	576	724	634	713	423	536	645	581	761	761	655	600
RAPID CITY S.DAK.	657	522	603	693	413	413	359	352	722	351	752	699	467	472	418	516	528	429	664	756	628	77	114	504	381	499	588	753	729	404	489	515
RENO NEVADA	647	611	443	661	629	686	661	485	438	682	525	352	291	693	698	701	458	635	312	568	703	574	480	602	697	686	687	682	698	655	680	591
RICHLAND 25 NW WASH.	608	675	682	538	496	509	691	677	586	652	661	635	343	429	633	736	728	698	313	456	590	545	609	698	449	567	608	559	761	755	667	599
RIVERSIDE CALIFORNIA	505	380	239	438	172	593	462	340	566	535	359	51	346	682	685	658	640	662	585	655	664	544	607	665	653	674	692	651	642	456	473	525
RUSTON LOUISIANA	642	615	455	550	628	627	497	352	151	152	374	165	501	523	408	282	110	564	654	672	522	619	580	496	538	425	413	681	662	378	544	477
SAINT CLOUD MINN.	641	546	632	241	704	166	78	177	570	654	266	691	561	485	576	261	298	127	526	417	494	495	651	219	276	33	207	460	293	494	125	399
SALT LAKE CITY	698	700	755	717	341	---	---	736	625	653	381	527	592	219	407	744	797	791	742	596	449	364	493	427	499	740	808	750	612	505	726	600
SAN ANTONIO TEXAS	633	511	338	677	395	175	51	411	469	413	94	217	332	293	525	250	179	732	669	678	558	507	377	536	623	432	397	703	531	620	413	443
SANTA MARIA CALIF.	586	524	490	481	431	728	551	562	719	674	693	284	442	694	737	725	632	720	551	698	755	758	757	769	756	765	752	747	751	777	715	652
SAULT STE MARIE MICH	692	313	320	541	744	705	587	483	223	738	640	587	700	351	524	76	418	740	474	423	733	646	614	710	663	338	104	95	156	181	655	489
SEATTLE TACOMA WASH.	571	660	659	512	206	366	447	621	435	591	452	296	273	543	683	718	723	625	213	314	590	725	593	620	262	680	427	576	479	642	402	513
SPOKANE WASHINGTON	---	---	---	---	---	---	---	---	---	---	692	687	499	447	668	726	718	721	643	194	386	540	621	730	194	625	525	524	734	718	719	---
STATE COLLEGE PENN.	521	590	431	537	315	706	744	636	195	454	124	261	322	392	211	161	609	194	492	336	372	582	74	98	699	625	154	84	428	231	124	377
STERLING VIRGINA	731	---	397	382	560	---	695	642	558	524	245	271	566	220	148	---	---	---	---	---	461	674	73	287	764	588	54	137	707	337	665	445
SWAN ISLAND W.I.	605	676	640	636	600	454	645	626	623	652	603	579	651	652	625	615*	---	623	499	320	559	617	657	627	633	654	596	496	356	174	349	568*
TAMPA FLORIDA	699	693	642	426	682	666	584	547	553	463	611	596	551	670	629	---	678	679	476	682	506	704	606	272	267	568	717	488	763	694	673	593
WAKE ISLAND PACIFIC	---	530	676	682	668	668	612	---	577	---	649	688*	---	673	458	631	680	677	285	678	675	699	689	687	678	685	710	704	695	691	638	644*

Note.--Langley is the unit used to denote one gram calorie per square centimeter.

Values with an asterisk are interpolated.

NET RADIATION

Net radiation in langleys per day (8 a.m. to 8 a.m.) at Palmer, Alaska

MAY 1968

Date.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
Langleys. . .	68	148	229	64	89	42	158	78	175	231	213	267	265	117	52	53	280	276	290	287	285	90	101	116	273	227	177	268	271	106	167	176

The measurement is made with a CSIRO FUNK net exchange radiometer over a plot of sod. The value represents the total incoming minus the total outgoing radiation of all wave lengths.

These data are of an experimental nature and are published as received from the Palmer Exp. Station. The instrument with which they were measured has not been checked by ESSA, Weather Bureau.

SOLAR ULTRA-VIOLET RADIATION DATA

Daily totals and monthly average (<3900 Å)

Date.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
Langleys. . .	22.97	22.64	26.76	24.16	26.87	17.79	6.64	23.68	17.91	28.89	17.62	28.16	16.90	27.01	17.33	20.22	27.01	14.87	24.84	18.48	21.23	7.22	21.08	29.17	4.33	4.04	22.96	16.32	20.51	26.43	8.23	19.75

These data are from an U - V Eppley total ultra violet sensor and Speedomax H (Leeds Northrup) Recorder. It is at the same location (Agronomy Building, Iowa State University, Ames) as the published total solar radiation instrumentation. This instrument has not been checked by the ESSA, Weather Bureau.

TOTAL OZONE DATA

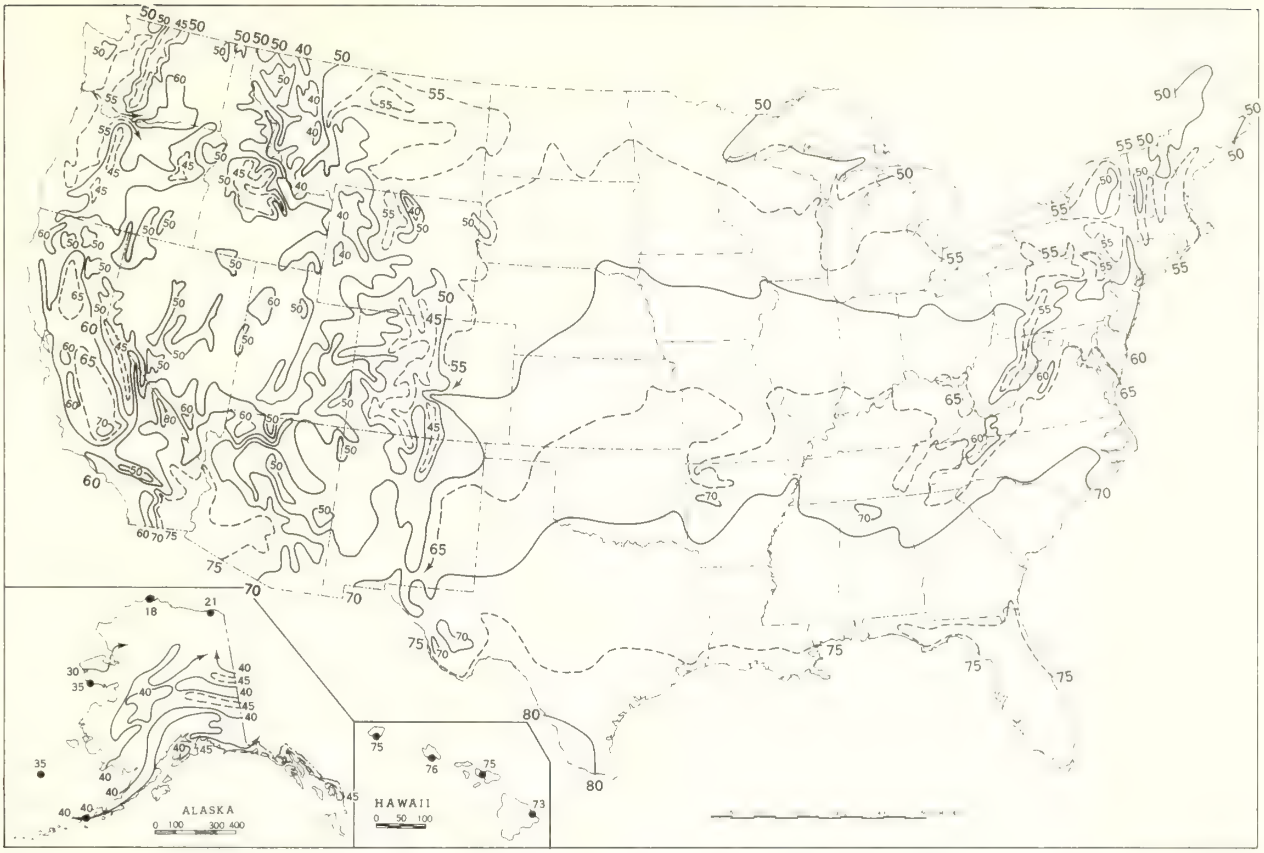
These provisional ozone data are obtained from measurements made with a Dobson ozone spectrophotometer, and are applicable approximately to local apparent noon. The data are presented in the code λS Ω Ω Ω defined in the August 1962 WMO circular entitled "PUBLICATION OF DATA FOR METEOROLOGICAL RESEARCH, WORLD OZONE DATA."

Units: Milli-atmo-cms.

Station	Day of month																														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean O_3
															Data will be delayed																	

The spectrophotometer measures the total amount of ozone in the atmosphere, i e , the amount contained in a vertical column of air extending from ground level to the top of the atmosphere in the vicinity of the station. The amount of ozone in this column (coded Ω Ω Ω) is expressed in terms of a thickness of a layer it would occupy at standard temperature and pressure, e g., 350 milli-atmo-cm ozone implies an ozone layer 0.350 centimeter thick. The code λS designates the type of measurement made

Chart 1. A. Normal Daily Average Temperature (°F. 1931-60), May.



B. Temperature Departure from 30 - Year Mean (°F 1931-60), May 1968.

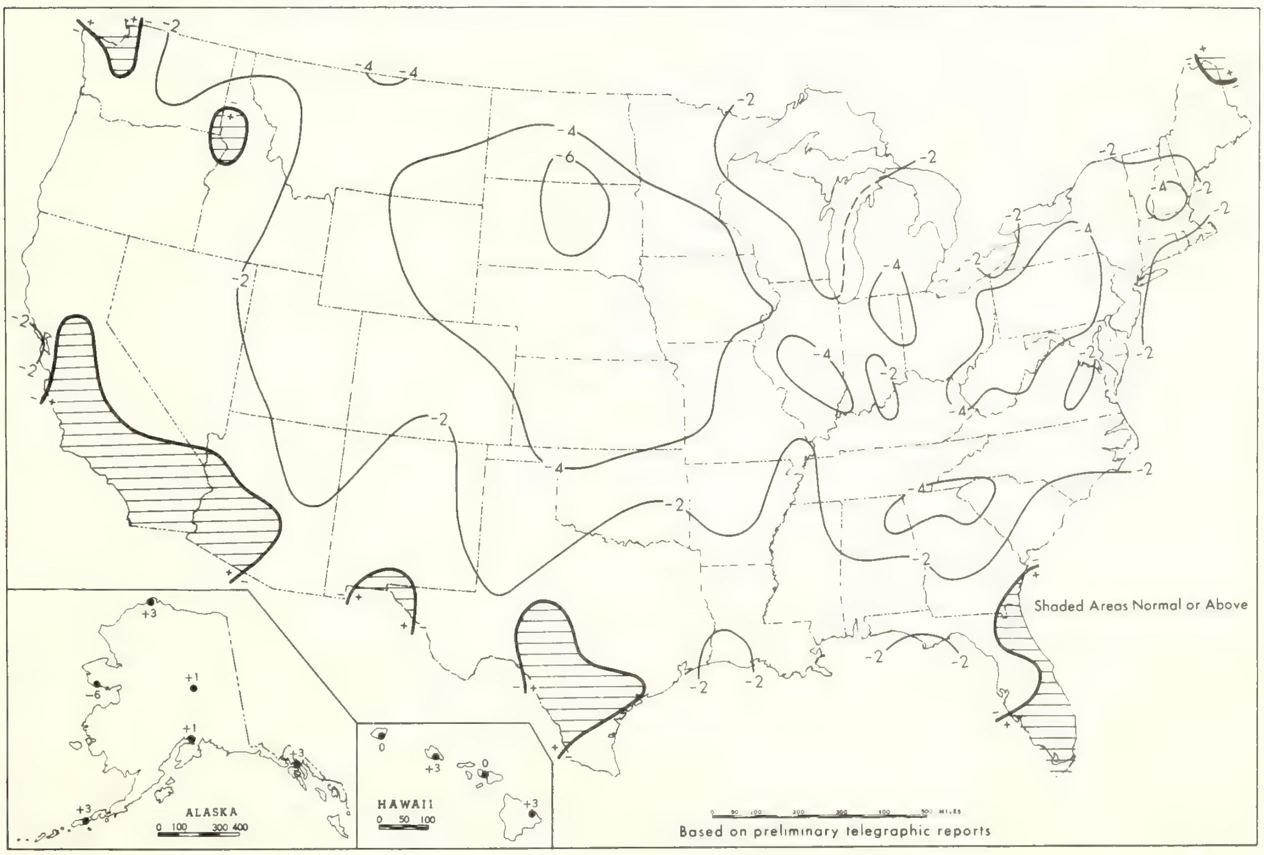


Chart II. Total Precipitation (Inches), May 1968.

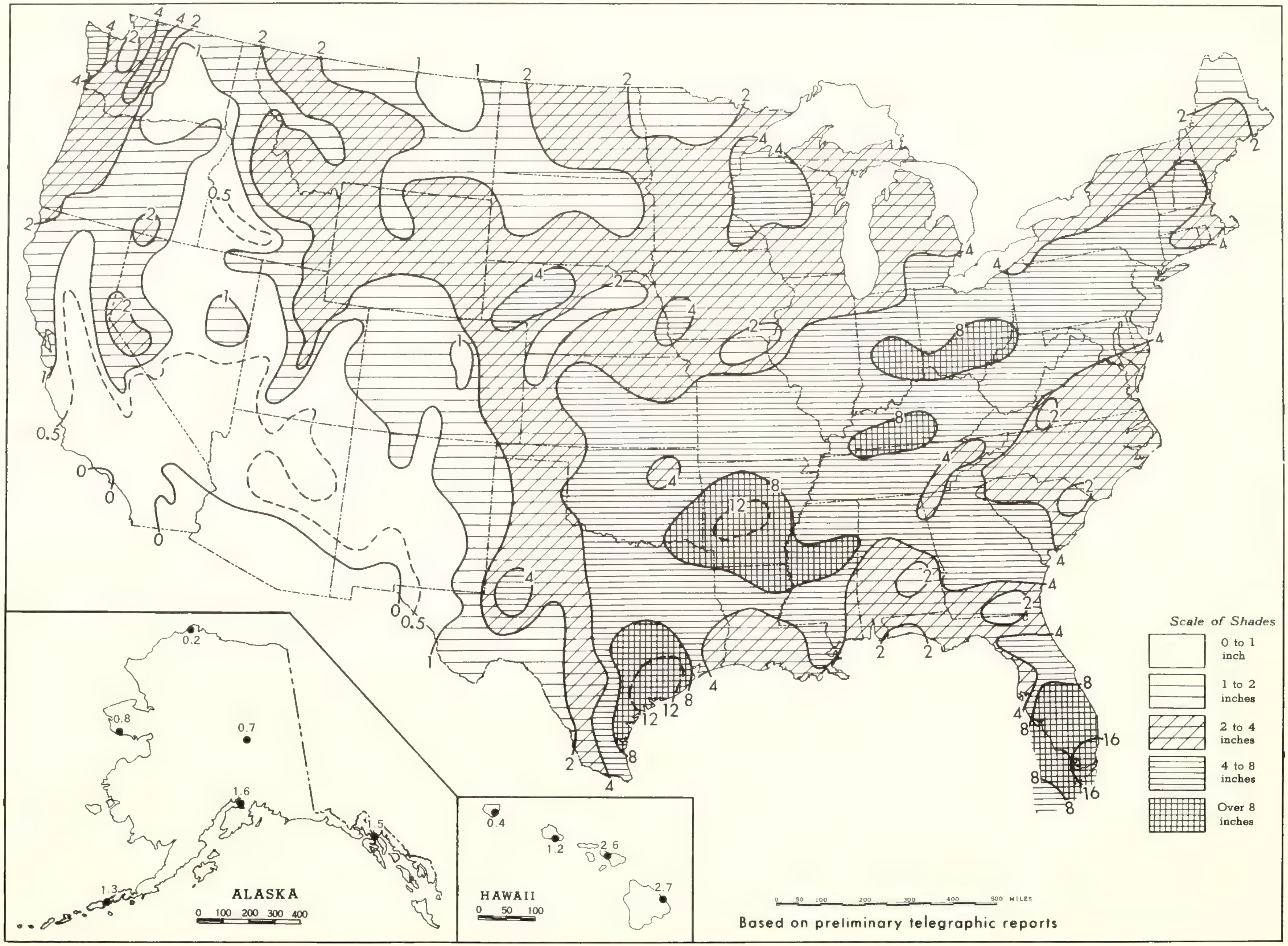


Chart III. Percentage of Normal Precipitation, May 1968.

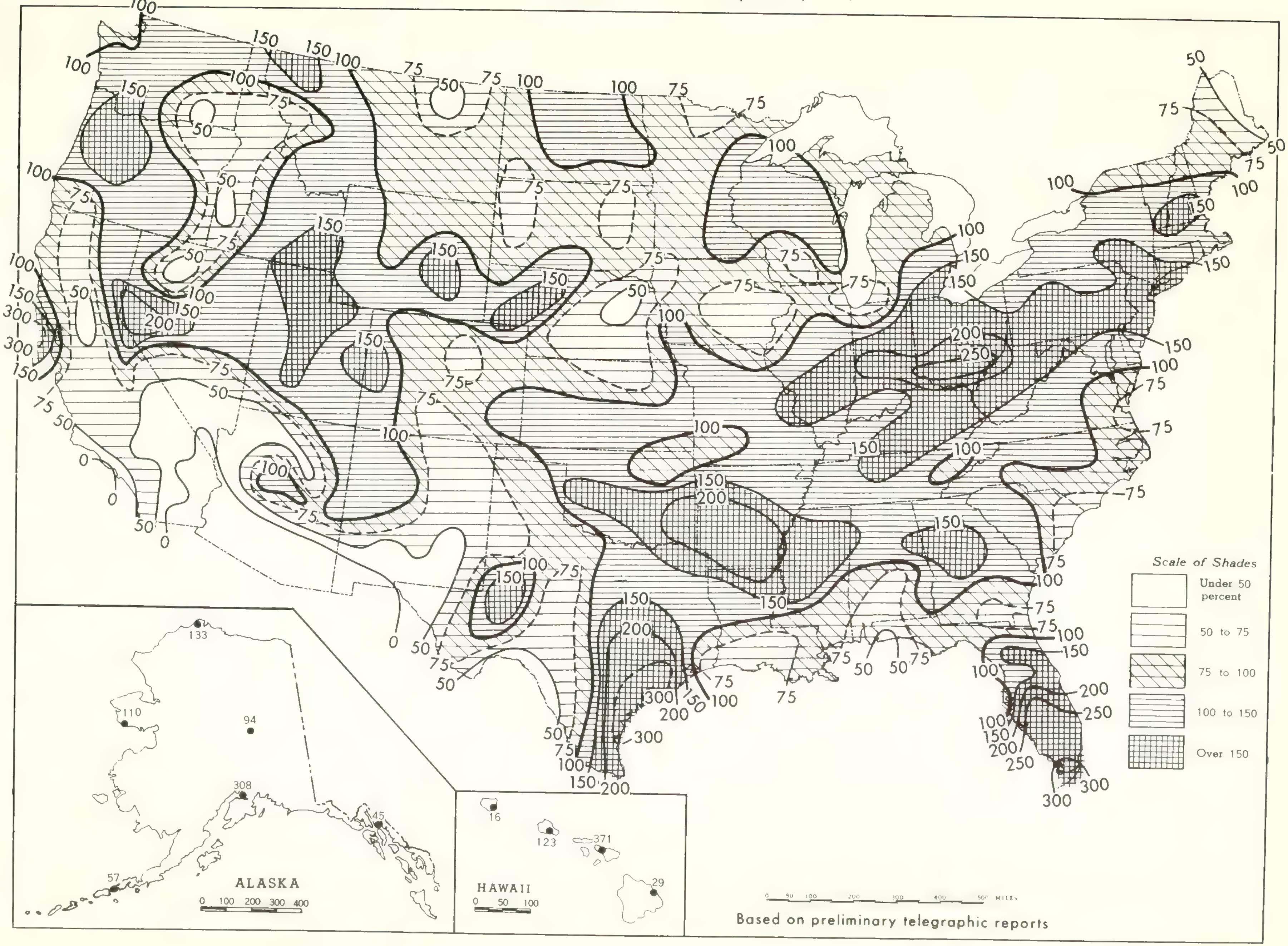
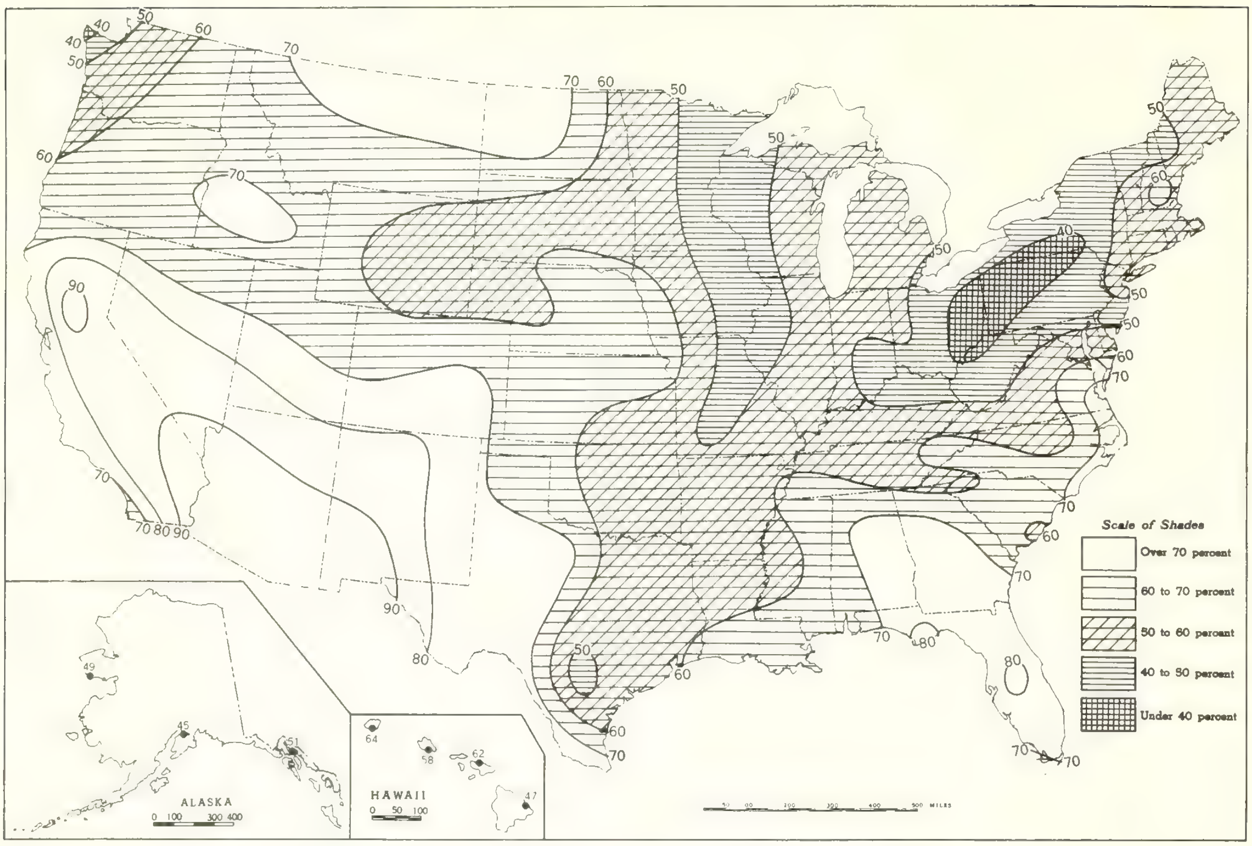
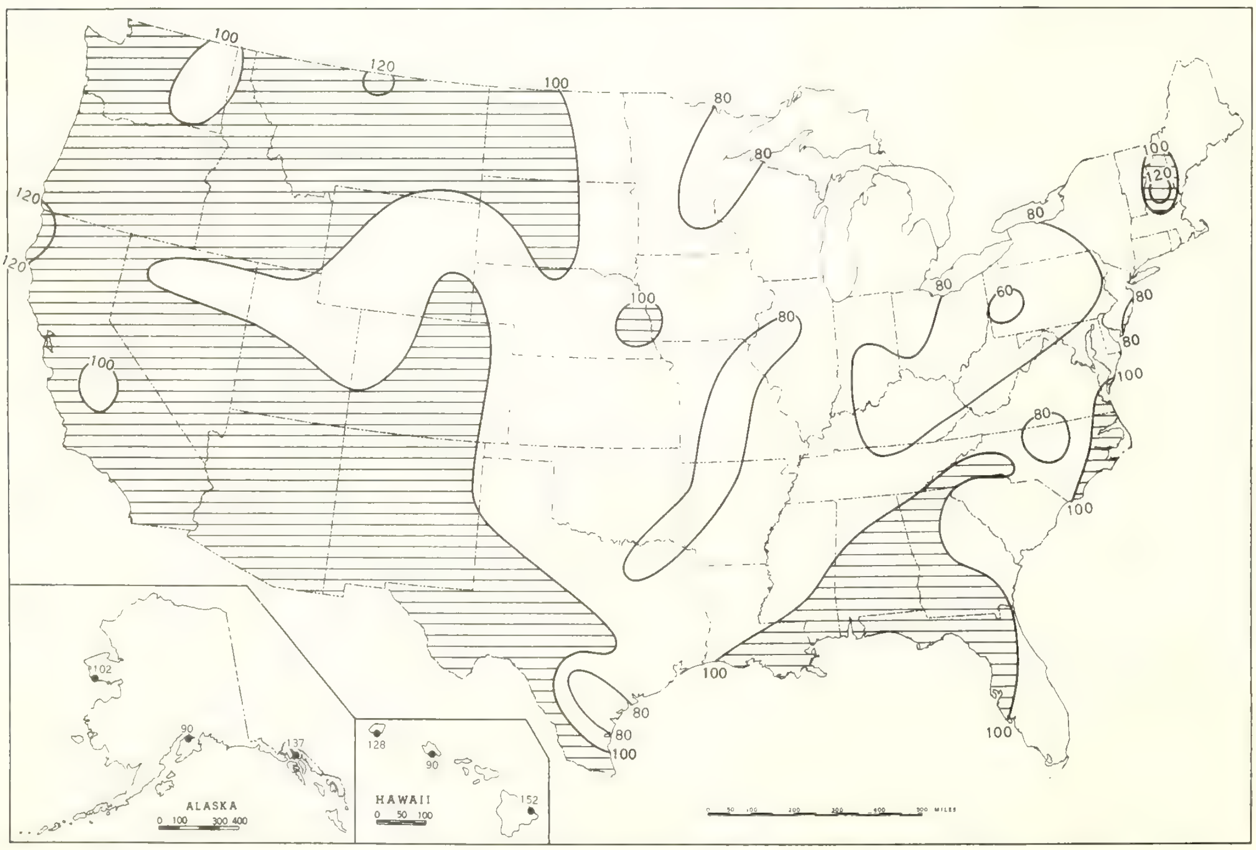


Chart VI. A. Percentage of Possible Sunshine, May 1968.

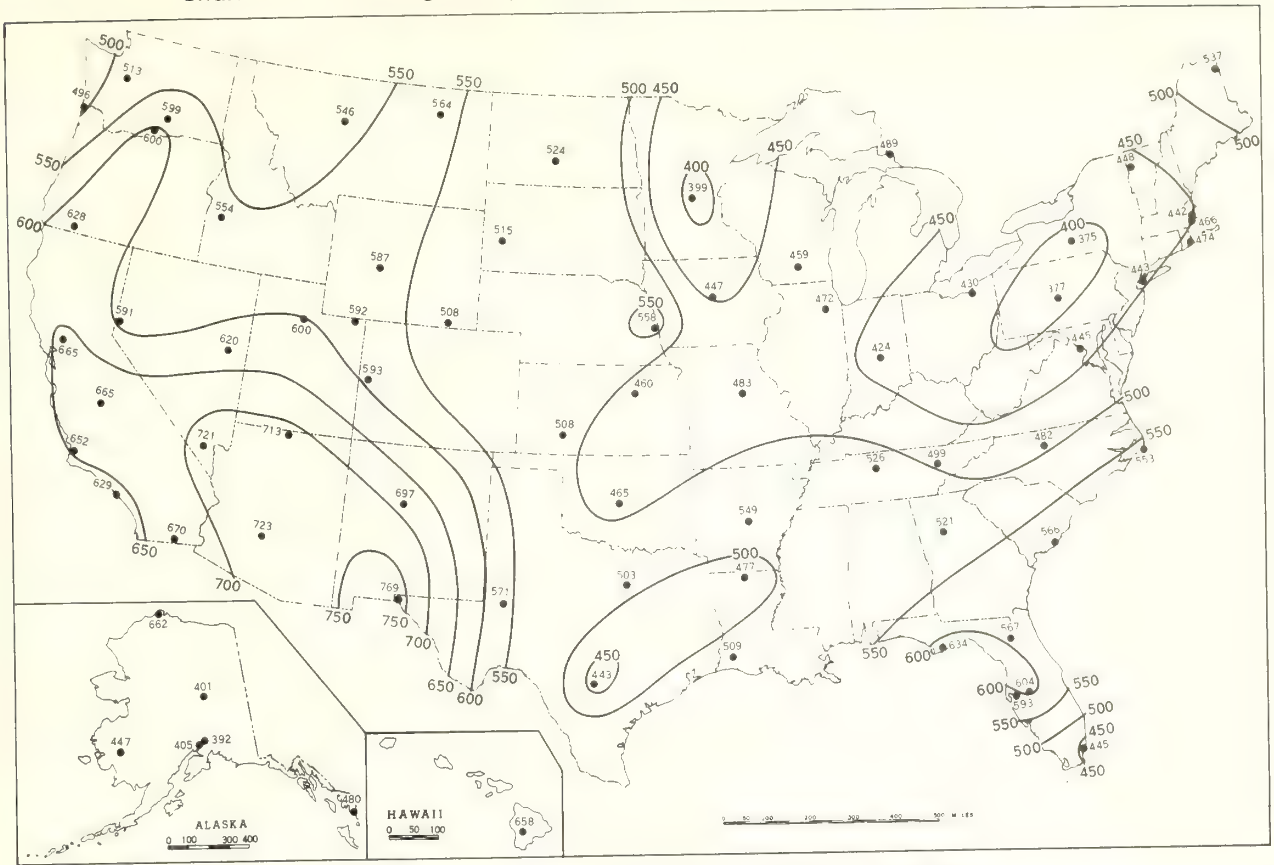


B. Percentage of Mean Monthly Sunshine, May 1968.

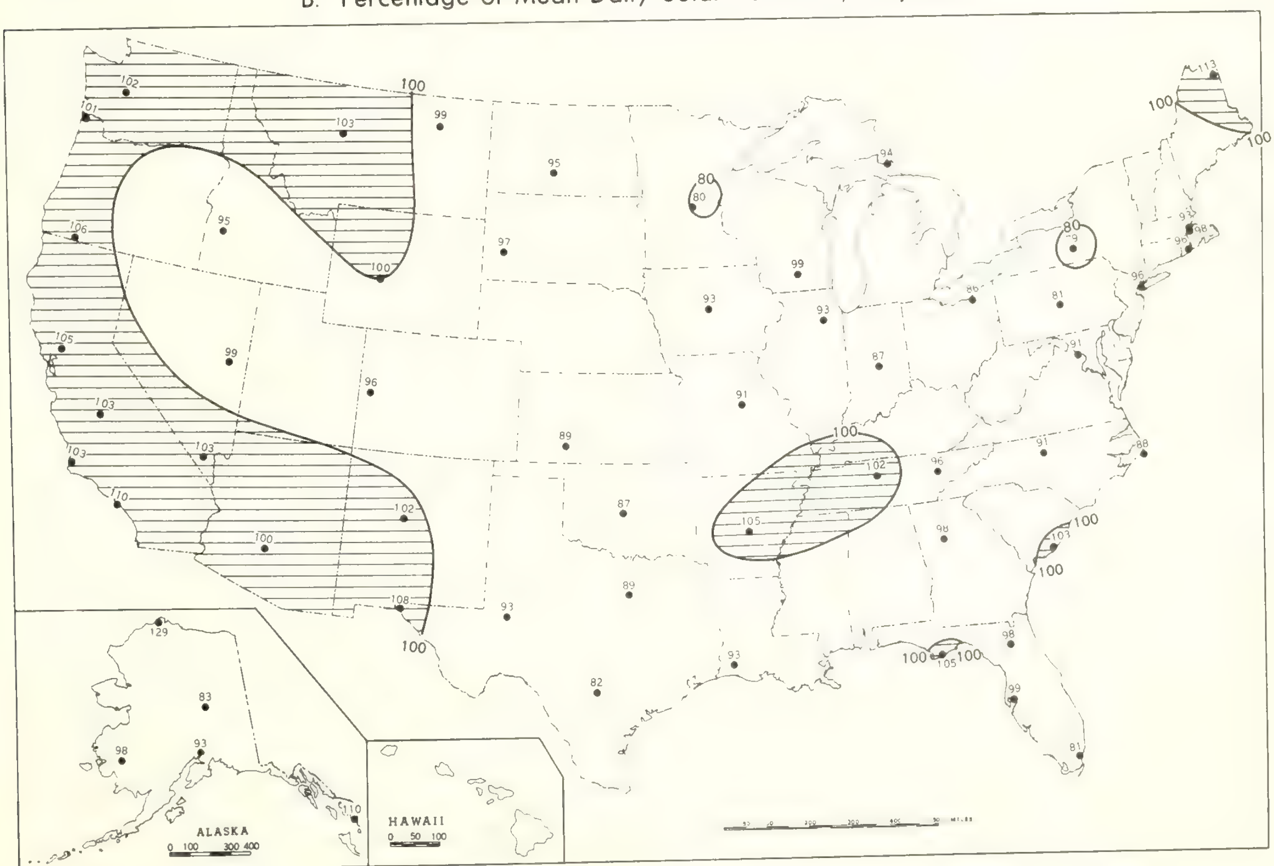


A. Computed from total number of hours of observed sunshine in relation to total number of possible hours of sunshine during month. B. Means are computed for stations having at least 10 years of record.

Chart VII. A. Average Daily Values of Solar Radiation, Langleys, May 1968.

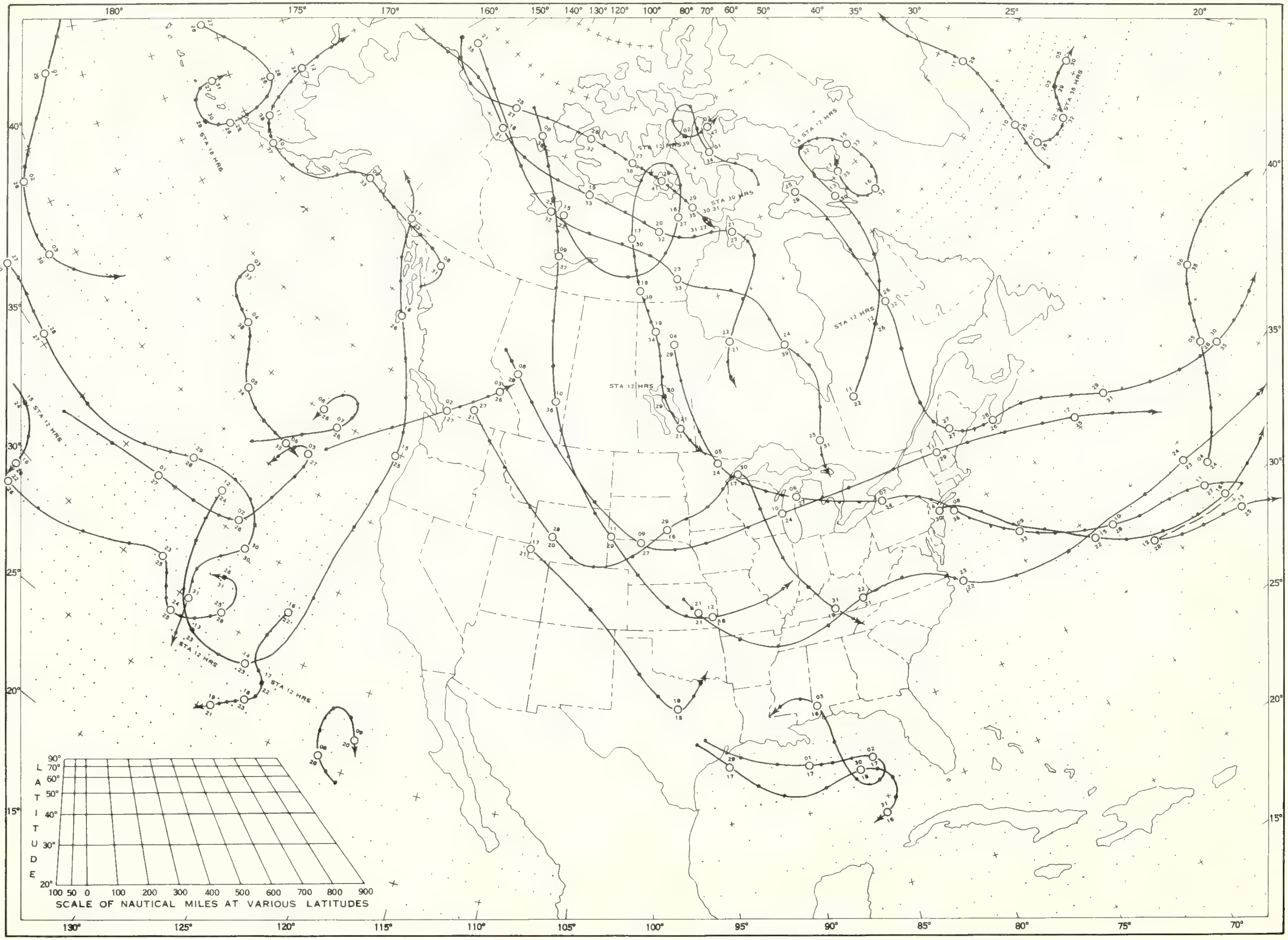


B. Percentage of Mean Daily Solar Radiation, May 1968.



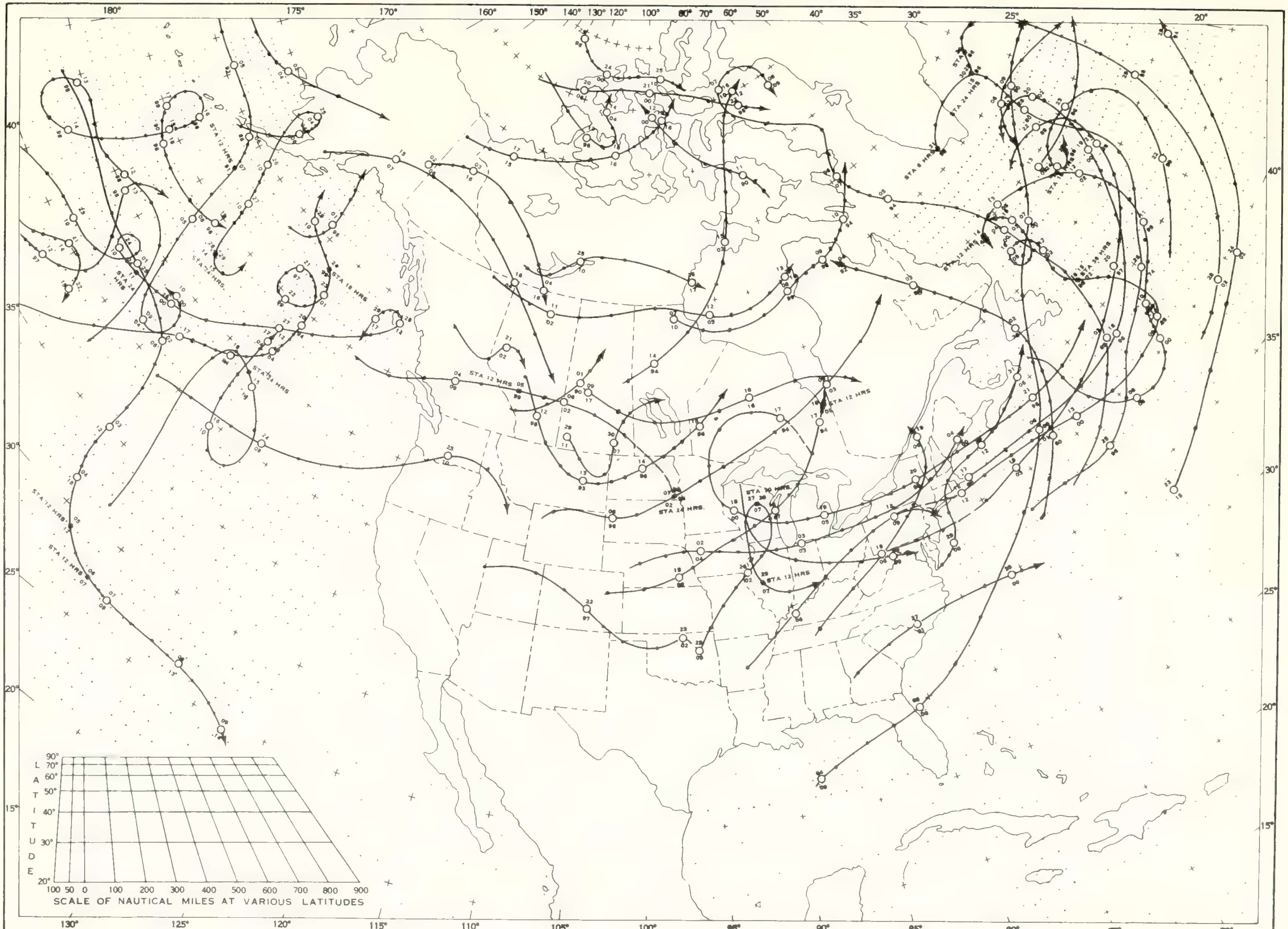
A. Mean daily solar radiation, direct + diffuse, received on a horizontal surface in langleys (1 langley = 1 gm. cal. cm.$^{-2}$) and recorded in International Pyrheliometer Scale of 1956. B. Percentage of the mean based on at least 5 years of record during the period 1950-60, and corrected to the International Pyrheliometer Scale of 1956.

Chart VIII. Tracks of Centers of Anticyclones at Sea Level, May 1968.



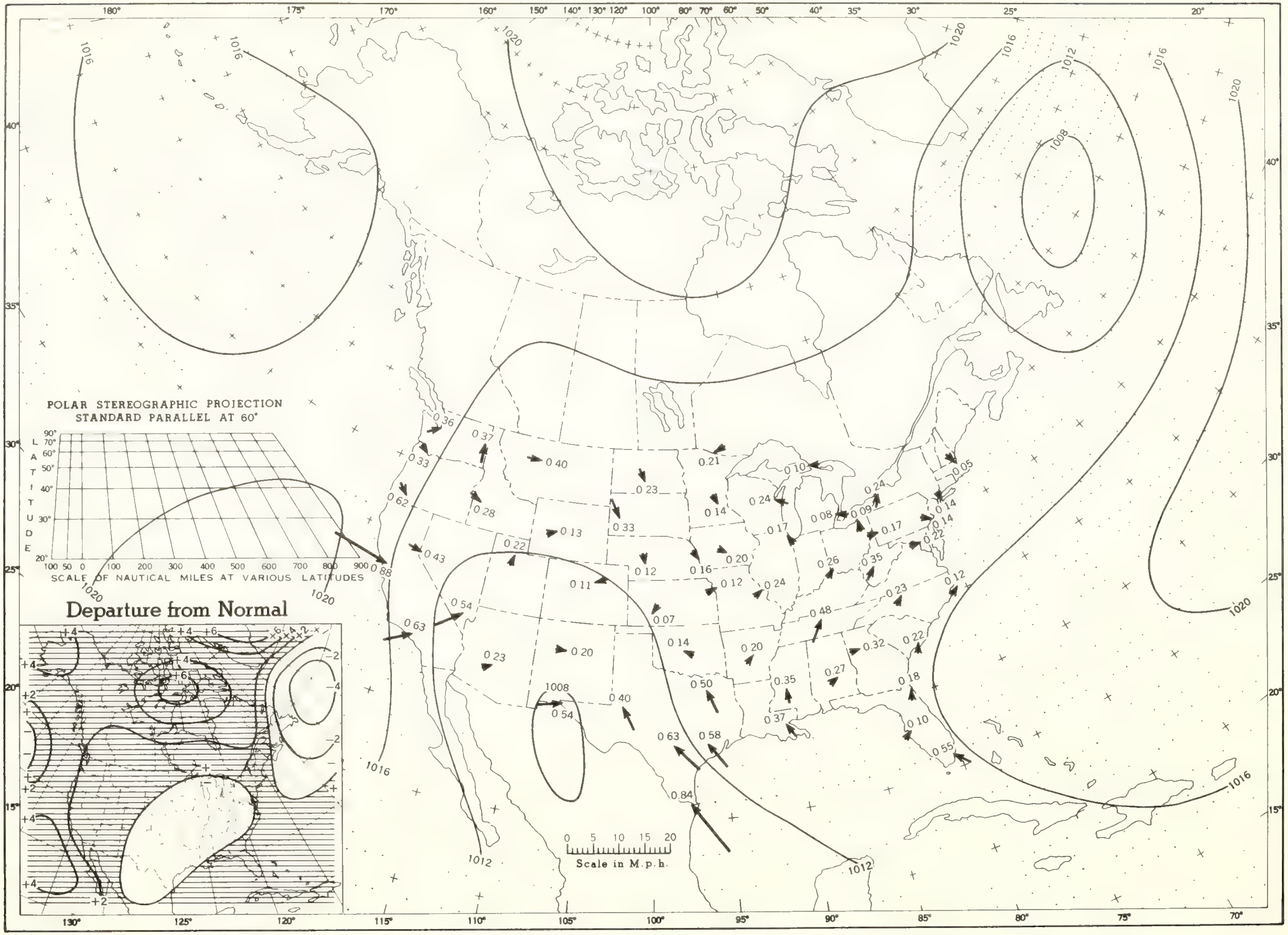
Circle indicates position of center at 7:00 a.m. E.S.T. Figure above circle indicates date, figure below, pressure to nearest millibar. Dots indicate intervening 6-hourly positions. Squares indicate position of stationary center for period shown. Dashed line in track indicates reformation at new position. Only those centers which could be identified for 24 hours or more are included.

Chart IX. Tracks of Centers of Cyclones at Sea Level, May 1968.



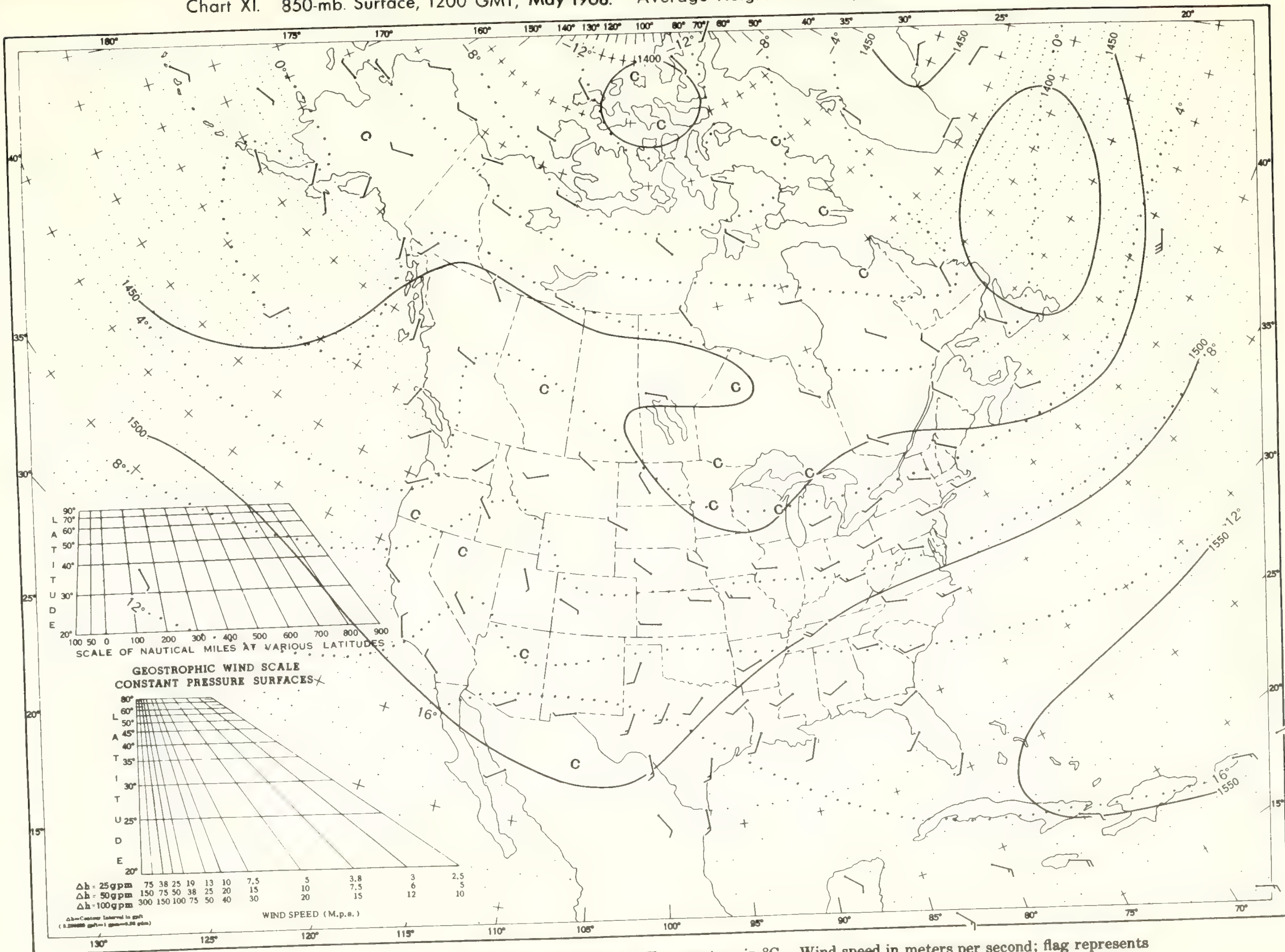
Circle indicates position of center at 7:00 a.m. E.S.T. Figure above circle indicates date, figure below, pressure to nearest millibar. Dots indicate intervening 6-hourly positions. Squares indicate position of stationary center for period shown. Dashed line in track indicates reformation at new position. Only those centers which could be identified for 24 hours or more are included.

Chart X. Average Sea Level Pressure (mb) and Resultant Surface Wind, May 1968. Inset: Departure of Average Pressure (mb) from Normal, May 1968.



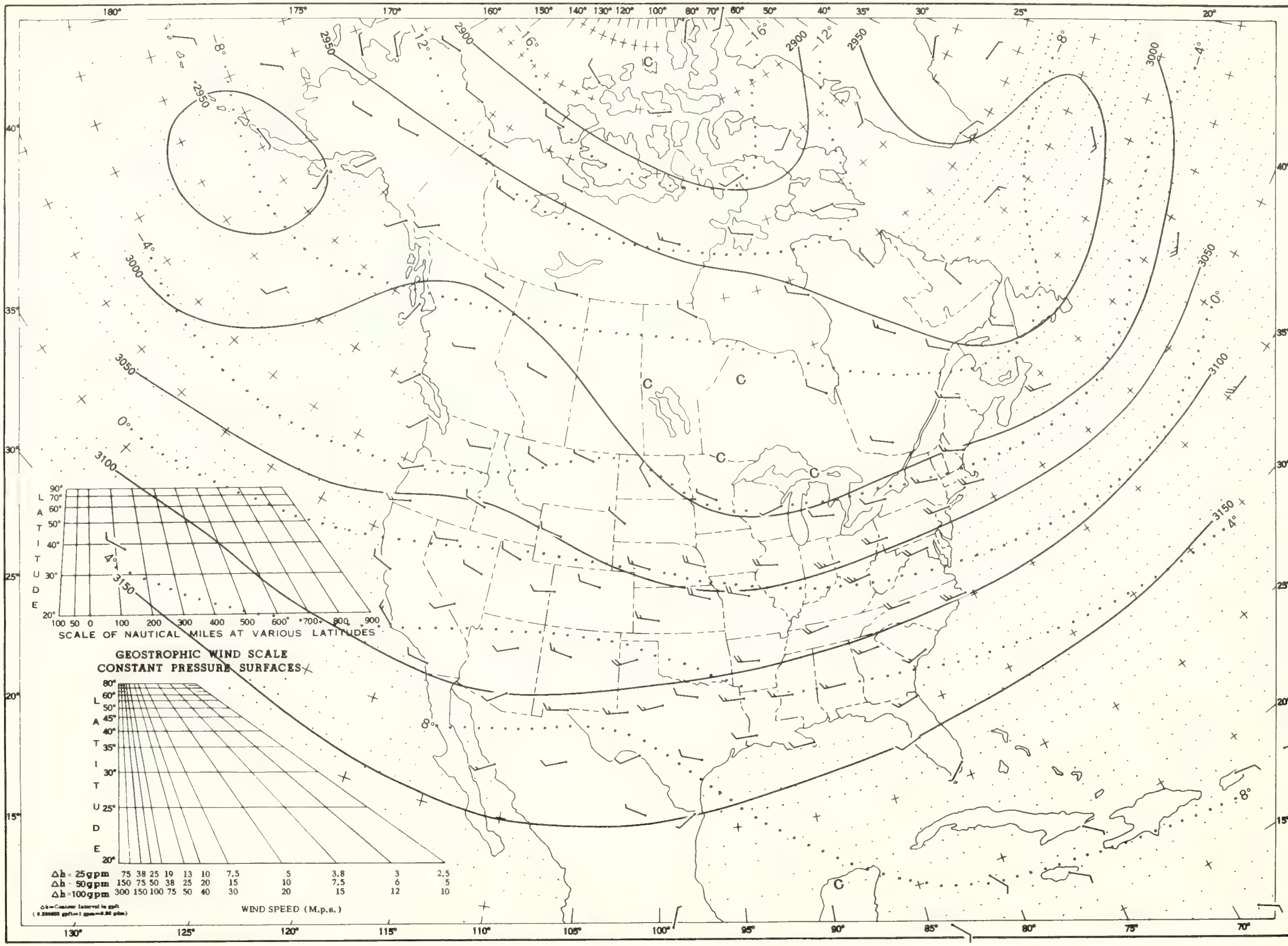
Average sea level pressures are obtained from eight daily 3-hourly observations. Resultant wind directions and speeds are shown by arrows. Constancy ratios (resultant speed÷average speed) are shown to two decimal places. Pressure normals are computed for stations having at least 10 years of record and for 10° intersections in a diamond grid over the oceans.

Chart XI. 850-mb. Surface, 1200 GMT, May 1968. Average Height and Temperature, and Resultant Winds.



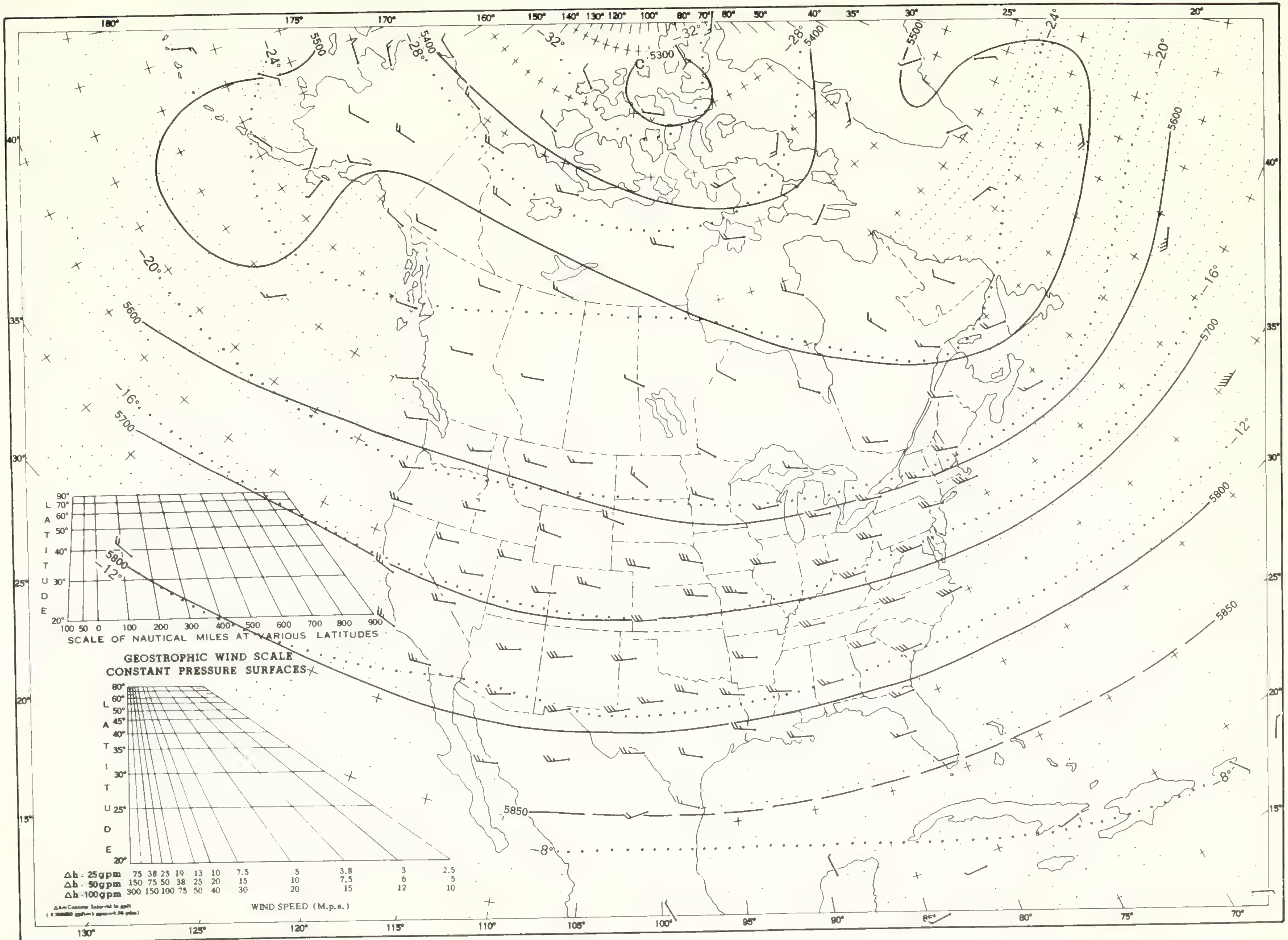
Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XII. 700-mb. Surface, 1200 GMT, May 1968. Average Height and Temperature, and Resultant Winds.



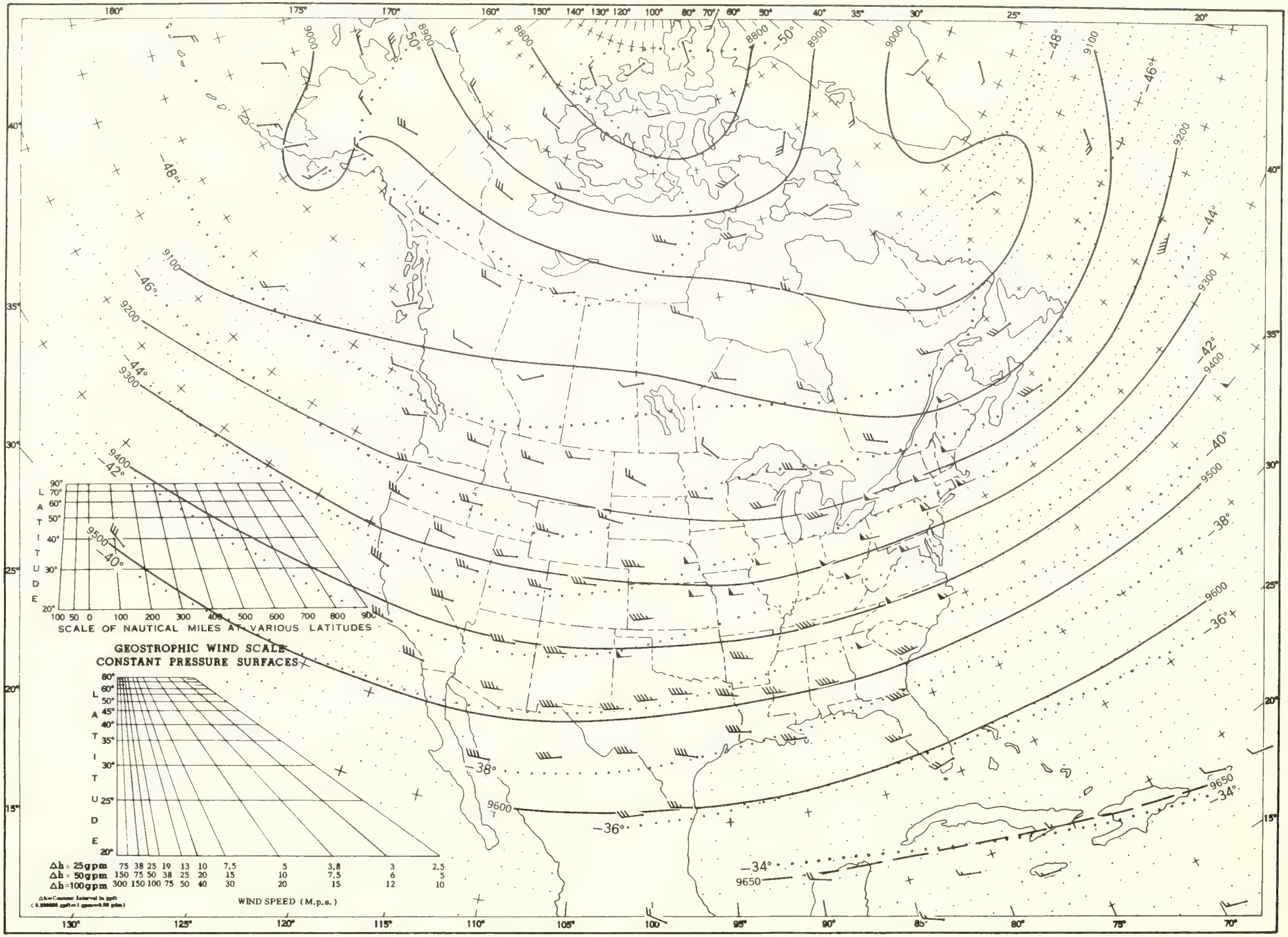
Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XIII. 500-mb. Surface, 1200 GMT, May 1968. Average Height and Temperature, and Resultant Winds.



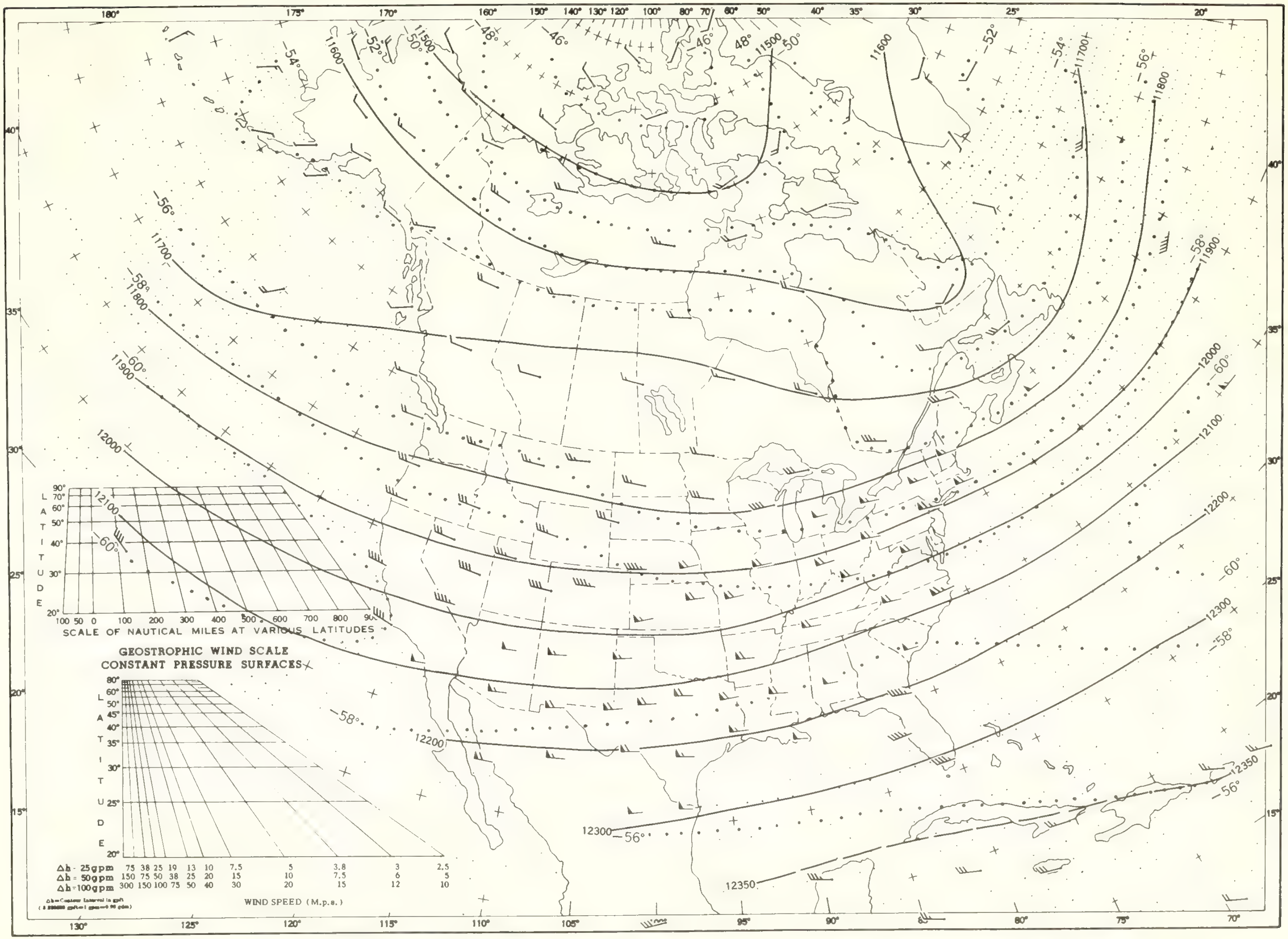
Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XIV. 300-mb. Surface, 1200 GMT, May 1968. Average Height and Temperature, and Resultant Winds.



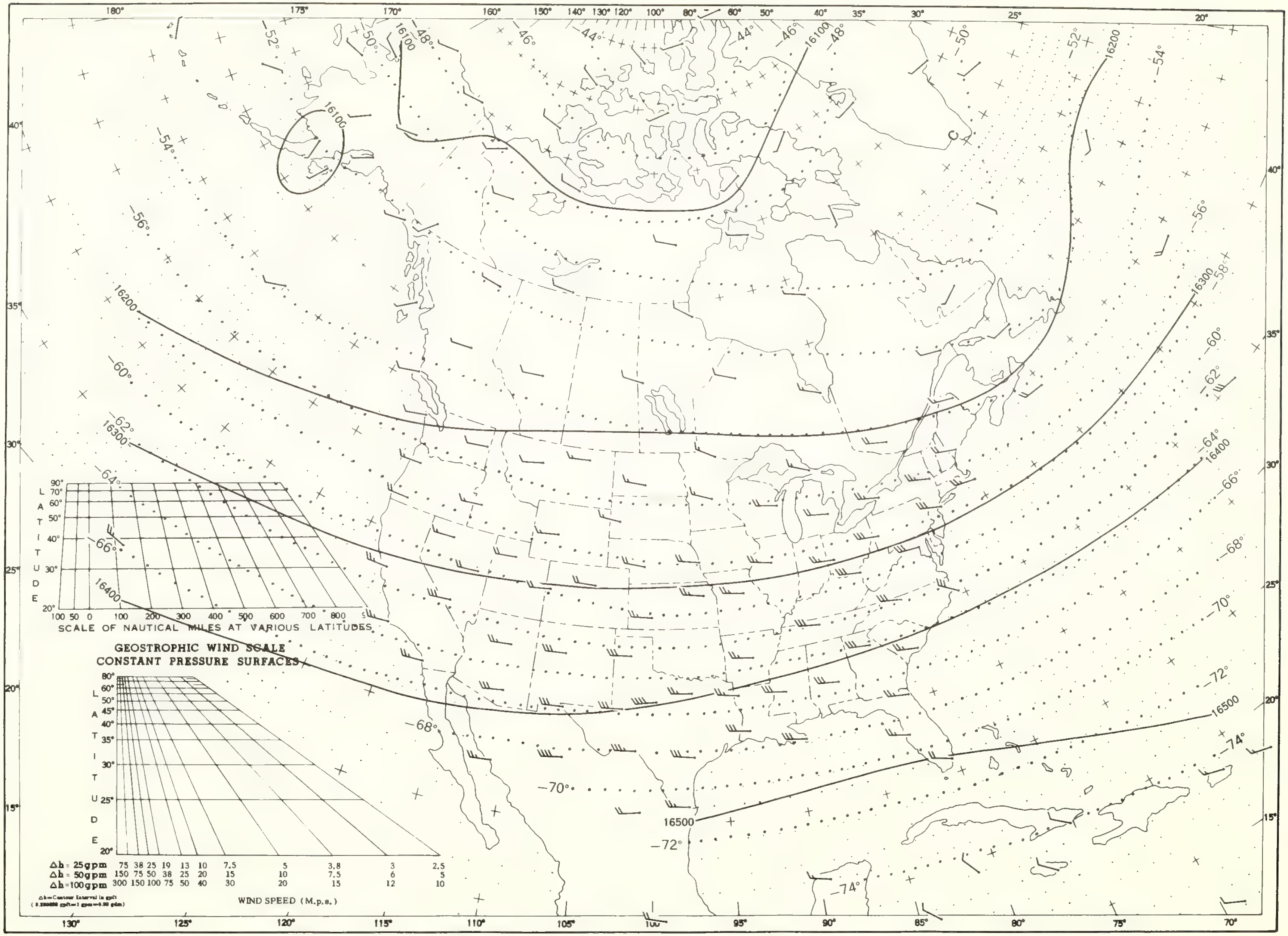
Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XV. 200-mb. Surface, 1200 GMT, May 1968. Average Height and Temperature, and Resultant Winds.



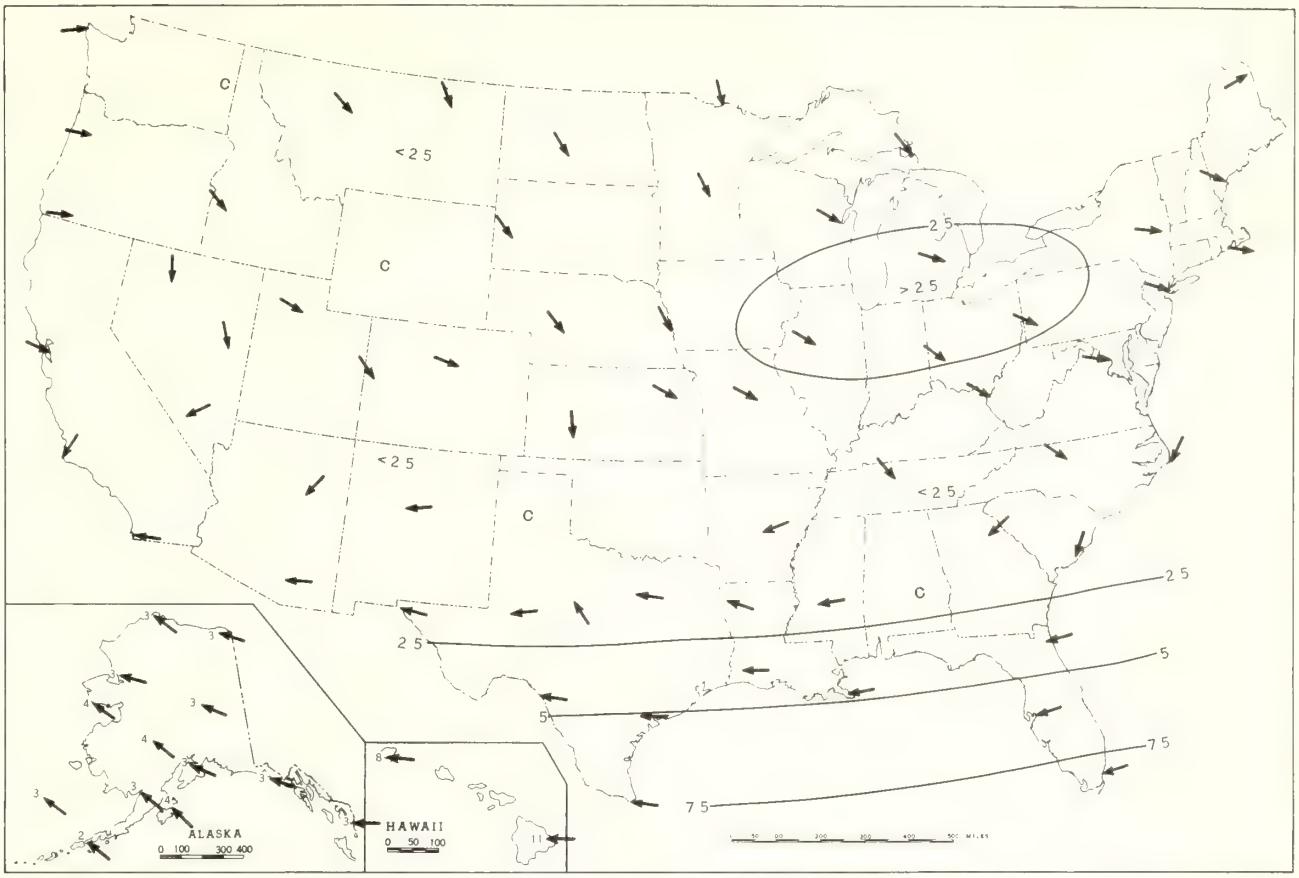
Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XVI. 100-mb. Surface, 1200 GMT, May 1968. Average Height and Temperature, and Resultant Winds.

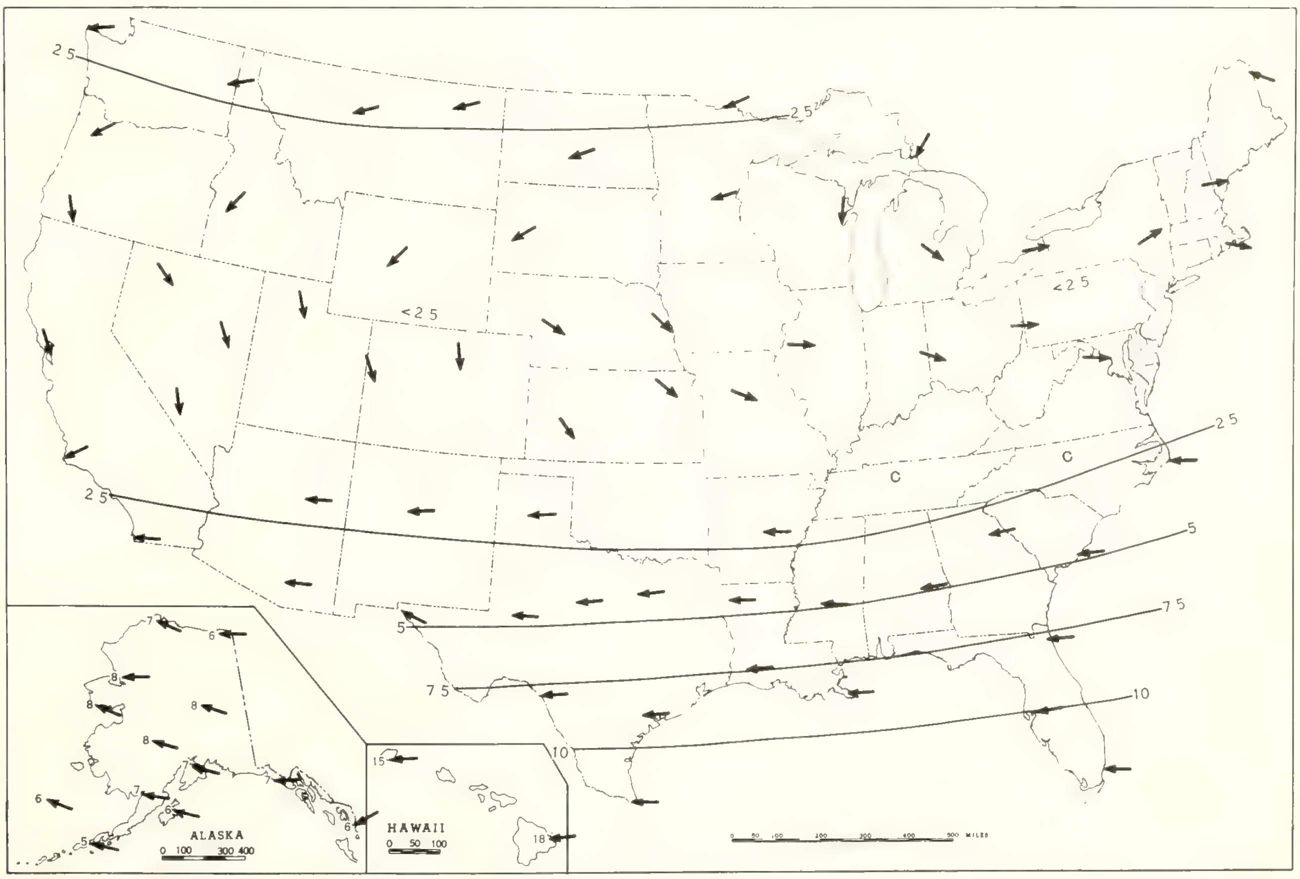


Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XVII. A. 50-mb. Surface, 1200 GMT, May 1968. Resultant Winds.



B. 30-mb. Surface, 1200 GMT, May 1968. Resultant Winds.



Wind speed (isotachs) in meters per second. Arrows show resultant wind direction. All wind data are based on rawin observations.

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CLIMATOLOGICAL DATA

NATIONAL SUMMARY

JUNE 1968
Volume 19 No. 6

ASHEVILLE: 1968

CONTENTS

NOTE: Delayed data and corrections will be carried in the June and December issues of this publication. An explanatory page "Description of Charts" will be carried in the January and July issues.

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CLIMATOLOGICAL DATA

NATIONAL SUMMARY

Volume 19 No. 6 JUNE 1968

GENERAL SUMMARY OF WEATHER CONDITIONS

HIGHLIGHTS:
1. Tropical Storm Abby crossed Florida and Tropical Storm Candy hit Texas.
2. Scores of tornadoes and other severe storms in the "Tornado Belt".
3. Hot in West and Central; mostly cool in northern Great Plains, East, and southern Great Plains.

TEMPERATURE.--Temperatures over the West averaged near normal during the first 10 days of June. The Great Plains warmed during that period with many stations from Montana and the Dakotas to Texas reporting 90° temperatures on several afternoons. Mott and Jamestown, N. Dak., registered 100° on June 3. A large area from central Nebraska to Michigan averaged 10° to 15° above normal during the first 10 days of the month. The warming trend in the Northeast ended a cool spell which had lasted 5 weeks in New York and 6 weeks in Pennsylvania. The Southeast continued cool due to overcast skies and rainy weather associated with Tropical Storm Abby.

Warming occurred over the West about midmonth with temperatures rising above normal. After a few places in Colorado, Nebraska, and Kansas had registered 100° temperatures on June 12, a cold front pushed southward over the Great Plains. By the 13th the arctic air covered the East ending a hot spell that had lasted 6 or 7 days.

The West continued to warm in the third week of June. Phoenix, Ariz., registered 115° on 4 consecutive afternoons, June 18 to 21. Much of the Southwest averaged 6° to 10° above normal. Heat and humidity increased in the East also, causing considerable discomfort to the citizens.

Most areas west of the Continental Divide warmed to 90° or higher on the 23d and 24th, with desert areas reaching 100° or higher; then, cold air started moving in. Medford, Ore., registered 102° on Wednesday, June 25, but a high of only 75° on Friday, 2 days later. The temperature at Ely, Nev., plunged from 90° on Friday to 23° on Sunday morning, June 29. On the 24th, cool air began moving into the Great Plains, Great Lakes region, and New England. By the morning of the 25th, the temperatures over the northern Great Plains had tumbled to the 40's. The Great Plains warmed to the 90's by the 26th, and by the 27th, many stations from western and central Kansas to the Rio Grande registered 100° to 108°. By the end of June, the East was again becoming hot and humid.

As the East endured hot humid weather at the end of the month, a cold blast brought record-low temperatures west of the Rockies--Pocatello, Idaho, with 30° and Grand Junction, Colo., with 38° on the 30th set new records for cold temperatures so late in the season. Also, it is interesting to note, that the temperature at Sacramento soared to 90° or higher on 12 consecutive days, tying a previous record, and Fresno set a new record with the temperature reaching 100° or higher on 13 days in June.

PRECIPITATION.--Hurricane Abby weakened and, by the time she struck the Florida Peninsula in the first week of June, winds near the center had diminished to about 40 m.p.h. The winds broke tree limbs and knocked down small trees, signs, and powerlines, and the heavy rains caused local flooding, but in general, the benefits far outweighed the losses. The generous rains improved pastures and crops, especially citrus. The rains were particularly opportune because the Peninsula was slowly recovering from a severe spring drought. Abby brought over 8 inches of rain to a fairly large area on the eastern side of Florida. Rains were heaviest in the Cape Kennedy area. Orlando received 10.41 inches on the 4th and 5th; Titusville 13.87 inches and Merritt Island, 9.50 inches on the 5th and 6th.

The storm then moved northward to the Carolinas, dropping heavy rains in parts of Georgia, most of South Carolina, and in the mountains of North Carolina -- 5.11 inches at Charlotte.

Heavy showers also fell along the Texas middle coastal plain in the first week of June, and the weekend brought tornadoes to Texas, Oklahoma, Kansas, Minnesota, and Illinois. Tornado damage was not excessive.

A 3-week rainy period from Illinois to Ohio ended June 3 and no rain fell in those States and southward to the central portions of Mississippi and Alabama from the 3d to the 10th. Southwestern Montana, northern Wyoming, and parts of the Dakotas received 1 to 3 inches of rain late in the first week of June.

Much severe weather occurred in the second week of June in the hot humid air which lay south of a slow-moving cold front. Numerous thunderstorms occurred Monday, June 10, from Minnesota to northern Texas. A score of tornadoes struck on that day from Wisconsin to Texas.

About midmonth, torrential downpours fell at scattered locations along the Atlantic coast and another score of tornadoes touched down, mostly in the northern Great Plains. One of the worst killed 9 persons, injured 125, and caused heavy damage to residential property in the Tracy, Minn., vicinity on June 13. Thunderstorms rumbled day and night over the area from the Dakotas to Texas and Louisiana. Many of the thunderstorms were accompanied by hail, damaging winds, and torrential rains.

June 23 Tropical Storm Candy hit the Texas coast, causing considerable flooding by dumping up to more than 8 inches of rain in the Galveston, Texas, area. As the remnants of Candy moved northward, the winds diminished so it was no longer a tropical storm. Nevertheless, it was still a large and powerful rainstorm system as it crossed Arkansas and Missouri, turned northeastward and continued to Lower Michigan. Numerous stations in Texas received 5 to 10 inches of rain from the storm and large areas received 3- to 5-inch totals. The torrential rains flooded many local areas. Numerous tornadoes occurred in connection with the storm. By the end of June, many areas in the eastern half of the Nation had become quite drenched. In contrast, wide areas in the West had received less than 1 inch of rain in the entire month. Included in these areas were the usually-dry parts of Washington, Oregon, California, Nevada, Utah, Colorado, Arizona, and New Mexico.

Some June 1968 precipitation statistics:
Miami, Fla., AP, 22.36 inches set new record for June; Trenton, N. J., 6.26 inches, most June rainfall in 27

years; South Bend, Ind., 9.09 inches, set new record for June; Port Arthur, Texas., 12.17 inches, 2d greatest June rainfall; Chattanooga, Tenn., 0.87 inch, least June rainfall in 37 years; Birmingham, Ala., 0.67 inch, least June rainfall in 37 years; 2d driest in 73-yr. record. Topeka, Kans., 4 days with thunderstorms, least for June in 21 years; Tucson, Ariz., first rainless June in 23 years.

CONDENSED CLIMATOLOGICAL SUMMARY

JUNE 1968

Section	Temperature						Precipitation			
	Monthly extremes						Monthly extremes			
	Station	Highest	Date	Station	Lowest	Date	Station	Greatest	Station	Least
		°F			°F			In.		In.
Alabama	Martin Dam	110	16	Valley Head	42	14	Newton	6.78	Fort Morgan	T
Alaska	5 Stations	82	30+	Puntilla	21	2	Little Port Walter	9.66	Hughes	T
Arizona	2 Stations	119	21+	2 Stations	21	10	Seligman	1.61	92 Stations	.00
Arkansas	do	99	12+	3 Stations	46	27	Nashville Peach Substa	10.53	Brinkley	1.03
California	Death Valley	122	22	White Mountain 2	12	9	Donner Memorial St Pk	2.99	253 Stations	.00
Colorado	2 Stations	107	28	2 Stations	18	9	Las Animas	3.29	10 Stations	.00
Connecticut	Hartford WBAP	96	9	5 Stations	42	21+	Falls Village	8.82	Norwich Pub Util Plt	4.25
Delaware	2 Stations	97	30+	2 Stations	47	21	Dover	3.99	Newark University Farm	1.76
Florida	do	100	12+	Palatka	53	8	Homestead Exp Sta	23.98	Cedar Key 1WSW	.89
Georgia	4 Stations	100	30+	Tallapoosa 2N	40	14	Blackbeard Island	8.82	Rome WBAP	.56
Hawaii	Mauna Kea Beach 98	96	30	Mauna Loa Slope Obs	32	14	Honomumakuka 138	15.62	10 Stations	.00
Idaho	Swan Falls Power House	109	27	Three Creek	20	30	Island Park Dam	4.16	Weiser 2SE	.17
Illinois	6 Stations	98	10+	3 Stations	42	13	Quincy Memorial Bridge	10.96	Prairie Du Rocher 1WSW	1.11
Indiana	Sullivan 1SSE	99	23	Albion 5E	39	13	Lagrange Sewage Plant	9.13	Henryville St Forest	1.34
Iowa	Red Oak	100	28	Mount Ayr 2NNE	36	13	Forest City	12.29	Jewell	.13
Kansas	2 Stations	111	29+	Tuttle Creek Dam	41	27	Winkler	8.00	Havensville 2E	.87
Kentucky	5 Stations	97	30+	2 Stations	41	4+	Caneyville	4.94	Jeremiah	.15
Louisiana	Franklinton 3SW	99	29	do	53	28+	New Orleans WB New Fed	9.07	Paradis 7S	.77
Maine	Saco	92	6	3 Stations	28	10	Rumford 1SSE	7.27	Presque Isle	1.62
Maryland	Baltimore WB City	99	30	2 Stations	35	21+	U. S. Soldiers Home D.C.	7.52	Savage River Dam	1.56
Massachusetts	3 Stations	95	6	do	41	21+	Heath	12.28	Edgartown	4.25
Michigan	5 Stations	95	10+	Herman	27	20	Marquette FAA AP	12.26	Cheboygan RR Light Sta	1.41
Minnesota	2 Stations	100	20+	Hoyt Lakes 5N	30	15	Young America	10.92	Elbow Lake	2.10
Mississippi	do	100	30+	7 Stations	50	28+	Buckatunna	7.17	Amory 4W	.00
Missouri	Malden	100	23	Gerald	42	27	Palmyra	7.44	Trenton	.42
Montana	3 Stations	98	19+	Philipsburg Ranger Sta	21	14	Shonkin 7S	8.84	Wisdom	.82
Nebraska	4 Stations	107	30+	Harrisburg 10NW	33	26	Ravenna	9.25	Tecumseh	.70
Nevada	Sunrise Manor Las Vegas	115	28+	2 Stations	18	30	Carlin Gold Mine	3.93	2 Stations	.00
New Hampshire	Manchester	94	7	Mount Washington	23	21+	Mount Washington	11.02	Benton 5SW	4.07
New Jersey	4 Stations	97	30+	Layton 2	38	21	Midland Park	7.74	2 Stations	2.86
New Mexico	Duval Potash Mine	114	29	Gavilan	22	11	Tatum	4.19	33 Stations	.00
New York	New York Laurel Hill	99	7	Wanakena Ranger School	31	17	Gardiner	9.84	Ellenburg Depot	1.94
North Carolina	2 Stations	101	30	2 Stations	35	14	Buck Forest	10.57	Butner Filter Plant	.84
North Dakota	Velva	102	3	Belcourt Indian Res	30	15	Hillsboro	9.35	Willow City	.52
Ohio	Toledo Blade	101	8	Warren 3S	34	14	Chillicothe	10.33	Ripley Exp Farm	1.10
Oklahoma	Goodwell	111	28	Boise City 2E	43	26	Daisy 2ENE	10.08	Kenton	.45
Oregon	Medford WBAP	107	25	Hampton	18	12	Otis 2NE	8.29	Rome 2NW	T
Pennsylvania	Farrell Sharon	103	8	2 Stations	30	21	Conshohocken	8.31	Whitesburg	.72
Puerto Rico	2 Stations	97	26+	3 Stations	59	30+	Rio Blanco Upper	19.80	Puerto Real	.55
Rhode Island	Greenville	91	6	Kingston	43	5	Woonsocket	9.12	Block Island WBAP	4.50
South Carolina	3 Stations	99	27+	2 Stations	48	28+	Charleston WB City	9.94	Loris 1S	.87
South Dakota	4 Stations	105	21+	Custer	29	26	Vivian	8.75	Vermillion 2N	2.59
Tennessee	6 Stations	98	30+	Unicoi 3ESE	40	14	Lafayette	5.51	Lawrenceburg Filt Pl	.75
Texas	Pecos	118	29	Bravo	43	26	Austwell WL Refuge	19.90	6 Stations	.00
Utah	Saint George	111	22	Silver Lake Brighton	19	15	Logan Radio KVNU	3.67	do	.00
Vermont	Bellows Falls	95	7	Mount Mansfield	30	28+	Vernon	8.72	Saint Albans Bay	2.27
Virginia	3 Stations	100	30+	Wytheville 1S	36	1	Elkwood 6SE	7.68	Newport 2NW	.95
Washington	Dallesport FAA AP	100	25	Rainier Paradise RS	25	29	Cedar Lake	9.44	2 Stations	T
West Virginia	2 Stations	98	30	Bayard	32	21	Brandonville	5.97	Petersburg	.70
Wisconsin	Neillsville 1W	99	6	Gordon 2ESE	30	15	Big Falls Hydro	13.70	Port Washington	3.62
Wyoming	Yoder	100	20	Crandall Creek	11	14+	Alva 5SE	6.46	Foxpark	.08

\+ And also on an earlier date or dates.

NOTE: Dates in the above Condensed Climatological Summary apply to the period 24 hours prior to time of observation. In some cases the actual occurrence is on the calendar date preceding that shown. (See individual Climatological Data for times of observations).

CLIMATOLOGICAL DATA

ENGLISH UNITS

JUNE 1968

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	No. of days: Max. 90 F. or above	No. of days: Min. 32 F. or below	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	No. of days: .01 inch or more	No. of days: With thunderstorms	Snow, Sleet: Total	Snow, Sleet: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Fastest mile: Speed	Fastest mile: Direction	Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	Ft.	Mb.	Mb.	F.	F.	F.	F.	F.		F.				F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
ALABAMA																																
BIRMINGHAM	620	992.9	1015.0	91	65	77.9	-1.5	98	30	53	28	19	0	64	66	0.67	-3.34	0.31	7	8	0.0	0	1.2	34	29	NW	12	13	9	8	4.7	83
HUNTSVILLE	624	992.6	1015.1	90	65	77.5	-1.1	97	30	54	28+	14	0	64	67	0.77	-2.60	0.40	5	4	0.0	0	0.7	29	30	36	12	11	11	8	4.8	
MOBILE	211	1007.1	1014.9	94	72	83.2	1.7	98	12+	66	7	27	0	69	67	3.71	-2.52	1.39	12	12	0.0	0	0.5	20	27	12	9	11	14	5	5.0	
MONTGOMERY	194	1007.8	1014.9	93	68	80.2	0.8	98	10	56	28	27	0	66	67	1.89	-2.28	0.92	7	7	0.0	0	1.1	27	29	N	11	12	10	8	4.7	78
ALASKA																																
ANCHORAGE	114	1008.8	1013.7	63	47	54.8	-0.9	77	29	36	4	B 3	0	42	61	0.62	-0.36	0.28	6	0	0.0	0	3.4	19	21	18	20+	2	7	21	8.1	50
ANNETTE	110	1012.2	1016.3	63	47	55.1	0.8	72	29	41	21	4	0	45	73	4.13	-1.54	0.86	15	0	0.0	0	3.6	17	28	16	18	4	8	18	7.3	
BARROW	31			37	29	33.0	-0.1	50	23+	24	8	0	28			0.45	0.09	0.19	9	0	0.8	4	1.8	6	18	23	29+	2	4	24	8.4	
BARTER ISLAND	39	1014.9	1016.9	38	31	34.0	-0.2	54	29	26	10	0	26	32	91	1.31	0.80	0.35	9	0	7.3	5	5.4	7	26	28	25	3	4	23	7.9	
BETHEL	125	1009.8	1015.4	63	42	52.3	0.7	77	12	33	2	3	0	43	74	1.18	0.00	0.54	6	1	0.0	0	4.9	31	23	22	13	1	10	19	7.7	
COLD BAY	96	1011.5	1015.3	50	41	45.4	0.1	57	14	34	5	0	0	39	82	0.84	-1.11	0.20	14	0	0.0	0	5.9	33	30	16	11	0	3	27	9.3	
FAIRBANKS	436	995.3	1012.1	70	49	59.5	1.1	81	13+	40	8	19	0	44	61	1.52	0.13	0.66	13	2	0.0	0	1.4	27	21	23	19	1	11	18	7.7	
JUNEAU	12	1013.9	1014.8	62	43	52.2	-0.1	71	9	34	5	1	0	46	84	1.95	-1.44	0.77	12	0	0.0	0	2.4	11	25	12	2	1	7	22	8.3	41
KING SALMON	49	1011.2	1013.1	60	41	50.7	-0.7	75	29	34	2+	3	0	36	61	1.35	-0.05	0.53	11	2	0.0	0	2.1	14	31	9	15	0	9	21	8.2	
KOTZEBUE	10	1014.6	1015.2	45	35	39.9	-3.9	54	23+	24	2	0	10	34	80	0.53	0.04	0.29	4	0	0.0	2	9.7	29	32	30	25	6	14	10	6.2	
MC GRATH	344	1000.7	1013.4	66	45	55.5	-1.0	79	12	38	9+	9	0	42	61	1.31	-0.35	0.38	16	3	0.0	0	2.3	28	22	3	10	1	9	20	7.9	
NOME	13	1014.6	1015.4	52	35	43.4	-2.5	67	12	25	1	0	9	31	64	0.22	-0.71	0.19	3	0	0.0	T	5.9	28	20	27	29+	14	8	8	4.8	56
ST. PAUL ISLAND	22	1017.3	1018.1	44	34	39.2	-1.6	55	13	24	15	0	9	36	89	0.35	-0.80	0.13	12	0	0.2	T	5.3	1	28	35	24+	0	2	28	9.5	
SHEMYA	122	1014.6	1018.2	45	39	42.1	0.3	49	21	36	5+	0	0	38	88	0.80	-0.52	0.34	7	0	0.0	0	1.6	2	37	18	27	0	2	28	9.6	
YAKUTAT	28	1013.9	1014.8	56	42	49.0	-1.5	64	9	31	11	0	1	45	86	4.37	-0.69	0.84	17	0	0.0	0	1.5	17	20	17	2	0	5	25	9.2	
ARIZONA																																
FLAGSTAFF	6993	789.0	1013.1	79	41	59.9	0.4	90	21+	28	10+	2	3	27	33	0.16	-0.53	0.14	3	2	0.0	0	5.7	21	23	20	9	20	5	5	2.8	
PHOENIX	1117	969.5	1007.3	104	68	86.2	2.6	115	22+	59	8	28	0	40	21	0.00	-0.09	0.00	0	0	0.0	0	1.7	24	38Y	SW	7	24	5	1	1.4	97
TUCSON	2584	922.8	1008.0	99	68	83.5	0.8	110	22	54	10	25	0	38	21	0.00	-0.29	0.00	0	0	0.0	0	4.0	24	29	SW	7	25	4	1	1.2	98
WINSLOW	4895	850.3	1010.4	91	54	72.0	-2.3	102	22	37	10	21	0	25	20	0.12	-0.14	0.07	2	3	0.0	0	4.7	21	30	31	19	20	9	1	2.3	
YUMA	194	1000.7	1007.6	103	71	86.9	0.9	116	21	59	8	26	0	44	26	0.00	-0.01	0.00	0	0	0.0	0	4.2	21	28	W	5	26	3	1	1.0	98
ARKANSAS																																
FORT SMITH	447	997.3	1013.7	89	69	78.9	0.3	94	12+	55	27	18	0	66	68	2.65	-1.70	1.59	5	4	0.0	0	1.3	17	23	S	30+	6	10	14	6.2	70
LITTLE ROCK	257	1004.7	1013.9	89	67	77.8	-1.1	94	15+	54	27	19	0	68	76	6.77	3.16	3.51	7	8	0.0	0	3.5	21	28	E	6	8	7	15	6.3	81
TEXARKANA	391	1001.0	1013.9	89	70	79.4	0.0	95	12	59	27	12	0	71	79	3.92	0.03	1.25	11	8	0.0	0	4.0	18	23	6	19	9	11	10	6.0	
CALIFORNIA																																
BAKERSFIELD	475	994.2	1011.5	95	67	81.2	4.1	106	25	55	7	24	0	44	29	0.00	-0.09	0.00	0	0	0.0	0	4.9	33	25	32	5	24	6	0	1.5	
BISHOP	4108	871.3		93	54	73.5	3.7	104	26+	42	30	21	0			T	-0.09	T	0		0.0	0						21	3	6	2.9	
BLUE CANYON	5280			72	55	63.7	4.5	86	25+	38	5	0	0			0.87	-0.06	0.50	3		0.0	0			22	4	24	17	5	8	3.6	
EUREKA U	43			60	51	55.5	0.0	66	22+	45	13	0	0			0.20	-0.54	0.11	4		0.0	0			29	N	29	8	12	10	5.8	66
FRESNO	328	999.7	1011.2	96	60	78.0	3.3	106	25	50	6	25	0	47	37	0.00	-0.07	0.00	0	0	0.0	0	6.3	30	25	NW	2	23	4	3	1.9	91
LONG BEACH	34	1012.5	1013.8	77	60	68.5	1.0	89	21	54	10	0	0	55	69	T	-0.03	T	0	0	0.0	0	3.2	21	15	15	22+	11	9	10	5.3	
LOS ANGELES	97	1009.5	1013.1	72	61	66.2	1.4	78	15	58	21+	0	0	56	74	T	-0.05	T	0	0	0.0	0	5.6	24	29Y	SW	5	10	9	11	5.7	
LOS ANGELES U	270			77	62	69.2	1.2	88	21	58	10+	0	0			0.01	-0.05	0.01	1		0.0	0			16	SE	5	12	11	7	4.7	48
MT SHASTA R	3544			78	47	62.2	1.9	95	25	37	30+	5	0			1.66	0.41	1.63	2		0.0	0										
OAKLAND	6	1014.6	1014.7	70	56	63.0	0.2	86	15	50	12	0	0	53	74	T	-0.12	T	0	0	0.0	0	6.8	28	29	27	5	16	11	3	3.8	
RED BLUFF	342	999.7	1011.9	93	62	77.5	1.3	108	25	53	7	17	0	45	36	0.48	0.03	0.37	2	3	0.0	0	2.1	34	34	NW	28	19	5	6	3.0	92
SACRAMENTO	17	1011.2	1012.0	92	56	73.9	3.4	106	22	48	13	17	0	51	53	0.15	0.05	0.15	1	1	0.0	0	5.1	22	38	N	29	20	8	2	2.5	96
SANDBERG R	4517	862.5		77	54	65.8	1.0	92	26	33	6	2	0			0.00	-0.03	0.00	0		0.0	0			38	35	23	23	5	2	2.0	
SAN DIEGO	13	1012.5	1013.5	71	61	65.8	-0.4	78	21	58	8	0	0	55	71	T	-0.05	T	0	0	0.0	0	4.0	25	19	NW	20	11	5	14	6.0	56
SAN FRANCISCO	8	1014.2	1014.9	71	51	61.3	0.0	85	15	46	7	0	0	50	73	T	-0.11	T	0	0	0.0	0	12.0	29	43	WNW	22	17	9	4	3.3	
SAN FRANCISCO U	52			65	53	59.0	-0.1	77	15	50	19+	0	0			T	-0.14	T	0		0.0	0			31	SW	5					77
SANTA MARIA	236			72	52	61.6	2.0	80	15+	45	30	0	0			T	-0.14	T	0		0.0	0						16	13	1	3.4	
STOCKTON	22	1011.5	1012.6	91	57	73.9	1.1	102	24+	47	13	17	0	46	42	T	-0.07	T	0	0	0.0	0	9.3	30	28	32	29	19	9	2	2.6	
COLORADO																																
ALAMOSA	7536	773.1		79	41	60.1	0.1	87	28+	28	9	0	2			0.06	-0.43	0.04	2		0.0	0						14	14	2	3.7	
COLORADO SPRINGS	6145	811.4	1010.7	83	51	66.9	2.2	97	28+	39	26	8	0	35	38	0.15	-1.44	0.08	3	7	0.0	0	1.5	11	35	35	24	10	14	6	5.0	
DENVER	5283	835.1	1009.2	85	51	67.8	1.3	97	20	40	30+	10	0	40	43	0.50	-0.94	0.26	4	4	0.0	0	0.8	12	29	S	20+	11	13	6	4.8	70
GRAND JUNCTION	4855	850.3	1008.8	89	56	72.8	1.5	102	20	38	30	17	0	31	24	0.05	-0.37	0.03	2	1	0.0	0	1.5	20	30	SW	29	15	11	4	3.6	81
PUEBLO	4684	853.7	1009.2	89	54	71.5	0.4	102	28+	45	26+	16	0	41	39	0.29	-0.93	0.18	3	7	0.0	0	1.6	10	40	N	24+	15	14	1	4.0	87

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure: Station O	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No. of days: Max. 90 F. or above	Temperature: No. of days: Min. 32 F. or below	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No. of days: 01 inch or more	Precipitation: No. of days: With thunderstorms	Snow, Sleet: Total	Snow, Sleet: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile: Speed	Wind: Fastest mile: Direction	Wind: Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	No. of days (sunrise to sunset): Partly cloudy, 4-7	No. of days (sunrise to sunset): Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	Ft.	Mb.	Mb.	F	F.	F.	F.	F.		F				F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
CONNECTICUT																																
BRIDGEPORT	7	1013.5	1014.2	74	60	67.1	- 0.9	93	30	52	21	1	0	59	78	5.68	2.28	1.39	12	8	0.0	0	0.9	25	35	9	27	9	4	17	6.6	
HARTFORD	169	1007.1	1013.6	77	58	67.4	- 1.3	96	9	52	5+	4	0	57	74	6.65	2.95	1.67	18	6	0.0	0	0.9	27	26	NW	20+	4	10	16	7.2	47
NEW HAVEN	6	1013.9		74	58	65.6	- 0.6	92	30	50	4	1	0			4.52	0.99	1.37	12		0.0	0			23	NW	20	9	7	14	6.5	52
DELAWARE																																
WILMINGTON	74	1011.5	1014.5	82	61	71.4	0.0	95	30	51	21+	3	0	61	72	2.81	- 1.26	1.75	9	8	0.0	0	2.5	23	28	26	12	7	11	12	6.1	
DIST.OF COLUMBIA																																
WASH NATL AP	14	1012.2	1014.6	84	64	74.1	- 0.1	96	30	54	1	7	0	62	68	7.40	4.19	2.23	11	10	0.0	0	2.2	21	43	W	24	7	10	13	6.2	60
FLORIDA																																
APALACHICOLA U	13			88	74	81.3	1.1	92	27+	68	6	10	0			1.09	- 4.21	0.63	5	3	0.0	0			21	E	5	13	14	3	4.1	85
DAYTONA BEACH	31	1013.5	1015.0	86	71	78.6	0.2	93	10	65	8	6	0	71	82	14.38	8.57	3.76	16	12	0.0	0	1.8	12	37	35	10+	0	13	17	7.7	
FORT MYERS	15	1015.2	1015.6	87	73	80.1	- 0.7	91	30+	67	14	8	0	73	82	15.03	6.07	5.83	19	17	0.0	0	0.7	19	37	18	14	4	11	15	7.2	
JACKSONVILLE	20	1013.5	1014.7	89	73	81.1	0.3	96	11	68	3	13	0	71	76	12.25	5.92	5.93	13	6	0.0	0	1.7	12	52	N	6	7	13	10	6.1	66
KEY WEST	4	1013.9	1014.7	86	77	81.7	- 0.1	90	21	72	2+	1	0	75	81	9.36	5.39	3.65	16	10	0.0	0	3.0	17	43	SE	3	1	17	12	6.7	78
LAKELAND U	214			86	71	78.5	- 2.1	92	24	66	14	7	0			14.86	7.66	4.95	18		0.0	0						4	13	13	6.9	49
MIAMI	7	1014.6	1014.8	85	74	79.6	- 1.2	91	21	72	29+	2	0	72	80	22.36	14.99	3.42	24	16	0.0	0	2.9	16	29	17	11	0	11	19	8.0	
ORLANDO	108	1010.8	1015.0	87	71	78.8	- 2.5	91	11+	67	8	10	0			18.28	11.32	6.16	15	12	0.0	0	1.1	16	29	7	4	2	12	16	7.7	
PENSACOLA	112	1010.5	1014.5	90	72	81.1	0.0	95	13+	65	28	17	0	69	69	4.86	- 0.57	2.81	9		0.0	0	1.4	21	51	W	10	10	15	5	4.9	77
TALLAHASSEE	55	1012.5	1015.0	94	70	82.1	1.9	98	11	62	29	28	0	69	70	2.96	- 3.58	0.90	6	9	0.0	0	1.3	35	21	24	12+	10	16	4	4.7	
TAMPA	19	1014.6	1014.7	87	72	79.6	- 1.0	93	30+	65	15	5	0	71	79	6.72	- 0.56	2.43	18	11	0.0	0	1.3	31	25	1	5	2	13	15	7.6	55
WEST PALM BEACH	15	1014.2	1015.0	85	72	78.4	- 2.6	89	13+	68	2	0	0	70	79	16.78	9.25	3.90	21	16	0.0	0	3.8	16	32	14	11	1	6	23	8.5	
GEORGIA																																
ATHENS	802	986.5	1015.0	86	65	75.4	- 2.2	94	30	55	28	9	0	64	71	4.94	1.06	2.21	8	7	0.0	0	0.8	30	17	5	6	10	8	12	5.4	
ATLANTA	1010	979.3	1015.3	86	65	75.7	- 0.9	92	30+	54	28+	5	0	64	71	2.65	- 1.18	1.22	8	4	0.0	0	1.4	31	35	NW	2	10	9	11	5.3	78
AUGUSTA	145	1009.5	1014.6	89	65	76.8	- 2.1	94	30+	54	28	15	0	66	74	5.08	2.04	1.46	8	7	0.0	0	0.7	15	28	28	17+	7	13	10	5.7	
COLUMBUS	385			91	68	79.8	0.4	98	11+	56	14	23	0	66	68	1.80	- 1.88	0.73	6		0.0	0	1.6	34	20	5	18	15	7	8	4.8	
MACON	354	1002.0	1014.9	91	65	78.1	- 2.6	98	30+	53	14	25	0	64	66	1.66	- 1.68	0.74	5	5	0.0	0	1.4	33	23	S	2	10	9	11	5.4	73
ROME	637			89	61	74.9	- 1.5	98	30	48	28+	12	0			0.56	- 3.20	0.25	4		0.0	0										
SAVANNAH	46	1013.2	1014.9	89	69	79.1	- 0.6	95	26+	59	1	16	0	69	77	5.86	0.77	3.72	9	9	0.0	0	2.2	14	34	SW	23	9	5	16	6.3	67
HAWAII																																
HILO	27	1016.9	1018.2	84	69	76.6	2.3	88	6	67	30+	0	0	68	77	8.72	1.93	2.23	25	1	0.0	0	1.2	15	21	E	3	1	11	18	7.9	36
HONOLULU	7	1016.9	1017.5	88	73	80.4	2.5	89	29+	68	2+	0	0	66	64	0.24	- 0.09	0.17	8	0	0.0	0	13.6	5	26	N	28+	6	16	8	5.5	68
KAHULUI	48	1014.6	1016.9	88	68	77.9	0.7	92	5	61	2+	8	0	67	71	0.12	- 0.06	0.05	5	0	0.0	0	12.8	6	30	E	14	10	13	7	5.2	73
LIHUE	103	1013.9	1019.0	83	73	77.8	1.2	84	28+	66	1	0	0	70	79	1.23	- 0.23	0.33	21	0	0.0	0	11.4	6	21	NE	25	4	23	3	5.5	70
IDAHO																																
BOISE	2838	914.0	1012.4	82	54	67.9	2.1	102	26	45	29	10	0	36	34	0.60	- 0.29	0.44	5	1	0.0	0	4.5	31	30	NW	28	13	7	10	5.1	79
LEWISTON	1413			79	54	66.4	1.6	93	26+	45	12	4	0			1.34	- 0.39	0.46	10		0.0	0						9	6	15	6.4	
POCATELLO	4454	862.5	1013.2	76	46	61.1	- 1.7	93	19	30	30	4	1	39	49	1.84	0.88	0.72	9	4	0.0	0	6.2	23	36	SW	3	11	9	10	5.3	76
ILLINOIS																																
CAIRO U	314			88	69	78.6	0.7	94	30+	57	27	11	0			2.16	- 1.97	0.85	5		0.0	0			35	SW	25	14	7	9	4.9	77
CHICAGO O HARE	658	988.8	1012.7	81	59	70.2	2.2	94	23	43	13	7	0	56	62	4.15	0.19	2.07	10	5	0.0	0	2.3	19	37	23	23	4	13	13	6.2	
CHICAGO MIDWAY	607	990.5		82	62	72.3	1.8	96	23+	51	13	7	0	56	60	2.15	- 1.92	1.23	11	7	0.0	0	3.8	19	37	W	10	6	14	10	5.8	57
MOLINE	582	990.9	1012.0	84	60	72.1	0.7	96	10+	47	28	8	0	59	65	3.70	- 0.67	1.02	10	9	0.0	0	4.2	21	44	NW	23	6	13	11	5.9	65
PEORIA	652	989.2	1012.7	83	61	72.4	0.7	94	10	49	28	6	0	59	65	6.16	2.08	3.73	8	8	0.0	0	3.9	21	30	NW	30+	9	11	10	5.8	67
ROCKFORD	724	985.4	1011.8	80	60	69.6	- 0.1	91	10+	48	13	2	0	57	67	6.26	1.96	1.75	14	11	0.0	0	2.9	23	46	23	29	5	14	11	6.2	
SPRINGFIELD	588	990.9	1012.6	86	64	74.5	0.5	96	30+	50	28+	10	0	60	61	3.25	- 1.20	2.63	7	5	0.0	0	4.7	20	29	W	14	15	5	10	4.8	74
INDIANA																																
EVANSVILLE	381	1000.7	1014.4	86	63	74.5	- 1.3	94	30	51	14	9	0	63	69	3.07	- 0.67	1.34	6	5	0.0	0	2.8	23	29	5	25	10	10	10	5.4	79
FORT WAYNE	791	983.7	1013.4	81	60	70.4	- 0.2	92	11	46	13	5	0	59	68	5.15	0.98	2.16	13	8	0.0	0	4.4	24	54	SW	11	6	8	16	6.6	72
INDIANAPOLIS	792	985.4	1014.0	82	62	72.3	1.2	92	30	48	13	4	0	61	68	2.51	- 2.11	0.88	10	7	0.0	0	3.2	23	30	SW	25	8	9	13	5.8	71
SOUTH BEND	773	985.4	1013.0	79	59	68.9	- 0.1	90	23+	47	13	3	0	58	69	9.09	5.51	4.70	13	8	0.0	0	3.4	25	23	22	11	8	8	14	6.3	

See footnotes at end of table

CLIMATOLOGICAL DATA
ENGLISH UNITS

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	No. of days: Max. 90 F. or above	No. of days: Min. 32 F. or below	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	No. of days: 01 inch or more	No. of days: With thunderstorms	Snow, Sleet: Total	Snow, Sleet: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Fastest mile: Speed	Fastest mile: Direction	Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	Ft.	Mb.	Mb.	F.	F.	F.	F.	F.		F.				F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
IOWA																																
BURLINGTON	692			84	62	73.0	0.9	93	10+	48	27	7	0	60	64	4.44	- 0.57		8	6	0.0		4.4	22	29	32	10	9	11	10	5.6	
DES MOINES	938	978.0	1012.0	83	62	72.4	1.4	93	23+	48	27	8	0	57	60	3.42	- 1.29	1.35	7	6	0.0	0	3.5	21	44	NW	29	7	15	8	5.5	69
DUBUQUE	1056	973.6		78	57	67.7	- 0.2	91	9	46	28+	1	0			7.31	3.10	2.47	14		0.0	0						3	13	14	6.8	
SIOUX CITY	1095	971.6	1010.7	84	60	71.9	0.5	96	20	46	27	11	0	58	63	3.85	- 0.48	1.27	11	11	0.0	0	2.6	19	42	NW	21	3	18	9	6.2	69
WATERLOO	868	980.4	1011.5	81	57	69.1	- 1.0	93	4	44	28	8	0	57		4.66	- 0.17	1.47	9	10	0.0	0	2.4	20	35	24	23	3	16	11	6.6	
KANSAS																																
CONCORDIA	1470	959.0	1010.6	86	62	74.1	- 0.1	103	28	47	27	9	0	61	68	3.09	- 1.11	1.31	9	10	0.0	0	6.6	18	38	SE	30+	12	11	7	4.7	73
DODGE CITY	2582	921.8	1010.3	87	62	74.5	0.1	104	28	49	26	10	0	58	60	4.78	1.75	1.91	10	12	0.0	0	7.5	17	42	N	30	16	9	5	4.2	89
GOODLAND	3650	885.5	1009.0	88	57	72.3	2.6	104	29	42	26	14	0	50	52	3.48	0.82	2.65	6	10	0.0	0	5.0	17	41	33	30	11	13	6	4.4	
TOPEKA	876	980.7	1011.9	85	64	74.1	- 0.6	94	28	49	27	8	0	63	69	3.18	- 1.33	1.58	5	4	0.0	0	4.9	19	46	S	10	10	12	8	5.3	70
WICHITA	1321	964.8	1011.4	89	64	76.1	- 0.4	101	28	46	27	14	0	62	65	2.38	- 1.83	0.83	6	7	0.0	0	7.7	18	40	W	10	10	8	12	5.3	70
KENTUCKY																																
COVINGTON	869	983.7	1014.6	84	62	72.9	1.1	93	30+	50	13	7	0	58	61	2.43	- 1.46	0.81	9	4	0.0	0	3.1	24	22	24	25	7	11	12	6.1	
LEXINGTON	966	980.4	1015.2	82	62	72.0	- 1.6	91	30+	49	13	4	0	59	66	2.83	- 1.89	0.84	10	6	0.0	0	2.8	21	35	22	25	11	7	12	5.7	
LOUISVILLE	477	997.0	1014.1	84	64	74.0	0.6	93	30+	52	14	6	0	62	66	1.70	- 2.29	0.60	9	4	0.0	0	2.6	24	26	W	25	8	12	10	5.8	69
LOUISIANA																																
ALEXANDRIA	92	1010.5	1014.7	88	68	77.9	- 1.8	94	30	58	28+	12	0	70	80	3.16	- 1.13	1.03	9	9	0.0	0	1.7	17	25	20	5	8	11	11	5.8	
BATON ROUGE	64	1011.9	1014.7	91	70	80.6	- 0.3	95	12+	60	28	21	0	71	77	1.90	- 2.19	0.69	11	9	0.0	0	1.5	16	29	35	12	5	15	10	5.9	
LAKE CHARLES	9	1012.9	1014.1	87	72	79.8	- 1.4	94	12	67	27	11	0	73	83	8.90	4.18	3.54	14	14	0.0	0	3.0	15	29	27	4	9	9	12	5.9	
NEW ORLEANS	3	1013.9	1014.8	91	70	80.4	0.3	95	11	61	28+	20	0	71	76	3.69	- 0.74	1.40	14	10	0.0	0	1.1	19	26	27	17	7	17	6	5.0	
SHREVEPORT	254	1004.7	1013.9	90	71	80.1	- 0.5	97	12	59	27	20	0	69	73	2.78	- 0.56	1.63	10	6	0.0	0	3.5	17	29	16	24	6	11	13	6.4	59
MAINE																																
CARIBOU	624	989.8		70	49	59.1	0.1	81	15	35	10	0	0			1.65	- 2.42	0.76	9		0.0	0						0	7	23	8.5	
PORTLAND	47	1011.5	1014.0	69	51	60.0	- 2.1	87	30+	41	21	0	0	54	83	4.04	0.86	1.18	20	1	0.0	0	1.3	17	24	E	28+	2	8	20	7.9	30
MARYLAND																																
BALTIMORE	148	1009.1	1014.5	84	62	72.6	0.1	94	30+	50	21	8	0	61	69	3.35	0.06	1.13	9	8	0.0	0	3.1	25	39	NW	16	7	11	12	6.0	62
MASSACHUSETTS																																
BLUE HILL OBS R	629			72	54	62.9	- 2.2	91	6	46	21	1	0			6.04	2.29	1.32	17		0.0	0			35	WNW	3					41
BOSTON	15	1013.2	1014.1	71	58	64.9	- 2.9	91	30+	50	10	2	0	57	79	5.65	2.17	1.34	17	4	0.0	0	0.3	13	34	SW	3	6	8	16	6.8	52
NANTUCKET	43	1013.9	1014.2	68	53	60.5	- 0.8	86	6	48	2+	0	0	57	93	4.96	2.04	2.30	12	5	0.0	0	2.6	22	30	E	28	5	10	15	7.3	42
PITTSFIELD	1170			72	53	62.8	- 0.3	90	6	45	5	1	0			7.08	2.80	1.01	19		0.0	0										
WORCESTER	986	978.0	1014.6	71	54	62.2	- 2.4	89	6	46	21	0	0	53	75	7.78	3.94	1.29	18	6	0.0	0	2.6	29	27	30	30+	3	10	17	7.2	
MICHIGAN																																
ALPENA	689	987.8	1012.8	73	50	61.3	0.7	93	5	36	17	1	0	52	76	3.80	1.13	0.95	14	6	0.0	0	0.4	16	24	NE	26	3	10	17	7.2	48
DETROIT	619			79	61	70.1	0.4	94	11	51	18	4	0	58	66	6.05	3.22	3.53	11	9	0.0	0	2.4	24	29	29	29+					
DETROIT M WAYNE CO	633	989.2	1012.8	79	58	68.4	0.5	93	11+	48	18	5	0	57	69	4.99	1.68	2.21	15	8	0.0	0	2.3	24	36	SW	11	7	10	13	6.4	56
DETROIT WILLOW RUN	711	985.4	1013.2	78	56	66.6	- 3.0	94	11	47	18	3	0	55	68	6.20	2.92	3.23	13	7	0.0	0	2.6	24	29	30	29	7	8	15	6.5	
FLINT	770	985.1	1012.7	75	56	65.3	- 1.3	90	7	45	20	1	0	57	75	5.40	2.28	2.11	15	9	0.0	0	3.2	21	46	23	11	5	9	16	6.9	
GRAND RAPIDS	784	983.7	1012.5	78	56	66.7	- 0.8	92	8	41	13	2	0	57	71	5.02	1.71	1.58	12	6	0.0	0	2.6	24	52	NW	29	5	10	15	6.8	54
HOUGHTON LAKE	1149	971.6	1013.2	73	52	62.6	0.0	90	8	41	13	1	0	54	76	5.54	2.42	1.75	15	6	0.0	0	1.7	24	22	27	21	4	12	14	6.7	
LANSING	841	981.7	1013.0	77	56	66.5	- 0.9	91	11	42	20	2	0	54	66	7.94	4.60	2.42	15	8	0.0	0	3.2	23	49	NW	23	7	8	15	6.5	58
MARQUETTE U	677			65	48	56.4	- 3.7	86	4	42	15	0	0			7.07	3.61	1.73	20		0.0	0			32	NW	14	1	8	21	8.1	44
MUSKEGON	627	989.8	1012.4	74	56	64.9	- 1.8	90	9	46	17	1	0	55	72	2.86	0.16	0.57	12	7	0.0	0	3.2	24	35	25	29	9	7	14	5.9	
SAULT STE MARIE	721	986.1	1012.6	68	48	57.8	- 1.2	88	6	34	16	0	0	51	81	3.73	0.43	0.61	15	5	0.0	0	0.7	12	28	SE	30	0	11	19	8.0	42
MINNESOTA																																
DULUTH	1428	961.4	1012.5	68	47	57.4	- 1.4	90	4	35	15	1	0	47	73	5.39	1.12	1.76	12	9	0.0	0	1.9	8	32	NE	25+	1	11	18	7.9	44
INTERNATIONAL FALLS	1179	969.2	1011.9	70	49	59.5	- 0.4	80	3	40	15+	0	0	52	79	4.65	0.78	1.52	15	11	0.0	0	0.5	14	23	34	11	3	8	19	7.6	
MINNEAPOLIS	834	981.4	1011.3	77	57	67.2	0.4	96	4	42	15	4	0	56	69	6.78	2.78	1.71	13	8	0.0	0	1.2	19	40	NW	13	3	10	17	7.3	58
ROCHESTER	1297	964.8	1011.9	76	55	65.1	- 1.9	92	4	42	15	2	0	55	71	6.07	1.61	2.33	14	10	0.0	0	2.5	21	35	26	10	2	12	16	7.2	
ST CLOUD	1034	973.2	1010.7	76	54	65.4	0.2	94	4	39	15	3	0		69	6.98	2.49	2.19	14		0.0	0						5	6	19	7.1	

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No of days: Max 90 F. or above	Temperature: No of days: Min. 32 F or below	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No of days: .01 inch or more	Precipitation: No of days: With thunderstorms	Snow, Sleet: Total	Snow, Sleet: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile: Speed	Wind: Fastest mile: Direction	Wind: Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	No. of days (sunrise to sunset): Partly cloudy, 4-7	No. of days (sunrise to sunset): Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	Ft.	Mb.	Mb.	F.	F.	F.	F.	F		F				F	%	In	In.	In.			In.	In	M.p.h.		M.p.h.							%
MISSISSIPPI																																
JACKSON	310	1003.1	1014.8	92	68	79.6	-0.2	96	30+	56	27	24	0	68	72	1.02	-2.77	0.32	7	7	0.0	0	1.7	17	25	NW	26	13	3	14	5.4	63
MERIDIAN	290	1004.4	1015.4	95	66	80.3	0.8	100	30+	53	28	28	0	67	72	0.71	-3.36	0.45	5	5	0.0	0	1.1	26	23	17	11	12	8	10	5.3	
MISSOURI																																
COLUMBIA	778	985.1	1012.6	86	66	75.7	1.7	93	14	50	27	10	0	63	67	7.35	3.01	4.37	8	7	0.0	0	4.3	20	29	SW	29	10	11	9	5.3	78
KANSAS CITY	742	985.8	1012.1	87	68	77.6	1.7	96	28	52	27	14	0	63	63	2.33	-2.24	1.53	3	3	0.0	0	5.8	20	31	S	29	7	16	7	5.2	74
ST JOSEPH	811			87	64	75.6	1.6	94	28	47	27	13	0	63	69	2.35	-3.58		7	4	0.0		5.2	19	32	18	10	9	14	7	5.0	
ST LOUIS	535	993.6	1013.5	87	67	77.0	2.9	95	29	54	28	12	0	63	63	0.90	-3.39	0.30	9	4	0.0	0	4.1	20	32	SW	25	12	8	10	5.4	79
SPRINGFIELD	1268	969.5	1013.9	85	63	74.0	-0.2	92	22	48	27	4	0	63	72	2.35	-2.67	1.83	4	3	0.0	0	4.8	19	29	S	29	10	13	7	5.0	68
MONTANA																																
BILLINGS	3567	889.9	1012.5	72	53	62.6	-2.5	93	2	43	14	1	0	47	62	3.86	1.31	1.73	14	5	0.0	0	2.3	31	79	NW	13	3	11	16	7.1	46
GLASGOW	2284	931.3	1012.2	72	49	60.4	-1.9	93	19+	39	1	2	0	44	60	2.24	-0.74	0.84	12	3	0.0	0	1.6	35				3	8	19	7.6	
GREAT FALLS	3662	887.2	1013.1	70	49	59.2	-0.7	88	19	39	14	0	0	43	59	2.89	-0.01	0.76	17	7	0.0	0	4.8	25	36	W	27+	3	8	19	7.8	62
HAVRE	2582	921.1	1012.2	73	48	60.3	-0.7	92	19	39	25+	1	0	44	59	2.53	-0.20	1.23	14	5	0.0	0	3.5	26	42	NW	27	0	12	18	8.0	70
HELENA	3828	880.1	1014.2	70	46	58.3	-1.2	88	19	35	14	0	0	43	61	2.68	0.45	0.81	16	3	0.0	0	4.8	28	42	SW	11	4	7	19	7.5	47
KALISPELL	2965	910.6	1014.4	71	45	58.0	-0.6	92	26	35	16	1	0	44	64	2.16	-0.05	0.65	13	6	0.0	0	2.7	18	25	32	27	2	9	19	7.7	
MILES CITY	2629	920.1	1012.0	74	52	62.9	-2.7	94	19+	43	16	3	0	50	67	5.18	2.47		18	8	0.0		2.8	34								
MISSOULA	3190	904.5	1015.1	73	47	59.8	1.3	89	26	37	14	0	0	43	59	1.89	-0.02	0.44	15	3	0.0	0	3.0	31	34	W	27	3	4	23	7.9	55
NEBRASKA																																
GRAND ISLAND	1841	945.8	1010.5	87	59	73.2	2.2	101	29	47	27	14	0	57	61	7.13	3.34	4.20	6	7	0.0	0	4.5	18	46	13	23	12	10	8	5.0	
LINCOLN U	1150			86	63	74.6	1.5	99	29+	50	27	13	0			3.28	-1.22	1.41	10		0.0	0			42	SW	29	9	12	9	5.4	75
NORFOLK	1544			85	59	72.0	1.1	99	20	45	16	10	0			2.49	-1.77	0.93	11		0.0	0						8	10	12	6.0	
NORTH PLATTE	2775	914.0	1009.8	85	54	69.5	0.4	100	20	44	27+	9	0	52	57	2.25	-1.00	1.84	6	7	0.0	0	2.8	12	33	NW	30	12	11	7	4.6	76
OMAHA	977	976.3	1010.9	86	62	74.0	0.9	95	3	47	27	13	0	61	66	4.44	-0.09	1.87	10	9	0.0	0	3.6	18	45	NW	29	7	16	7	5.5	80
SCOTTSBLUFF	3957	877.4	1010.6	81	54	67.3	0.4	98	27+	40	26	6	0	49	59	2.29	-0.81	0.65	11	12	0.0	0	1.8	2	32	31	4	12	9	9	5.0	
VALENTINE	2587			80	55	67.5	0.0	101	20	45	1	6	0			5.73	2.62	2.04	8		0.0	0			68	N	20	11	9	10	5.4	70
NEVADA																																
ELKO	5050	844.2	1012.3	82	47	64.1	4.1	98	27	32	30	8	1	38	43	2.60	1.89	1.85	4	2	T	0	3.0	26	25	26	28+	12	8	10	4.8	
ELY	6253	809.0	1011.2	78	41	59.4	0.8	93	27	23	30	6	2	31	41	1.12	0.62	0.45	5	5	0.0	0	2.3	23	30	NW	23	13	8	9	4.6	79
LAS VEGAS	2162	933.3	1007.6	100	68	84.0	1.1	111	27+	52	9	24	0	31	18	0.31	0.27	0.31	1	1	0.0	0	4.5	21	40	SW	5	23	4	3	2.1	91
RENO	4404	865.6	1013.1	83	42	62.9	2.8	100	26	32	13	8	1	34	36	0.16	-0.21	0.14	2	0	0.0	0	3.1	30	35	NW	6	14	8	8	4.3	87
WINNEMUCCA	4299	867.3	1012.4	83	48	65.3	3.8	101	26	34	30	11	0	33	34	0.85	0.09	0.47	4	2	0.0	0	2.7	29	31	SW	28+	12	7	11	4.9	73
NEW HAMPSHIRE																																
CONCORD	342	1001.4	1014.0	72	53	62.0	-2.5	89	6	43	29	0	0	55	81	5.90	2.30	1.63	19	5	0.0	0	0.5	24	26	NW	20	0	12	18	7.8	34
MT WASHINGTON OBS	6262			49	38	43.1	-1.8	59	15+	23	21+	0	5			11.02	4.52	1.96	25	5	1.5	T			100Y	W	20	1	1	28	9.2	20
NEW JERSEY																																
ATLANTIC CITY	64	1011.9	1014.2	81	59	70.1	0.1	97	30	44	21	6	0	60	74	2.86	0.03	1.22	8	7	0.0	0	3.6	22	21	19	22	9	7	14	6.2	58
ATLANTIC CITY U	11			77	64	70.6	1.6	97	30	55	21	2	0			6.24	3.20	4.10	9						33	SSW	22					
NEWARK	7	1012.9	1013.9	79	61	69.7	-1.6	95	30	53	1	4	0	58	71	4.37	0.93	1.75	13	5	0.0	0	2.3	24	24	30	3	9	6	15	6.4	
TRENTON U	56			80	61	70.6	-0.4	94	30	53	21	5	0			6.26	2.66	4.43	12		0.0	0			32	NW	3	9	6	15	6.0	60
NEW MEXICO																																
ALBUQUERQUE	5311	837.8	1009.5	92	59	75.2	0.3	101	22+	43	10	21	0	33	25	0.05	-0.52	0.05	1	2	0.0	0	0.8	23	40	NW	9	20	6	4	2.8	92
CLAYTON	4969			87	55	70.8	0.6	104	28	40	26	10	0			2.09	0.61	1.40	5		0.0	0						12	14	4	3.9	
RATON	6379			85	49	66.6	1.2	97	28	36	10	7	0			0.58	-1.12	0.30	6		0.0	0						8	18	4	5.0	
ROSWELL	3617	889.3		97	57	77.0	-0.1	109	28	44	11	26	0	44	35	0.60	-0.45	0.54	3	5	0.0	0	3.0	17	29	W	15+	19	9	2	3.3	86
SILVER CITY	5373			89	58	73.4	-1.2	101	21	40	10	17	0			0.48	-0.10	0.48	2		0.0	0						20	8	2	3.1	
NEW YORK																																
ALBANY	275	1003.4	1013.9	77	56	66.7	-0.6	98	9	47	1	3	0	56	71	4.38	1.13	1.44	19	5	0.0	0	3.0	23	32	W	20	1	10	19	7.8	41
BINGHAMTON	1590	956.3	1014.7	72	54	62.9	-0.6	85	30+	43	1	0	0	56	80	6.96	3.11	1.72	17	4	0.0	0	3.1	25	29	NW	20	4	9	17	7.4	52
BUFFALO	705	988.2	1013.6	74	56	64.8	0.0	91	11+	45	21+	2	0	55	73	4.45	1.91	3.04	13	6	0.0	0	5.2	23	29	W	29+	6	7	17	6.6	57
J.F. KENNEDY	13	1013.5	1014.3	75	61	68.1	-2.0	97	30	55	5+	2	0	59	76	4.16	0.81	1.81	15	6	0.0	0	3.3	19	24	19	22+	6	8	16	6.7	
NEW YORK U	132	1010.5	1013.8	78	61	69.7	-1.7	94	30	53	21	3	0	57	68	6.15	2.84	1.91	14	5	0.0	0	1.2	26	22	NE	28+					55

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	No. of days: Max. 90 F. or above	No. of days: Min. 32 F. or below	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	No. of days: .01 inch or more	No. of days: With thunderstorms	Snow, Sleet: Total	Snow, Sleet: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Fastest mile: Speed	Fastest mile: Direction	Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	Ft.	Mb.	Mb.	F.	F.	F.	F.	F.		F.				F	%	In.	In.	In			In	In.	M.p.h		M.p.h.							%
NEW YORK																																
NEW YORK LA GUARDIA	11	1012.2	1013.9	77	62	69.2	- 2.3	93	30	55	21	3	0	57	69	6.16	2.78	1.67	14	6	0.0	0	0.9	26	27	NW	19	6	9	15	6.5	
ROCHESTER	547	993.9	1013.7	75	54	64.7	- 2.2	90	11	42	21	1	0	55	74	2.84	0.28	1.39	13	7	0.0	0	3.2	25	28	NW	20	6	7	17	6.9	56
SYRACUSE	410	998.6	1013.5	74	56	64.9	- 2.4	90	9	40	1	1	0	55	73	6.14	3.18	3.10	11	5	0.0	0	1.8	28	29	NW	12+	6	8	16	6.8	49
NORTH CAROLINA																																
ASHEVILLE	2140	941.1	1015.9	82	57	69.5	- 0.6	91	30	45	14+	1	0	62	81	5.06	1.54	1.85	12	8	0.0	0	2.0	35	28	34	16	9	9	12	5.7	68
CAPE HATTERAS R	7	1015.9	1016.2	82	68	74.9	- 0.3	87	23	57	2	0	0	67	78	3.47	- 0.67	1.30	6	4	0.0	0	4.8	19	34	W	28	9	12	9	5.3	79
CHARLOTTE	736	988.2	1015.0	84	64	73.8	- 3.3	95	30	53	28	5	0	64	75	6.63	3.02	3.28	8	4	0.0	0	1.6	23	34	SW	26	12	3	15	5.9	74
GREENSBORO	897	984.1	1015.4	84	62	72.9	- 1.9	96	30	50	14	5	0	63	75	1.62	- 1.85	0.56	8	9	0.0	0	1.5	19	25	NW	25	6	11	13	6.2	54
RALEIGH	434	999.3	1015.1	85	67	73.6	- 1.5	95	30+	50	14	8	0	64	77	1.74	- 1.96	0.86	8	7	0.0	0	2.2	21	28	31	17	7	11	12	6.0	66
WILMINGTON	28	1014.6	1015.9	87	69	78.3	0.6	100	26	61	14+	9	0	67	71	2.52	- 1.74	0.90	8	5	0.0	0	3.3	18	25	SE	7	9	11	10	5.7	69
NORTH DAKOTA																																
BISMARCK	1647	952.9	1012.0	72	50	61.2	- 3.3	96	3	40	15	1	0	52	77	6.52	3.12	1.57	21	11	0.0	0	2.0	36	40	NW	20	4	8	18	7.6	61
FARGO	896	978.7	1011.0	75	54	64.1	- 0.7	97	3	39	15	1	0	55	76	3.94	0.90	0.92	15	12	0.0	0	1.8	36	61	W	5	4	12	14	6.7	68
WILLISTON	1899	944.1	1011.7	72	50	61.4	- 1.7	95	2	40	15	3	0	48	66	3.68	0.37	1.85	11	6	0.0	0	1.5	31	38	NW	3	4	8	18	7.6	53
OHIO																																
AKRON	1208	970.5	1014.3	80	59	69.8	0.4	91	30+	48	14	5	0	59	69	2.40	- 1.86	0.58	12	7	0.0	0	3.8	24	25	29	26+	4	13	13	6.5	
CINCINNATI OBS	761			84	63	73.3	- 0.1	93	10	51	13	9	0			1.50	- 2.68	0.61	10		0.0	0			17	SW	25					63
CLEVELAND	777	985.4	1014.3	77	56	66.5	- 1.3	91	11	43	14	1	0	56	70	2.32	- 1.11	0.87	11	5	0.0	0	3.8	22	28	S	21+	5	6	19	7.1	52
COLUMBUS	812	985.1	1014.5	82	61	71.5	0.7	95	30	50	14	7	0	62	73	2.96	- 1.20	0.65	11	8	0.0	0	2.0	21	34	SW	25	5	12	13	6.3	57
DAYTON	1002	978.7	1014.2	82	61	71.3	- 0.2	92	9	49	13	3	0	58	65	3.66	- 0.44	2.09	13	6	0.0	0	3.9	22	35	SW	25	7	10	13	6.1	70
MANSFIELD	1295			79	58	68.9	1.1	90	30+	50	21+	2	0	59	73	3.94	- 0.29	1.74	11	5	0.0	0	5.1	23	23	30	26+	7	13	10	5.9	
TOLEDO	669	988.8	1013.7	81	58	69.6	1.3	96	11	47	18	8	0	59	69	3.40	- 0.39	1.36	12	7	0.0	0	2.7	24	35	W	11	5	10	15	6.7	58
YOUNGSTOWN	1178	972.2	1014.7	77	53	65.0	- 2.1	89	30	38	14	0	0	56	74	3.16	- 0.42	0.72	15	8	0.0	0	3.2	24	24	35	19	5	8	17	6.9	
OKLAHOMA																																
OKLAHOMA CITY	1285	967.2	1012.5	84	65	74.8	- 3.2	94	30	54	27	6	0	66	76	2.39	- 2.08	1.10	6	7	0.0	0	6.8	17	34	S	29	10	6	14	5.8	70
TULSA	650	989.2	1012.9	87	67	76.8	- 0.5	95	13	53	27	11	0	66	71	4.08	- 0.61	2.24	8	6	0.0	0	6.4	18	35	NE	14	9	10	11	5.4	72
OREGON																																
ASTORIA	8	1018.3	1018.9	64	48	56.1	- 1.2	76	25	41	9+	0	0	49	77	4.81	1.79	2.42	13	0	0.0	0	4.6	28	23	18	1	4	7	19	7.6	
BURNS U	4151	873.4	1014.5	76	46	61.1	1.3	97	26	35	28	3	0	37	44	0.21	- 0.67	0.11	3		0.0	0	5.3	31				11	10	9	5.0	
EUGENE	359	1004.7	1018.1	75	48	61.6	0.7	94	25	40	12	1	0	50	70	0.96	- 0.46	0.46	4	0	0.0	0	2.6	31	18	31	28+	8	9	13	5.9	
MEACHAM	4050	877.4	1015.5	66	44	54.8	1.1	85	25	34	29+	0	0	38	57	1.44	- 1.01	0.53	8		T	0	3.6	29	20	30	27	9	10	11	5.6	
MEDFORD	1298	969.5	1016.4	86	52	68.8	4.6	107	25	40	8	12	0	45	47	0.06	- 0.96	0.03	2	1	0.0	0	4.4	32	20	31	14+	15	10	5	3.7	
PENDLETON	1482	962.4	1015.3	80	55	67.5	1.7	99	25	44	12	6	0	42	44	0.89	- 0.28	0.43	6	1	0.0	0	6.7	26	32	26	27+	13	8	9	5.0	
PORTLAND	21	1016.6	1017.8	73	52	62.2	0.2	93	25	45	3	1	0	50	67	2.20	0.53	0.97	11	1	0.0	0	3.9	32	24	SW	26	7	8	15	6.4	59
SALEM	196	1010.8	1018.0	73	46	59.6	- 1.0	93	25	37	12	1	0	50	70	1.29	- 0.16	0.79	8	0	0.0	0	2.2	29	23	25	26	9	7	14	5.8	
SEXTON SUMMIT R	3836	885.5	1016.3	68	46	57.1	1.4	90	25	36	29+	1	0			0.18	- 1.35	0.17	2		0.0	0			42	18	1	18	6	6	3.8	
PACIFIC AREA																																
JOHNSTON	7	1014.2	1014.8	85	78	81.4	1.1	86	28+	75	5	0	0	72	74	1.48	0.64	0.62	15	1	0.0	0	16.9	8	38	E	29	13	10	7	5.2	53
KOROR R	94	1006.8	1010.5	90	76	83.2	2.1	92	18	73	11	21	0	76	83	7.01	- 5.97	3.16	24	2	0.0	0	2.6	11	26	E	11	0	6	24	8.6	72
KWAJALEIN	8	1009.8	1010.7	87	76	81.3	- 0.1	89	29	73	24+	0	0	76	83	11.56	2.88	3.36	22	2	0.0	0	7.1	9	32	13	12	0	6	24	8.8	
MAJURO	10	1010.8	1011.1	86	76	81.1	0.8	87	30+	74	29+	0	0	75	79	16.07	3.23	3.86	26	3	0.0	0	5.7	9	26	E	12	1	10	19	7.8	64
MARCUS ISLAND	20			88	75	81.1	- 1.6	90	30+	70	14	2	0			1.25	- 1.37	0.39	6		0.0	0			24	W	16					67
PAGO PAGO	12	1013.2	1013.5	85	75	79.8		86	7+	69	3	0	0	73	81	2.71		0.63	20	0	0.0	0	11.7	10	30	E	19+	2	14	14	7.3	40
PONAPE R	123	1005.1	1010.3	88	73	80.1	0.0	91	11+	70	27+	6	0	75	87	10.54	- 6.16	2.59	25	2	0.0	0	2.5	11	20	E	20	2	6	22	8.1	49
TAGUAC GUAM R	361			87	71	79.1	- 1.1	88	27+	67	9+	0	0			6.17	0.30	1.29	23		0.0	0			19	SE	25+	3	18	9	6.5	61
TRUK MOEN ISLAND	5	1009.8	1010.2	87	76	81.5	0.8	89	26+	72	22	0	0	75	83	14.20	2.33	3.23	21	2	0.0	0	3.6	7	21	NW	25	1	9	20	8.4	68
WAKE	11	1013.5	1013.9	88	77	82.5	1.1	89	29+	72	13	0	0	72	73	2.26	0.36	1.08	11	1	0.0	0	11.3	10	34	SE	13	6	15	9	6.3	86
YAP R	44	1008.1	1010.2	88	75	81.2	- 0.7	91	8	72	25+	4	0	75	82	5.76	- 4.96	1.40	19	2	0.0	0	3.6	10	19	NE	11	1	9	20	8.2	61
PENNSYLVANIA																																
ALLENTOWN	387	1000.7	1014.3	78	56	67.2	- 2.2	93	30	45	21	3	0	57	72	3.59	- 0.48	0.98	13	9	0.0	0	1.9	26	29	32	3	4	11	15	6.8	
ERIE	731	987.5	1014.0	75	55	65.0	- 1.7	91	11	42	21	1	0	55	72	2.63	- 0.42	0.93	12	9	0.0	0	3.9	23	35	28	29	7	9	14	6.3	
HARRISBURG	338	1001.7	1014.2	81	59	70.3	- 1.0	95	30	48	1	4	0	60	72	2.25	- 1.17	0.87	13	9	0.0	0	2.2	24	24	NW	26+	6	9	15	6.8	66

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

JUNE 1968

State and Station	Elevation (ground)	Pressure: Station ○	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	No. of days: Max. 90 F. or above	No. of days: Min. 32 F. or below	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	No. of days: .01 inch or more	No. of days: With thunderstorms	Snow, Sleet: Total	Snow, Sleet: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Fastest mile: Speed	Fastest mile: Direction	Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	Ft.	Mb.	Mb.	F	F	F.	F	F		F				F	%	In.	In.	In			In	In.	M.p.h.		M.p.h.							%
PENNSYLVANIA																																
PHILADELPHIA	5	1013.2	1014.1	81	61	71.2	0.2	94	30	48	21	3	0	60	69	5.89	1.84	3.05	12	7	0.0	0	2.7	25	30	N	16	8	6	16	6.6	62
PITTSBURGH	1137	971.2	1014.5	79	55	66.9	- 1.5	90	30	40	21	1	0	56	68	2.38	- 1.40	0.98	13	5	0.0	0	4.0	26	31	30	12	5	9	16	6.7	60
READING U	266			81	61	71.0	- 1.2	95	30	52	21+	4	0			3.46	- 0.26	0.84	11		0.0	0			38	E	10+	9	9	12	5.9	58
SCRANTON	930	980.7	1014.6	77	58	67.5	- 0.7	91	30	45	21	3	0	60	78	4.82	0.91	1.21	13	8	0.0	0	2.5	23	25	SW	15	3	12	15	7.2	55
WILLIAMSPORT	524	995.6	1014.4	78	55	66.3	- 2.9	92	30	44	21	1	0	59	81	5.20	1.97	1.53	16	9	0.0	0	1.7	24	40	32	15	3	13	14	6.8	
RHODE ISLAND																																
BLOCK ISLAND	110			68	56	62.2	- 0.7	81	7+	50	5+	0	0			4.50	1.94	1.80	15		0.0	0						9	8	13	6.4	
PROVIDENCE	51	1011.5	1013.9	74	56	65.0	- 1.2	90	7+	49	5	2	0	56	75	4.74	1.98	0.95	17	4	0.0	0	0.7	28	23	30	20	5	12	13	6.8	46
SOUTH CAROLINA																																
CHARLESTON	40	1013.5	1015.2	87	69	77.8	- 1.4	97	26	58	1	5	0	66	71	9.41	4.43	2.77	11	8	0.0	0	2.7	16	65Y	NW	12	9	6	15	6.3	68
CHARLESTON U	9			85	73	78.7	- 0.9	94	26	67	1	3	0			9.94	5.69	4.97	10		0.0	0			82	NW	12					
COLUMBIA	213	1007.1	1015.2	89	67	77.9	- 1.8	96	30+	55	1	19	0	67	74	5.41	1.56	1.55	10	7	0.0	0	0.5	21	32	31	12	8	8	14	6.0	64
GNVLE-SPARTANBURG	957	981.4	1015.3	85	63	74.2	- 2.8	94	30	50	28	5	0	62	70	5.71	2.82	4.07	9	8	0.0	0	0.5	29	33	SW	26	10	8	12	5.5	55
SOUTH DAKOTA																																
ABERDEEN	1296	964.4	1010.7	76	54	65.0	- 1.6	97	3	36	15	1	0	54	71	3.24	- 0.52	0.64	17	12	0.0	0	2.6	36	40	32	20	6	8	16	6.8	
HURON	1282	964.4	1010.1	80	55	67.7	0.1	99	20	41	15	5	0	55	67	7.23	4.09	3.41	13	11	0.0	0	0.8	25	59	NW	20	5	11	14	6.7	60
RAPID CITY	3162	902.5	1011.6	75	51	63.0	- 1.9	94	3	42	26+	1	0	50	68	7.00	3.92	1.89	17	12	0.0	0	4.0	36	56	NW	20	11	6	13	6.1	57
SIOUX FALLS	1418	960.0	1010.4	83	57	69.6	1.5	101	20	37	15	8	0	55	64	4.10	- 0.25	2.37	12	12	0.0	0	2.5	22	58	25	21	4	13	13	6.5	
TENNESSEE																																
BRISTOL	1507	962.8	1016.1	83	59	70.8	- 2.4	93	30	47	1	2	0	61	74	2.89	- 0.49	0.87	12	6	0.0	0	1.0	30	31	31	11	8	8	14	6.3	
CHATTANOOGA	665	990.9	1014.9	88	63	75.3	- 2.8	95	30	50	28	11	0	63	69	0.87	- 2.83	0.68	6	7	0.0	0	1.3	25	25	NW	11	8	9	13	5.8	64
KNOXVILLE	980	980.4	1014.8	84	63	73.6	- 2.1	91	30	52	14	1	0	63	75	3.97	0.64	0.92	11	7	0.0	0	0.8	29	32	SW	26	7	13	10	6.3	69
MEMPHIS	258	1004.4	1014.4	90	69	79.5	1.0	96	16	61	27	18	0	64	60	3.76	0.08	2.91	6	5	0.0	0	2.5	19	30	SW	25+	11	7	12	5.6	78
NASHVILLE	590	993.2	1014.6	87	63	74.9	- 2.5	96	30	48	14	9	0	63	69	2.26	- 0.99	1.26	7	5	0.0	0	2.4	23	29	SW	25	9	10	11	5.8	64
OAK RIDGE R	905			85	63	73.9	- 0.6	92	30	52	14	5	0			3.56	0.32	1.09	10		0.0	0			35Y		25	9	9	12	6.2	
TEXAS																																
ABILENE	1762	951.6	1011.6	89	69	79.3	- 1.0	97	28+	61	27	16	0	63	63	1.09	- 1.58	0.90	3	4	0.0	0	7.5	16	36	N	1	8	10	12	6.0	80
AMARILLO	3604	889.3	1009.4	88	62	74.9	- 2.1	104	29+	49	26	15	0	54	54	1.68	- 1.21	1.15	8	8	0.0	0	7.1	17	35	SE	8	15	10	5	4.0	83
AUSTIN	597	991.2	1012.7	88	71	79.5	- 2.4	96	12	61	27	14	0	69	75	3.10	- 0.12	0.88	13	6	0.0	0	4.9	15	34	NW	5	3	12	15	6.8	58
BROWNSVILLE	19	1011.2	1011.6	91	76	83.3	0.6	95	12	71	26	23	0	74	78	4.71	1.75	1.82	8	5	0.0	0	9.1	14	35	NW	26	7	17	6	5.6	80
CORPUS CHRISTI	41	1010.5	1012.1	86	74	79.9	- 2.4	92	12	69	3	2	0	74	85	8.36	5.97	3.54	11	7	0.0	0	7.3	14	32	NW	26	1	17	12	6.7	58
DALLAS	481	995.9	1012.9	89	72	80.6	- 0.7	100	12	65	27+	15	0	67	67	4.80	1.56	2.04	10	5	0.0	0	7.1	16	28	SE	29	4	10	16	6.9	63
DEL RIO	1026	975.3	1010.6	94	71	82.3	- 2.1	101	12	62	17+	26	0	67	63	1.72	- 0.57	1.35	4	6	0.0	0	9.3	12	38	36	25	6	13	11	6.0	
EL PASO	3918	879.8	1007.9	96	66	81.0	0.0	106	21	51	11	26	0	41	26	0.03	- 0.66	0.03	1	3	0.0	0	2.1	24	35	NE	15	20	8	2	2.8	90
FORT WORTH	537	992.9	1013.0	89	70	79.5	- 2.0	96	13+	60	27	12	0	69	75	3.50	0.52	1.36	10	7	0.0	0	5.6	17	24	19	30+	4	9	17	6.9	
GALVESTON U	7			84	76	80.3	- 1.4	93	13	71	21+	1	0			13.03	10.38	4.95	13		0.0	0			37	SW	24+					36
HOUSTON	50	1011.5	1013.5	88	73	80.5	- 1.1	94	12	68	27	13	0	72	80	11.18	7.49	3.56	15	11	0.0	0	6.0	14	29	16	24	2	15	13	6.6	49
LUBBOCK	3254	901.8	1010.6	89	60	74.5	- 3.0	103	28	49	2	14	0	56	59	1.81	- 0.72	1.01	5	8	0.0	0	6.5	17	36	2	16	13	10	7	4.1	
MIDLAND	2851	914.3	1010.2	91	64	77.5	- 3.7	102	28	53	3	22	0	56	53	1.02	- 0.61	0.49	5	5	0.0	0	5.8	14	48	30	9	18	10	2	3.3	
PORT ARTHUR	16	1013.5	1014.3	88	71	79.5	- 1.1	95	12	65	27	12	0	72	82	12.17	7.88	3.47	15	12	0.0	0	4.8	15	38	SW	24	5	12	13	6.5	48
SAN ANGELO	1903	945.8	1010.8	91	67	79.3	- 3.2	99	11	58	3	19	0	66	68	4.71	2.89	1.28	7	6	0.0	0	6.0	15	37	2	25	10	12	8	5.5	
SAN ANTONIO	788	984.8	1012.4	89	72	80.5	- 1.4	95	13+	60	27	18	0	69	73	2.63	- 0.32	0.83	11	3	0.0	0	5.6	14	33	NW	1	1	16	13	6.8	52
VICTORIA	104	1008.5	1012.6	88	74	80.8	- 0.5	95	13+	68	27	11	0	73	82	10.67	7.63	3.10	13	11	0.0	0	5.9	15	56Y	ESE	23	1	18	11	6.8	
WACO	501	995.3	1012.9	88	72	79.9	- 2.1	98	13	64	27+	14	0	68	72	5.11	2.44	1.38	12	6	0.0	0	6.3	15	25	15	29	5	11	14	6.7	
WICHITA FALLS	994	976.3	1012.0	93	67	79.6	- 2.2	105	29	57	27	23	0	66	67	1.19	- 2.01	1.38	4	6	0.0		7.8	15	32	5	15	8	8	14	6.1	
UTAH																																
MILFORD	5028	845.2		88	47	67.2	1.8	102	27	34	30	14	0			0.15	- 0.28	0.15	2		0.0	0						20	4	6	3.0	
SALT LAKE CITY	4220	870.3	1011.7	82	53	67.5	0.1	100	27	40	30	8	0	41	44	1.58	0.60	0.97	6	6	T	T	0.8	16	30	W	23+	14	6	10	4.7	79
WENDOVER	4237	869.6	1012.5	81	58	69.4	- 0.4	100	27	44	30	9	0			0.97	0.51	0.42	6		0.0	0										
VERMONT																																
BURLINGTON	332	1000.7	1013.2	69	53	60.8	- 3.4	82	30	44	20	0	0	54	81	3.66	0.17	0.72	15	7	0.0	0	1.9	19	30	S	12	1	7	22	8.5	54

See footnotes at end of table

CLIMATOLOGICAL DATA
ENGLISH UNITS

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	No. of days: Max. 90 F. or above	No. of days: Min. 32 F. or below	Average dew point	Average relative humidity	Precipitation: Total	Departure from normal	Greatest in 24 hours	No. of days: .01 inch or more	No. of days: With thunderstorms	Snow, Sleet: Total	Snow, Sleet: Maximum depth on ground	Wind: Resultant speed	Resultant direction	Fastest mile: Speed	Fastest mile: Direction	Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	Ft.	Mb.	Mb.	F.	F.	F.	F.	F.		F.				F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
VIRGINIA																																
LYNCHBURG	916			84	60	72.1	- 0.9	98	30	49	14+	7	0			1.49	- 2.57	0.56	7		0.0	0			25	W	26	8	11	11	5.6	71
NORFOLK	22	1014.2	1015.2	84	66	74.9	- 0.7	96	27+	56	6	6	0	65	73	3.07	- 0.54	1.10	11	7	0.0	0	3.8	19	31	SW	28	8	15	7	5.2	82
RICHMOND	164	1009.1	1015.0	86	63	74.7	- 0.4	98	30	52	1	11	0	65	72	2.89	- 0.86	1.16	10	7	0.0	0	2.5	21	24	N	17	6	13	11	6.0	74
ROANOKE	1149	973.9	1015.3	83	59	71.3	- 2.1	97	30	46	14+	5	0	58	66	2.11	- 1.69	0.71	10	5	0.0	0	2.8	26	25	31	26+	8	10	12	5.7	
WALLOPS ISLAND	9			78	64	70.9		93	26	56	21+	2	0			2.51		0.90	10		0.0	0			38Y	WNW	27	7	12	11	6.0	
WASHINGTON																																
OLYMPIA	195	1010.5	1017.8	70	47	58.3	- 0.8	88	25	37	3	0	0	49	72	2.43	0.64	1.38	10	0	0.0	0	3.1	23	23	27	27+	5	10	15	6.8	
QUILLAYUTE	179	1010.8	1018.5	63	46	54.8	- 1.0	78	24	42	11+	0	0	49	83	4.58	1.20	1.19	16	0	0.0	0	2.5	25	17	NW	19+	3	8	19	7.8	33
SEATTLE TACOMA	400	1001.7	1017.9	69	52	60.7	0.9	87	25	48	29+	0	0	46	62	3.02	1.44	1.75	10	1	0.0	0	2.5	25	23	22	26	3	9	18	7.2	51
SPOKANE	2356	930.9	1013.6	74	48	61.2	- 0.7	92	26	38	29	1	0	41	52	0.87	- 0.62	0.43	8	0	0.0	0	6.0	20	33	SW	27	7	10	13	6.3	58
STAMPEDE PASS R	3958	881.1		56	42	48.8	- 0.1	83	25	34	28+	0	0			6.19	2.10	1.99	19		1.0	T						3	10	17	7.6	
WALLA WALLA U	949			80	56	67.9	0.7	97	25	48	29	4	0			0.91	- 0.31	0.37	8		0.0	0			26	NW	27	12	7	11	5.6	71
YAKIMA	1052	976.3	1014.3	79	49	63.9	- 0.5	91	26+	36	12	3	0	41	44	0.02	- 0.79	0.02	1	0	0.0	0	4.9	29	32	29	27	10	12	8	5.1	
WEST INDIES																																
SAN JUAN P.P.	13	1015.6	1017.8	87	74	80.4	0.4	89	25+	72	6	0	0	75	86	5.98	0.32	1.30	17	7	0.0	0	6.7	9	31	E	30	4	16	10	6.4	53
SWAN ISLAND	28			86	77	81.4	- 0.9	87	30+	72	13	0	0			7.59	1.13	1.51	19		0.0	0						1	7	22	8.1	
WEST VIRGINIA																																
BECKLEY	2504	928.9	1015.5	77	55	66.0	- 1.8	88	30	37	14	0	0	56	73	3.08	- 1.16	1.60	8	7	0.0	0	3.2	24	37	28	26	5	8	17	6.9	
CHARLESTON	939	981.4	1015.0	83	59	70.6	- 1.4	92	11+	45	14	5	0	60	73	2.83	- 0.86	0.94	11	10	0.0	0	2.1	22	25	22	26	5	10	15	6.6	
ELKINS	1970	945.8	1016.2	79	52	65.3	- 1.8	89	30	39	21	0	0	56	79	2.05	- 3.14	0.42	13	9	0.0	0	2.5	28	25	12	8	3	9	18	7.7	
HUNTINGTON	827	985.4	1015.3	82	58	70.3	- 1.7	93	30	44	14	3	0	60	74	1.67	- 2.43	0.60	11	9	0.0	0	2.3	21	21	27	26	5	12	13	6.5	
PARKERSBURG U	615			82	60	71.0	- 1.6	93	30	45	14	4	0			4.07	- 0.20	1.22	10		0.0	0			26	NW	24					58
WISCONSIN																																
GREEN BAY	682	986.8	1011.9	75	55	64.7	- 0.8	89	7	41	13	0	0	56	74	6.97	3.61	2.30	17	11	0.0	0	1.2	23	40	S	11	8	12	10	6.3	55
LA CROSSE	651	987.5	1011.8	78	58	68.0	- 0.8	93	6	45	28	5	0	58	73	9.53	5.33	2.84	13	9	0.0	0	1.3	18	30	28	30	3	11	16	7.2	
MADISON	858	981.0	1011.9	78	55	66.2	0.1	92	9	40	13	5	0	57	73	7.82	3.87	2.19	15	9	0.0	0	2.1	24	54	W	10	6	10	14	6.6	61
MILWAUKEE	672	987.5	1012.5	75	57	66.3	3.0	90	9	42	13	1	0	57	74	7.79	4.15	2.06	15	9	0.0	0	2.4	21	42	SW	29	8	9	13	6.0	61
WYOMING																																
CASPER	5338	836.8	1011.7	75	46	60.5	- 2.6	91	19	35	30	2	0	42	59	1.86	0.61	0.75	11	6	T	0	3.8	28	35	29	30+	9	10	11	5.8	
CHEYENNE	6126	812.4	1011.4	77	48	62.6	- 0.4	92	20	41	9	2	0	38	46	0.87	- 1.24	0.68	4	10	0.0	0	4.5	31	41	NW	13	9	15	6	4.9	61
LANDER	5563	828.3	1011.3	74	48	61.1	- 0.9	90	27	35	30	1	0	41	52	2.14	0.78	1.37	8	7	0.0	0	3.0	27	39	SW	28	9	9	12	5.8	78
SHERIDAN	3964	877.8	1013.4	71	47	58.8	- 3.1	92	19	38	1	1	0	47	67	3.89	1.32	1.52	12	8	0.0	0	3.3	32	42	NW	13	3	14	13	6.8	58

Data from airport unless otherwise specified. U indicates Urban, R indicates Rural, sites.

Precipitation data in column headed "Greatest in 24 hours" are computed on a 24-hour basis without regard to calendar day - data may include precipitation with a measurable amount from the last day of the previous month or the first day of the following month.

Wind directions under resultant direction are in tens of degrees.

Value entered in column "Fastest Mile" is the highest observed 1-minute wind speed when the direction is in tens of degrees. These stations are not equipped with a recording anemometer from which "Fastest Mile" data can be evaluated.

B Number of days maximum 70 F. or above for Alaskan Stations.
Y Peak Gust.
\+ And also on an earlier date or dates.
Ø Station pressures apply to elevations shown in the "Elevations - Station Pressure" table of the annual issue of this publication.

CLIMATOLOGICAL DATA
METRIC UNITS

State and Station	Elevation (ground)	Pressure: Station ⊙	Pressure: Sea level	Temperature: Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	No of days: Max 32.2 °C or above	No of days: Min 0 C or lower	Average dew point	Average relative humidity	Precipitation: Total	Departure from normal	Greatest in 24 hours	No of days: 25 mm or more	No of days: With thunderstorms	Snow, Sleet: Total	Maximum depth on ground	Wind: Resultant speed	Resultant direction	Fastest mile (1.6 kilometers): Speed	Direction	Date	No of days (sunrise to sunset): Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	M.	Mb.	Mb.	C	C.	C	C	C		C				C.	%	Mm	Mm	Mm			Mm	Mm.	M.p.s		M.p.s							%
ALABAMA																																
BIRMINGHAM	189	992.9	1015.0	32.8	18.3	25.5	-0.8	36.7	30	11.7	28	19	0	17.8	66	17	- 85	8	7	8	0	0	0.5	34	13.0	NW	12	13	9	8	4.7	83
HUNTSVILLE	190	992.6	1015.1	32.2	18.3	25.3	-0.6	36.1	30	12.2	28+	14	0	17.8	67	20	- 66	10	5	4	0	0	0.3	29	13.4	36	12	11	11	8	4.8	
MOBILE	64	1007.1	1014.9	34.4	22.2	28.4	0.9	36.7	12+	18.9	7	27	0	20.6	67	94	- 64	35	12	12	0	0	0.2	20	12.1	12	9	11	14	5	5.0	
MONTGOMERY	59	1007.8	1014.9	33.9	20.0	26.8	0.4	36.7	10	13.3	28	27	0	18.9	67	48	- 58	23	7	7	0	0	0.5	27	13.0	N	11	12	10	8	4.7	78
ALASKA																																
ANCHORAGE	35	1008.8	1013.7	17.2	8.3	12.7	-0.5	25.0	29	2.2	4	3	0	5.6	61	16	- 9	7	6	0	0	0	1.5	19	9.4	18	20+	2	7	21	8.1	50
ANNETTE	34	1012.2	1016.3	17.2	8.3	12.8	0.4	22.2	29	5.0	21	4	0	7.[illegible]	73	105	- 33	22	15	0	0	0	1.6	17	12.5	16	18	4	8	18	7.3	
BARROW	9			2.8	- 1.7	0.6	-0.1	10.0	23+	- 4.4	8	0	28			11	2	5	9	0	20	102	0.8	6	8.0	23	29+	2	4	24	8.4	
BARTER ISLAND	12	1014.9	1016.9	3.3	- 0.6	1.1	-0.1	12.2	29	- 3.3	10	0	26	0.0	91	33	20	9	9	0	185	127	2.4	7	11.6	28	25	3	4	23	7.9	
BETHEL	38	1009.8	1015.4	17.2	5.6	11.3	0.4	25.0	12	0.6	2	3	0	6.1	74	30	0	14	6	1	0	0	2.2	31	10.3	22	13	1	10	19	7.7	
COLD BAY	29	1011.5	1015.3	10.0	5.0	7.4	0.1	13.9	14	1.1	5	0	0	3.9	82	21	- 28	5	14	0	0	0	2.6	33	13.4	16	11	0	3	27	9.3	
FAIRBANKS	133	995.3	1012.1	21.1	9.4	15.3	0.6	27.2	13+	4.4	8	19	0	6.7	61	39	3	17	13	2	0	0	0.6	27	9.4	23	19	1	11	18	7.7	
JUNEAU	4	1013.9	1014.8	16.7	6.1	11.2	-0.1	21.7	9	1.1	5	1	0	7.8	84	50	- 37	20	12	0	0	0	1.1	11	11.2	12	2	1	7	22	8.3	41
KING SALMON	15	1011.2	1013.1	15.6	5.0	10.4	-0.4	23.9	29	1.1	2+	3	0	2.2	61	34	- 1	13	11	2	0	0	0.9	14	13.9	9	15	0	9	21	8.2	
KOTZEBUE	3	1014.6	1015.2	7.2	1.7	4.4	-2.2	12.2	23+	- 4.4	2	0	10	1.1	80	13	1	7	4	0	0	51	4.3	29	14.3	30	25	6	14	10	6.2	
MC GRATH	105	1000.7	1013.4	18.9	7.2	13.1	-0.6	26.1	12	3.3	9+	9	0	5.6	61	33	- 9	10	16	3	0	0	1.0	28	9.8	3	10	1	9	20	7.9	
NOME	4	1014.6	1015.4	11.1	1.7	6.3	-1.4	19.4	12	- 3.9	1	0	9	- 0.6	64	6	- 18	5	3	0	0	T	2.6	28	8.9	27	29+	14	8	8	4.8	56
ST. PAUL ISLAND	7	1017.3	1018.1	6.7	1.1	4.0	-0.9	12.8	13	- 4.4	15	0	9	2.2	89	9	- 20	3	12	0	5	T	2.4	1	12.5	35	24+	0	2	28	9.5	
SHEMYA	37	1014.6	1018.2	7.2	3.9	5.6	0.2	9.4	21	2.2	5+	0	0	3.3	88	20	- 13	9	7	0	0	0	0.7	2	16.5	18	27	0	2	28	9.6	
YAKUTAT	9	1013.9	1014.8	13.3	5.6	9.4	-0.8	17.8	9	- 0.6	11	0	1	7.2	86	111	- 18	21	17	0	0	0	0.7	17	8.9	17	2	0	5	25	9.2	
ARIZONA																																
FLAGSTAFF	2131	789.0	1013.1	26.1	5.0	15.5	0.2	32.2	21+	- 2.2	10+	2	3	- 2.8	33	4	- 13	4	3	2	0	0	2.5	21	10.3	20	9	20	5	5	2.8	
PHOENIX	340	969.5	1007.3	40.0	20.0	30.1	1.4	46.1	22+	15.0	8	28	0	4.4	21	0	- 2	0	0	0	0	0	0.8	24	17.0Y	SW	7	24	5	1	1.4	97
TUCSON	788	922.8	1008.0	37.2	20.0	28.6	0.4	43.3	22	12.2	10	25	0	3.3	21	0	- 7	0	0	0	0	0	1.8	24	13.0	SW	7	25	4	1	1.2	98
WINSLOW	1492	850.3	1010.4	32.8	12.2	22.2	-1.3	38.9	22	2.8	10	21	0	- 3.9	20	3	- 4	2	2	3	0	0	2.1	21	13.4	31	19	20	9	1	2.3	
YUMA	59	1000.7	1007.6	39.4	21.7	30.5	0.5	46.7	21	15.0	8	26	0	6.7	26	0	0	0	0	0	0	0	1.9	21	12.5	W	5	26	3	1	1.0	98
ARKANSAS																																
FORT SMITH	136	997.3	1013.7	31.7	20.6	26.1	0.2	34.4	12+	12.8	27	18	0	18.9	68	67	- 43	40	5	4	0	0	0.6	17	10.3	S	30+	6	10	14	6.2	70
LITTLE ROCK	78	1004.7	1013.9	31.7	19.4	25.4	-0.6	34.4	15+	12.2	27	19	0	20.0	76	172	80	89	7	8	0	0	1.6	21	12.5	E	6	8	7	15	6.3	81
TEXARKANA	119	1001.0	1013.9	31.7	21.1	26.3	0.0	35.0	12	15.0	27	12	0	21.7	79	100	1	32	11	8	0	0	1.8	18	10.3	6	19	9	11	10	6.0	
CALIFORNIA																																
BAKERSFIELD	145	994.2	1011.5	35.0	19.4	27.3	2.3	41.1	25	12.8	7	24	0	6.7	29	0	- 2	0	0	0	0	0	2.2	33	11.2	32	5	24	6	0	1.5	
BISHOP	1252	871.3		33.9	12.2	23.1	2.1	40.0	26+	5.6	30	21	0			T	- 2	T	0		0	0						21	3	6	2.9	
BLUE CANYON	1609			22.2	12.8	17.6	2.5	30.0	25+	3.3	5	0	0			22	- 2	13	3		0	0			9.8	4	24	17	5	8	3.6	
EUREKA U	13			15.6	10.6	13.1	0.0	18.9	22+	7.2	13	0	0			5	- 14	3	4		0	0			13.0	N	29	8	12	10	5.8	66
FRESNO	100	999.7	1011.2	35.6	15.6	25.6	1.8	41.1	25	10.0	6	25	0	8.3	37	0	- 2	0	0	0	0	0	2.8	30	11.2	NW	2	23	4	3	1.9	91
LONG BEACH	10	1012.5	1013.8	25.0	15.6	20.3	0.6	31.7	21	12.2	10	0	0	12.8	69	T	- 1	T	0	0	0	0	1.4	21	6.7	15	22+	11	9	10	5.3	
LOS ANGELES	30	1009.5	1013.1	22.2	16.1	19.0	0.8	25.6	15	14.4	21+	0	0	13.3	74	T	- 1	T	0	0	0	0	2.5	24	13.0Y	SW	5	10	9	11	5.7	
LOS ANGELES U	82			25.0	16.7	20.7	0.7	31.1	21	14.4	10+	0	0			T	- 1	T	1		0	0			7.2	SE	5	12	11	7	4.7	48
MT SHASTA R	1080			25.6	8.3	16.8	1.1	35.0	25	2.8	30+	5	0			42	10	41	2		0	0										
OAKLAND	2	1014.6	1014.7	21.1	13.3	17.2	0.1	30.0	15	10.0	12	0	0	11.7	74	T	- 3	T	0	0	0	0	3.0	28	13.0	27	5	16	11	3	3.8	
RED BLUFF	104	999.7	1011.9	33.9	16.7	25.3	0.7	42.2	25	11.7	7	17	0	7.2	36	12	1	9	2	3	0	0	0.9	34	15.2	NW	28	19	5	6	3.0	92
SACRAMENTO	5	1011.2	1012.0	33.3	13.3	23.3	1.9	41.1	22	8.9	13	17	0	10.6	53	4	1	4	1	1	0	0	2.3	22	17.0	N	29	20	8	2	2.5	96
SANDBERG R	1377	862.5		25.0	12.2	18.8	0.6	33.3	26	0.6	6	2	0			0	- 1	0	0		0	0			17.0	35	23	23	5	2	2.0	
SAN DIEGO	4	1012.5	1013.5	21.7	16.1	18.8	-0.2	25.6	21	14.4	8	0	0	12.8	71	T	- 1	T	0	0	0	0	1.8	25	8.5	NW	20	11	5	14	6.0	56
SAN FRANCISCO	2	1014.2	1014.9	21.7	10.6	16.3	0.0	29.4	15	7.8	7	0	0	10.0	73	T	- 3	T	0	0	0	0	5.4	29	19.2	WNW	22	17	9	4	3.3	
SAN FRANCISCO U	16			18.3	11.7	15.0	-0.1	25.0	15	10.0	19+	0	0			T	- 4	T	0		0	0			13.9	SW	5					77
SANTA MARIA	72			22.2	11.1	16.4	1.1	26.7	15+	7.2	30	0	0			T	- 4	T	0		0	0						16	13	1	3.4	
STOCKTON	7	1011.5	1012.6	32.8	13.9	23.3	0.6	38.9	24+	8.3	13	17	0	7.8	42	T	- 2	T	0	0	0	0	4.2	30	12.5	32	29	19	9	2	2.6	
COLORADO																																
ALAMOSA	2297	773.1		26.1	5.0	15.6	0.1	30.6	28+	- 2.2	9	0	2			2	- 11	1	2		0	0						14	14	2	3.7	
COLORADO SPRINGS	1873	811.4	1010.7	28.3	10.6	19.4	1.2	36.1	28+	3.9	26	8	0	1.7	38	4	- 37	2	3	7	0	0	0.7	11	15.6	35	24	10	14	6	5.0	
DENVER	1610	835.1	1009.2	29.4	10.6	19.9	0.7	36.1	20	4.4	30+	10	0	4.4	43	13	- 24	7	4	4	0	0	0.4	12	13.0	S	20+	11	13	6	4.8	70
GRAND JUNCTION	1480	850.3	1008.8	31.7	13.3	22.7	0.8	38.9	20	3.3	30	17	0	- 0.6	24	1	- 9	1	2	1	0	0	0.7	20	13.4	SW	29	15	11	4	3.6	81
PUEBLO	1428	853.7	1009.2	31.7	12.2	21.9	0.2	38.9	28+	7.2	26+	16	0	5.0	39	7	- 24	5	3	7	0	0	0.7	10	17.9	N	24+	15	14	1	4.0	87
CONNECTICUT																																
BRIDGEPORT	2	1013.5	1014.2	23.3	15.6	19.5	-0.5	33.9	30	11.1	21	1	0	15.0	78	144	58	35	12	8	0	0	0.4	25	15.6	9	27	9	4	17	6.6	

See footnotes at end of table

CLIMATOLOGICAL DATA
METRIC UNITS

State and Station	Elevation (ground)	Pressure: Station ⊙	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	No. of days: Max 32.2 °C or above	No. of days: Min. 0 C or lower	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	No. of days: 25 mm or more	No. of days: With thunderstorms	Snow, Sleet: Total	Snow, Sleet: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Fastest mile (1.6 kilometers): Speed	Fastest mile: Direction	Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	M.	Mb.	Mb.	C.	C.	C.	C	C.		C.				C.	%	Mm.	Mm.	Mm.			Mm.	Mm	M.p.s.		M.p.s.							%
CONNECTICUT																																
HARTFORD	52	1007.1	1013.6	25.0	14.4	19.7	-0.7	35.6	9	11.1	5+	4	0	12.9	74	169	75	42	18	6	0	0	0.4	27	11.6	NW	20+	4	10	16	7.2	47
NEW HAVEN	2	1013.9		23.3	14.4	18.7	-0.3	33.3	30	10.0	4	1	0			115	25	35	12		0	0			10.3	NW	20	9	7	14	6.5	52
DELAWARE																																
WILMINGTON	23	1011.5	1014.5	27.8	16.1	21.9	0.0	35.0	30	10.6	21+	3	0	16.1	72	71	- 32	44	9	8	0	0	1.1	23	12.5	26	12	7	11	12	6.1	
DIST.OF COLUMBIA																																
WASH NATL AP	4	1012.2	1014.6	28.9	17.8	23.4	-0.1	35.6	30	12.2	1	7	0	16.7	68	188	106	57	11	10	0	0	1.0	21	19.2	W	24	7	10	13	6.2	60
FLORIDA																																
APALACHICOLA U	4			31.1	23.3	27.4	0.6	33.3	27+	20.0	6	10	0			28	-107	16	5	3	0	0			9.4	E	5	13	14	3	4.1	85
DAYTONA BEACH	9	1013.5	1015.0	30.0	21.7	25.9	0.1	33.9	10	18.3	8	6	0	21.7	82	365	218	96	16	12	0	0	0.8	12	16.5	35	10+	0	13	17	7.7	
FORT MYERS	5	1015.2	1015.6	30.6	22.8	26.7	-0.4	32.8	30+	19.4	14	8	0	22.8	82	382	154	148	17	17	0	0	0.3	19	16.5	18	14	4	11	15	7.2	
JACKSONVILLE	6	1013.5	1014.7	31.7	22.8	27.3	0.2	35.6	11	20.0	3	13	0	21.7	76	311	150	151	13	6	0	0	0.8	12	23.2	N	6	7	13	10	6.1	66
KEY WEST	1	1013.9	1014.7	30.0	25.0	27.6	-0.1	32.2	21	22.2	2+	1	0	23.9	81	238	137	93	16	10	0	0	1.3	17	19.2	SE	3	1	17	12	6.7	78
LAKELAND U	65			30.0	21.7	25.8	-1.2	33.3	24	18.9	14	7	0			377	195	126	18		0	0						4	13	13	6.9	49
MIAMI	2	1014.6	1014.8	29.4	23.3	26.4	-0.7	32.8	21	22.2	29+	2	0	22.2	80	568	381	87	24	16	0	0	1.3	16	13.0	17	11	0	11	19	8.0	
ORLANDO	33	1010.8	1015.0	30.6	21.7	26.0	-1.4	32.8	11+	19.4	8	10	0			464	288	156	15	12	0	0	0.5	16	13.0	7	4	2	12	16	7.7	
PENSACOLA	34	1010.5	1014.5	32.2	22.2	27.3	0.0	35.0	13+	18.3	28	17	0	20.6	69	123	- 14	71	9		0	0	0.6	21	22.8	W	10	10	15	5	4.9	77
TALLAHASSEE	17	1012.5	1015.0	34.4	21.1	27.8	1.1	36.7	11	16.7	29	28	0	20.6	70	75	- 91	23	6	9	0	0	0.6	35	9.4	24	12+	10	16	4	4.7	
TAMPA	6	1014.6	1014.7	30.6	22.2	26.4	-0.6	33.9	30+	18.3	15	5	0	21.7	79	171	- 14	62	18	11	0	0	0.6	31	11.2	1	5	2	13	15	7.6	55
WEST PALM BEACH	5	1014.2	1015.0	29.4	22.2	25.8	-1.4	31.7	13+	20.0	2	0	0	21.1	79	426	235	99	21	16	0	0	1.7	16	14.3	14	11	1	6	23	8.5	
GEORGIA																																
ATHENS	244	986.5	1015.0	30.0	18.3	24.1	-1.2	34.4	30	12.8	28	9	0	17.8	71	125	27	56	8	7	0	0	0.4	30	7.6	S	6	10	8	12	5.4	
ATLANTA	308	979.3	1015.3	30.0	18.3	24.3	-0.5	33.3	30+	12.2	28+	5	0	17.8	71	67	- 30	31	8	4	0	0	0.6	31	15.6	NW	2	10	9	11	5.3	78
AUGUSTA	44	1009.5	1014.6	31.7	18.3	24.9	-1.2	34.4	30+	12.2	28	15	0	18.9	74	129	52	37	8	7	0	0	0.3	15	12.5	28	17+	7	13	10	5.7	
COLUMBUS	117			32.8	20.0	26.6	0.2	36.7	11+	13.3	14	23	0	18.9	68	46	- 48	19	6		0	0	0.7	34	8.9	S	18	15	7	8	4.8	
MACON	108	1002.0	1014.9	32.8	18.3	25.6	-1.4	36.7	30+	11.7	14	25	0	17.8	66	42	- 43	19	5	5	0	0	0.6	33	10.3	S	2	10	9	11	5.4	73
ROME	194			31.7	16.1	23.8	-0.8	36.7	30	8.9	28+	12	0			14	- 81	6	4		0	0										
SAVANNAH	14	1013.2	1014.9	31.7	20.6	26.2	-0.3	35.0	26+	15.0	1	16	0	20.6	77	149	20	94	9	9	0	0	1.0	14	15.2	SW	23	9	5	16	6.3	67
HAWAII																																
HILO	8	1016.9	1018.2	28.9	20.6	24.8	1.3	31.1	6	19.4	30+	0	0	20.0	77	221	49	57	25	1	0	0	0.5	15	9.4	E	3	1	11	18	7.9	36
HONOLULU	2	1016.9	1017.5	31.1	22.8	26.9	1.4	31.7	29+	20.0	2+	0	0	18.9	64	6	- 2	4	8	0	0	0	6.1	5	11.6	N	28+	6	16	8	5.5	68
KAHULUI	15	1014.6	1016.9	31.1	20.0	25.5	0.4	33.3	5	16.1	2+	8	0	19.4	71	3	- 2	1	5	0	0	0	5.7	6	13.4	E	14	10	13	7	5.2	73
LIHUE	31	1013.9	1019.0	28.3	22.8	25.4	0.7	28.9	28+	18.9	1	0	0	21.1	79	31	- 6	8	21	0	0	0	5.1	6	9.4	NE	25	4	23	3	5.5	70
IDAHO																																
BOISE	865	914.0	1012.4	27.8	12.2	19.9	1.2	38.9	26	7.2	29	10	0	2.2	34	15	- 7	11	5	1	0	0	2.0	31	13.4	NW	28	13	7	10	5.1	79
LEWISTON	431			26.1	12.2	19.1	0.9	33.9	26+	7.2	12	4	0			34	- 10	12	10		0	0						9	6	15	6.4	
POCATELLO	1358	862.5	1013.2	24.4	7.8	16.2	-0.9	33.9	19	- 1.1	30	4	1	3.9	49	47	22	18	9	4	0	0	2.8	23	16.1	SW	3	11	9	10	5.3	76
ILLINOIS																																
CAIRO U	96			31.1	20.6	25.9	0.4	34.4	30+	13.9	27	11	0			55	- 50	22	5		0	0			15.6	SW	25	14	7	9	4.9	77
CHICAGO O HARE	201	988.8	1012.7	27.2	15.0	21.2	1.2	34.4	23	6.1	13	7	0	13.3	62	105	5	53	10	5	0	0	1.0	19	16.5	23	23	4	13	13	6.2	
CHICAGO MIDWAY	185	990.5		27.8	16.7	22.4	1.0	35.6	23+	10.6	13	7	0	13.3	60	55	- 49	31	11	7	0	0	1.7	19	16.5	W	10	6	14	10	5.8	57
MOLINE	177	990.9	1012.0	28.9	15.6	22.3	0.4	35.6	10+	8.3	28	8	0	15.0	65	94	- 17	26	10	9	0	0	1.9	21	19.7	NW	23	6	13	11	5.9	65
PEORIA	199	989.2	1012.7	28.3	16.1	22.4	0.4	34.4	10	9.4	28	6	0	15.0	65	156	53	95	8	8	0	0	1.7	21	13.4	NW	30+	9	11	10	5.8	67
ROCKFORD	221	985.4	1011.8	26.7	15.6	20.9	-0.1	32.8	10+	8.9	13	2	0	13.9	67	159	50	44	14	11	0	0	1.3	23	20.6	23	29	5	14	11	6.2	
SPRINGFIELD	179	990.9	1012.6	30.0	17.8	23.6	0.3	35.6	30+	10.0	28+	10	0	15.6	61	83	- 30	67	7	5	0	0	2.1	20	13.0	W	14	15	5	10	4.8	74
INDIANA																																
EVANSVILLE	116	1000.7	1014.4	30.0	17.2	23.6	-0.7	34.4	30	10.6	14	9	0	17.2	69	78	- 17	34	6	5	0	0	1.3	23	13.0	S	25	10	10	10	5.4	70
FORT WAYNE	241	983.7	1013.4	27.2	15.6	21.3	-0.1	33.3	11	7.8	13	5	0	15.0	68	131	25	55	13	8	0	0	2.0	24	24.1	SW	11	6	8	16	6.6	72
INDIANAPOLIS	241	985.4	1014.0	27.8	16.7	22.4	0.7	33.3	30	8.9	13	4	0	16.1	68	64	- 54	22	10	7	0	0	1.4	23	13.4	SW	25	8	9	13	5.8	71
SOUTH BEND	236	985.4	1013.0	26.1	15.0	20.5	-0.1	32.2	23+	8.3	13	3	0	14.4	69	231	140	119	13	8	0	0	1.5	25	10.3	22	11	8	8	14	6.3	
IOWA																																
BURLINGTON	211			28.9	16.7	22.8	0.5	33.9	10+	8.9	27	7	0	15.6	64	113	- 14		8	6	0		2.0	22	13.0	32	10	9	11	10	5.6	
DES MOINES	286	978.0	1012.0	28.3	16.7	22.4	0.8	33.9	23+	8.9	27	8	0	13.9	60	87	- 33	34	7	6	0	0	1.6	21	19.7	NW	29	7	15	8	5.5	69
DUBUQUE	322	973.6		25.6	13.9	19.8	-0.1	32.8	9	7.8	28+	1	0			186	79	63	14		0	0						3	13	14	6.8	
SIOUX CITY	334	971.6	1010.7	28.9	15.6	22.2	0.3	35.6	20	7.8	27	11	0	14.4	63	98	- 12	32	11	11	0	0	1.2	19	18.8	NW	21	3	18	9	6.2	69

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure: Station	Pressure: Sea level	Temperature: Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	No. of days: Max 32.2 °C or above	No. of days: Min 0 C or lower	Average dew point	Average relative humidity	Precipitation: Total	Departure from normal	Greatest in 24 hours	No. of days: 25 mm or more	No. of days: With thunderstorms	Snow Sleet: Total	Snow Sleet: Maximum depth on ground	Wind: Resultant speed	Resultant direction	Fastest mile (1.6 kilometers): Speed	Direction	Date	No. of days (sunrise to sunset): Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	M.	Mb.	Mb.	C.	C.	C.	C.	C		C.				C	%	Mm	Mm	Mm			Mm	Mm	M p s		M p.s							%
IOWA																																
WATERLOO	265	980.4	1011.5	27.2	13.9	20.6	-0.6	33.9	4	6.7	28	8	0	13.9		118	- 4	37	9	10	0	0	1.1	20	15.6	24	23	3	16	11	6.6	
KANSAS																																
CONCORDIA	448	959.0	1010.6	30.0	16.7	23.4	-0.1	39.4	28	8.3	27	9	0	16.1	68	78	- 28	33	9	10	0	0	3.0	18	17.0	SE	30+	12	11	7	4.7	73
DODGE CITY	787	921.8	1010.3	30.6	16.7	23.6	0.1	40.0	28	9.4	26	10	0	14.4	60	141	44	49	10	12	0	0	3.4	17	18.8	N	30	16	9	5	4.2	80
GOODLAND	1113	885.5	1009.0	31.1	13.9	22.4	1.4	40.0	29	5.6	26	14	0	10.0	52	88	21	67	6	10	0	0	2.2	17	18.3	33	30	11	13	6	4.4	
TOPEKA	267	980.7	1011.9	29.4	17.8	23.4	-0.3	34.4	28	9.4	27	8	0	17.2	69	81	- 34	40	5	4	0	0	2.2	19	20.6	5	10	10	12	8	5.3	70
WICHITA	403	964.8	1011.4	31.7	17.8	24.5	-0.2	38.3	28	7.8	27	14	0	16.7	65	60	- 46	21	6	7	0	0	3.4	18	17.9	W	10	10	8	12	5.3	70
KENTUCKY																																
COVINGTON	265	983.7	1014.6	28.9	16.7	22.7	0.6	33.9	30+	10.0	13	7	0	14.4	51	62	- 37	21	9	4	0	0	1.4	24	9.8	24	25	7	11	12	6.1	
LEXINGTON	294	980.4	1015.2	27.8	16.7	22.2	-0.9	32.8	30+	9.4	13	4	0	15.0	66	72	- 48	21	10	6	0	0	1.3	21	15.0	22	25	11	7	12	5.7	
LOUISVILLE	145	997.0	1014.1	28.9	17.8	23.3	0.3	33.9	30+	11.1	14	6	0	15.7	66	43	- 58	15	9	4	0	0	1.2	24	11.6	W	25	8	12	10	5.8	69
LOUISIANA																																
ALEXANDRIA	28	1010.5	1014.7	31.1	20.0	25.5	-1.0	34.4	30	14.4	28+	12	0	21.1	80	80	- 29	26	9	9	0	0	0.8	17	11.2	20	5	8	11	11	5.8	
BATON ROUGE	20	1011.9	1014.7	32.8	21.1	27.0	-0.2	35.0	12+	15.6	28	21	0	21.7	77	48	- 56	18	11	9	0	0	0.7	16	13.0	35	12	5	15	10	5.9	
LAKE CHARLES	3	1012.9	1014.1	30.6	22.2	26.6	-0.8	34.4	12	19.4	27	11	0	22.8	83	226	106	90	14	14	0	0	1.3	15	13.0	27	4	9	9	12	5.9	
NEW ORLEANS	1	1013.9	1014.8	32.8	21.1	26.9	0.2	35.0	11	16.1	28+	20	0	21.7	76	94	- 17	36	14	10	0	0	0.5	19	11.6	27	17	7	17	6	5.0	
SHREVEPORT	77	1004.7	1013.9	32.2	21.7	26.7	-0.3	36.1	12	15.0	27	20	0	20.6	73	71	- 14	41	10	5	0	0	1.6	17	13.0	16	24	6	11	13	6.4	59
MAINE																																
CARIBOU	190	989.8		21.1	9.4	15.1	0.1	27.2	15	1.7	10	0	0			42	- 61	19	9		0	0						3	7	23	8.5	
PORTLAND	14	1011.5	1014.0	20.6	10.6	15.6	-1.2	30.6	30+	5.0	21	0	0	12.2	83	103	22	30	20	1	0	0	0.6	17	10.7	E	28+	2	8	20	7.9	30
MARYLAND																																
BALTIMORE	45	1009.1	1014.5	28.9	16.7	22.6	0.1	34.4	30+	10.0	21	8	0	16.1	69	65	4	29	9	8	0	0	1.4	25	17.4	NW	16	7	11	12	6.0	62
MASSACHUSETTS																																
BLUE HILL OBS R	192			22.2	12.2	17.2	-1.2	32.8	6	7.8	21	1	0			153	58	34	17		0	0			15.6	WNW	3					41
BOSTON	5	1013.2	1014.1	21.7	14.4	18.3	-1.6	32.8	30+	10.0	10	2	0	13.9	79	144	55	34	17	4	0	0	0.1	13	15.2	SW	3	6	8	16	6.8	52
NANTUCKET	13	1013.9	1014.2	20.0	11.7	15.8	-0.4	30.0	6	8.9	2+	0	0	13.9	93	126	52	58	12	5	0	0	1.2	22	13.4	E	28	5	10	15	7.3	42
PITTSFIELD	357			22.2	11.7	17.1	-0.2	32.2	6	7.2	5	1	0			180	71	26	19		0	0										
WORCESTER	301	978.0	1014.6	21.7	12.2	16.8	-1.3	31.7	6	7.8	21	0	0	11.7	75	198	100	33	18	6	0	0	1.2	29	12.1	30	30+	3	10	17	7.2	
MICHIGAN																																
ALPENA	210	987.8	1012.8	22.8	10.0	16.3	0.4	33.9	5	2.2	17	1	0	11.1	76	97	29	24	14	6	0	0	0.2	16	10.7	NE	26	3	10	17	7.2	48
DETROIT	189			26.1	16.1	21.2	0.2	34.4	11	10.6	18	4	0	14.4	66	154	82	90	11	9	0	0	1.1	24	13.0	29	29+					
DETROIT M WAYNE CO	193	989.2	1012.8	26.1	14.4	20.2	0.3	33.9	11+	8.9	18	5	0	13.9	69	127	43	56	15	8	0	0	1.0	24	16.1	SW	11	7	10	13	6.4	56
DETROIT WILLOW RUN	217	985.4	1013.2	25.6	13.3	19.2	-1.7	34.4	11	8.3	18	3	0	12.8	68	157	74	82	13	7	0	0	1.2	24	13.0	30	29	7	8	15	6.5	
FLINT	235	985.1	1012.7	23.9	13.3	18.5	-0.7	32.2	7	7.2	20	1	0	13.9	75	137	58	54	15	9	0	0	1.4	21	20.6	23	11	5	9	16	6.9	
GRAND RAPIDS	239	983.7	1012.5	25.6	13.3	19.3	-0.4	33.3	8	5.0	13	2	0	13.9	71	128	43	40	12	6	0	0	1.2	24	23.2	NW	29	5	10	15	6.8	54
HOUGHTON LAKE	350	971.6	1013.2	22.8	11.1	17.0	0.0	32.2	8	5.0	13	1	0	12.2	76	141	61	44	15	6	0	0	0.8	24	9.8	27	21	4	12	14	6.7	
LANSING	256	981.7	1013.0	25.0	13.3	19.2	-0.5	32.8	11	5.6	20	2	0	12.2	66	202	117	61	15	8	0	0	1.4	23	21.9	NW	23	7	8	15	6.5	58
MARQUETTE U	206			18.3	8.9	13.6	-2.1	30.0	4	5.6	15	0	0			180	92	44	20		0	0			14.3	NW	14	1	8	21	8.1	44
MUSKEGON	191	989.8	1012.4	23.3	13.3	18.3	-1.0	32.2	9	7.8	17	1	0	12.8	72	73	4	14	12	7	0	0	1.4	24	15.6	25	29	9	7	14	5.9	
SAULT STE MARIE	220	986.1	1012.6	20.0	8.9	14.3	-0.7	31.1	6	1.1	16	0	0	10.6	81	95	11	15	15	5	0	0	0.3	12	12.5	SE	30	0	11	19	8.0	42
MINNESOTA																																
DULUTH	435	961.4	1012.5	20.0	8.3	14.1	-0.8	32.2	4	1.7	15	1	0	8.3	73	137	28	45	12	9	0	0	0.8	8	14.3	NE	25+	1	11	18	7.9	44
INTERNATIONAL FALLS	359	969.2	1011.9	21.1	9.4	15.3	-0.2	26.7	3	4.4	15+	0	0	11.1	79	118	20	39	15	11	0	0	0.2	14	10.3	34	11	3	8	19	7.6	
MINNEAPOLIS	254	981.4	1011.3	25.0	13.9	19.6	0.2	35.6	4	5.6	15	4	0	13.3	69	172	71	43	13	8	0	0	0.5	19	17.9	NW	13	3	10	17	7.3	58
ROCHESTER	395	964.8	1011.9	24.4	12.8	18.4	-1.1	33.3	4	5.6	15	2	0	12.8	71	154	41	59	14	10	0	0	1.1	21	15.6	26	10	2	12	16	7.2	
ST CLOUD	315	973.2	1010.7	24.4	12.2	18.6	0.1	34.4	4	3.9	15	3	0		69	177	63	56	14		0	0						5	6	19	7.1	
MISSISSIPPI																																
JACKSON	94	1003.1	1014.8	33.3	20.0	26.4	-0.1	35.6	30+	13.3	27	24	0	20.0	72	26	- 70	8	7	7	0	0	0.8	17	11.2	NW	26	13	3	14	5.4	63
MERIDIAN	88	1004.4	1015.4	35.0	18.9	26.8	0.4	37.8	30+	11.7	28	28	0	19.4	72	18	- 85	11	5	5	0	0	0.5	26	10.3	17	11	12	8	10	5.3	
MISSOURI																																
COLUMBIA	237	985.1	1012.6	30.0	18.9	24.3	0.9	33.9	14	10.0	27	10	0	17.2	67	187	76	111	8	7	0	0	1.9	20	13.0	SW	29	10	11	9	5.3	78
KANSAS CITY	226	985.8	1012.1	30.6	20.0	25.3	0.9	35.6	28	11.1	27	14	0	17.2	63	59	- 57	39	3.	3	0	0	2.6	20	13.9	S	29	7	16	7	5.2	74
ST JOSEPH	247			30.6	17.8	24.2	0.9	34.4	28	8.3	27	13	0	17.2	69	60	- 91		.7	4	0		2.3	19	14.3	18	10	9	14	7	5.0	

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure: Station	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Date	Temperature: Lowest	Date	No. of days: Max 32.2 °C or above	No. of days: Min. 0 C or lower	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	No. of days: .25 mm or more	No. of days: With thunderstorms	Snow, Sleet: Total	Snow, Sleet: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Fastest mile (1.6 kilometers): Speed	Fastest mile: Direction	Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	M.	Mb.	Mb.	C.	C.	C.	C.	C.		C.				C.	%	Mm.	Mm.	Mm.			Mm.	Mm.	M.p.s.		M.p.s.							%
MISSOURI																																
ST LOUIS	163	993.6	1013.5	30.6	19.4	25.0	1.6	35.0	29	12.2	28	12	0	17.2	63	23	- 86	8	9	4	0	0	1.8	20	14.3	SW	25	12	8	10	5.4	79
SPRINGFIELD	386	969.5	1013.9	29.4	17.2	23.3	-0.1	33.3	22	8.9	27	4	0	17.2	72	60	- 68	46	4	3	0	0	2.1	19	13.0	S	29	10	13	7	5.0	68
MONTANA																																
BILLINGS	1087	889.9	1012.5	22.2	11.7	17.0	-1.4	33.9	2	6.1	14	1	0	8.3	62	98	33	44	14	5	0	0	1.0	31	35.3	NW	13	3	11	16	7.1	46
GLASGOW	696	931.3	1012.2	22.2	9.4	15.8	-1.1	33.9	19+	3.9	1	2	0	6.7	60	57	- 19	21	12	3	0	0	0.7	35				3	8	19	7.6	
GREAT FALLS	1116	887.2	1013.1	21.1	9.4	15.1	-0.4	31.1	19	3.9	14	0	0	6.1	59	73	- T	19	17	7	0	0	2.1	25	16.1		27+	3	8	19	7.8	62
HAVRE	787	921.1	1012.2	22.8	8.9	15.7	-0.4	33.3	19	3.9	25+	1	0	6.7	59	64	- 5	31	14	5	0	0	1.6	26	18.8	NW	27	0	12	18	8.0	70
HELENA	1167	880.1	1014.2	21.1	7.8	14.6	-0.7	31.1	19	1.7	14	0	0	6.1	61	68	11	21	16	3	0	0	2.1	28	18.8	SW	11	4	7	19	7.5	47
KALISPELL	904	910.6	1014.4	21.7	7.2	14.4	-0.3	33.3	26	1.7	16	1	0	6.7	64	55	- 1	17	13	6	0	0	1.2	18	11.2	32	27	2	9	19	7.7	
MILES CITY	801	920.1	1012.0	23.3	11.1	17.2	-1.5	34.4	19+	6.1	16	3	0	10.0	67	132	63		18	8	0		1.3	34								
MISSOULA	972	904.5	1015.1	22.8	8.3	15.4	0.7	31.7	26	2.8	14	0	0	6.1	59	48	- 1	11	15	3	0	0	1.3	31	15.2	W	27	3	4	23	7.9	55
NEBRASKA																																
GRAND ISLAND	561	945.8	1010.5	30.6	15.0	22.9	1.2	38.3	29	8.3	27	14	0	13.9	61	181	85	107	6	7	0	0	2.0	18	20.6	13	23	12	10	8	5.0	
LINCOLN U	351			30.0	17.2	23.7	0.8	37.2	29+	10.0	27	13	0			83	- 31	36	10		0	0			18.8	SW	29	9	12	9	5.4	75
NORFOLK	471			29.4	15.0	22.2	0.6	37.2	20	7.2	16	10	0			63	- 45	24	11		0	0						8	10	12	6.0	
NORTH PLATTE	846	914.0	1009.8	29.4	12.2	20.8	0.2	37.8	20	6.7	27+	9	0	11.1	57	57	- 25	47	6	7	0	0	1.3	12	14.8	NW	30	12	11	7	4.6	76
OMAHA	298	976.3	1010.9	30.0	16.7	23.3	0.5	35.0	3	8.3	27	13	0	16.1	66	113	- 2	47	10	9	0	0	1.6	18	20.1	NW	29	7	16	7	5.5	80
SCOTTSBLUFF	1206	877.4	1010.6	27.2	12.2	19.6	0.2	36.7	27+	4.4	26	6	0	9.4	59	58	- 21	17	11	12	0	0	0.8	2	14.3	31	4	12	9	9	5.0	
VALENTINE	789			26.7	12.8	19.7	0.0	38.3	20	7.2	1	6	0			146	67	52	8		0	0			30.4	N	20	11	9	10	5.4	70
NEVADA																																
ELKO	1539	844.2	1012.3	27.8	8.3	17.8	2.3	36.7	27	0.0	30	8	1	3.3	43	66	48	47	4	2	T	0	1.3	26	11.2	26	28+	12	8	10	4.8	
ELY	1906	809.0	1011.2	25.6	5.0	15.2	0.4	33.9	27	- 5.0	30	6	2	- 0.6	41	28	16	11	5	5	0	0	1.0	23	13.4	NW	23	13	8	9	4.6	79
LAS VEGAS	659	933.3	1007.6	37.8	20.0	28.9	0.6	43.9	27+	11.1	9	24	0	- 0.6	18	8	7	8	1	1	0	0	2.0	21	17.9	SW	5	23	4	3	2.1	91
RENO	1342	865.6	1013.1	28.3	5.6	17.2	1.6	37.8	26	0.0	13	8	1	1.1	36	4	- 5	4	2	0	0	0	1.4	30	15.6	NW	6	14	8	8	4.3	87
WINNEMUCCA	1310	867.3	1012.4	28.3	8.9	18.5	2.1	38.3	26	1.1	30	11	0	0.6	34	22	2	12	4	2	0	0	1.2	29	13.9	SW	28+	12	7	11	4.9	73
NEW HAMPSHIRE																																
CONCORD	104	1001.4	1014.0	22.2	11.7	16.7	-1.4	31.7	6	6.1	29	0	0	12.8	81	150	58	41	19	5	0	0	0.2	24	11.6	NW	20	0	12	18	7.8	34
MT WASHINGTON OBS	1909			9.4	3.3	6.2	-1.0	15.0	15+	- 5.0	21+	0	5			280	115	50	25	5	38	T			44.7Y	W	20	1	1	28	9.2	20
NEW JERSEY																																
ATLANTIC CITY	20	1011.9	1014.2	27.2	15.0	21.2	0.1	36.1	30	6.7	21	6	0	15.6	74	73	1	31	8	7	0	0	1.6	22	9.4	19	22	9	7	14	6.2	58
ATLANTIC CITY U	3			25.0	17.8	21.4	0.9	36.1	30	12.8	21	2	0			158	81	104	9						14.8	SSW	22					
NEWARK	2	1012.9	1013.9	26.1	16.1	20.9	-0.9	35.0	30	11.7	1	4	0	14.4	71	111	24	44	13	5	0	0	1.0	24	10.7	30	3	9	6	15	6.4	
TRENTON U	17			26.7	16.1	21.4	-0.2	34.4	30	11.7	21	5	0			159	68	113	12		0	0			14.3	NW	3	9	6	15	6.0	60
NEW MEXICO																																
ALBUQUERQUE	1619	837.8	1009.5	33.3	15.0	24.0	0.2	38.3	22+	6.1	10	21	0	0.6	25	1	- 13	1	1	2	0	0	0.4	23	17.9	NW	9	20	6	4	2.8	92
CLAYTON	1515			30.6	12.8	21.6	0.3	40.0	28	4.4	26	10	0			53	15	36	5		0	0						12	14	4	3.9	
RATON	1944			29.4	9.4	19.2	0.7	36.1	28	2.2	10	7	0			15	- 28	8	6		0	0						8	18	4	5.0	
ROSWELL	1102	889.3		36.1	13.9	25.0	-0.1	42.8	28	6.7	11	26	0	6.7	35	15	- 11	14	3	5	0	0	1.3	17	13.0	W	15+	19	9	2	3.3	86
SILVER CITY	1638			31.7	14.4	23.0	-0.7	38.3	21	4.4	10	17	0			12	- 3	12	2		0	0						20	8	2	3.1	
NEW YORK																																
ALBANY	84	1003.4	1013.9	25.0	13.3	19.3	-0.3	36.7	9	8.3	1	3	0	13.3	71	111	29	37	19	5	0	0	1.3	23	14.3	W	20	1	10	19	7.8	41
BINGHAMTON	485	956.3	1014.7	22.2	12.2	17.2	-0.3	29.4	30+	6.1	1	0	0	13.3	80	177	79	44	17	4	0	0	1.4	25	13.0	NW	20	4	9	17	7.4	52
BUFFALO	215	988.2	1013.6	23.3	13.3	18.2	0.0	32.8	11+	7.2	21+	2	0	12.8	73	113	49	77	13	6	0	0	2.3	23	13.0	W	29+	6	7	17	6.6	57
J.F. KENNEDY	4	1013.5	1014.3	23.9	16.1	20.1	-1.1	36.1	30	12.8	5+	2	0	15.0	76	106	21	46	15	6	0	0	1.5	19	10.7	19	22+	6	8	16	6.7	
NEW YORK U	40	1010.5	1013.8	25.6	16.1	20.9	-0.9	34.4	30	11.7	21	3	0	13.9	68	156	72	49	14	5	0	0	0.5	26	9.8	NE	28+					55
NEW YORK LA GUARDIA	3	1012.2	1013.9	25.0	16.7	20.7	-1.3	33.9	30	12.8	21	3	0	13.9	69	156	71	42	14	6	0	0	0.4	26	12.1	NW	19	6	9	15	6.5	
ROCHESTER	167	993.9	1013.7	23.9	12.2	18.2	-1.2	32.2	11	5.6	21	1	0	12.8	74	72	7	35	13	7	0	0	1.4	25	12.5	NW	20	6	7	17	6.9	56
SYRACUSE	125	998.6	1013.5	23.3	13.3	18.3	-1.3	32.2	9	4.4	1	1	0	12.8	73	156	81	79	11	5	0	0	0.8	28	13.0	NW	12+	6	8	16	6.8	49
NORTH CAROLINA																																
ASHEVILLE	652	941.1	1015.9	27.8	13.9	20.8	-0.3	32.8	30	7.2	14+	1	0	16.7	81	129	39	47	12	8	0	0	0.9	35	12.5	34	16	9	9	12	5.7	68
CAPE HATTERAS R	2	1015.9	1016.2	27.8	20.0	23.8	-0.2	30.6	23	13.9	2	0	0	19.4	78	88	- 17	33	6	4	0	0	2.1	19	15.2	W	28	9	12	9	5.3	79
CHARLOTTE	224	988.2	1015.0	28.9	17.8	23.2	-1.8	35.0	30	11.7	28	5	0	17.8	75	168	77	83	8	4	0	0	0.7	23	15.2	SW	26	12	3	15	5.9	74
GREENSBORO	273	984.1	1015.4	28.9	16.7	22.7	-1.1	35.6	30	10.0	14	5	0	17.2	75	41	- 47	14	8	9	0	0	0.7	19	11.2	NW	25	6	11	13	6.2	54
RALEIGH	132	999.3	1015.1	29.4	16.7	23.1	-0.8	35.0	30+	10.0	14	8	0	17.8	77	44	- 50	22	8	7	0	0	1.0	21	12.5	31	17	7	11	12	6.0	66
WILMINGTON	9	1014.6	1015.9	30.6	20.6	25.7	0.3	37.8	26	16.1	14+	9	0	19.4	71	64	- 44	23	8	5	0	0	1.5	18	11.2	SE	7	9	11	10	5.7	69

See footnotes at end of table

CLIMATOLOGICAL DATA
METRIC UNITS

State and Station	Elevation (ground)	Pressure: Station Q	Pressure: Sea level	Temperature: Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	No. of days: Max 32.2 °C or above	No. of days: Min 0 C or lower	Average dew point	Average relative humidity	Precipitation: Total	Departure from normal	Greatest in 24 hours	No. of days: 25 mm or more	No. of days: With thunderstorms	Snow Sleet: Total	Snow Sleet: Maximum depth on ground	Wind: Resultant speed	Resultant direction	Fastest mile (1.6 kilometers): Speed	Direction	Date	No. of days (sunrise to sunset): Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	M	Mb	Mb.	C	C.	C.	C.	C		C.				C.	%	Mm	Mm	Mm			Mm	Mm	M p.s		M p.s							%
NORTH DAKOTA																																
BISMARCK	502	952.9	1012.0	22.2	10.0	16.2	-1.8	35.6	3	4.4	15	1	0	11.1	77	156	79	42	21	11	0	0	0.9	36	17.9	NW	20	4	8	18	7.6	61
FARGO	273	978.7	1011.0	23.9	12.2	17.8	-0.4	36.1	3	3.9	15	1	0	12.8	76	100	23	23	15	12			0.8	36	27.[illegible]	W	5	4	12	14	6.7	68
WILLISTON	579	944.1	1011.7	22.2	10.0	16.3	-0.9	35.0	2	4.4	15	3	0	8.9	66	93	[illegible]	47	11	6	0	0	0.7	31	17.[illegible]	NW	3	4	8	18	7.6	53
OHIO																																
AKRON	368	970.5	1014.3	26.7	15.0	21.0	0.2	32.8	30+	8.9	14	5	0	15.0	69	61	- 47	15	12	7	0	0	1.7	24	11.2	29	26+	4	13	13	6.5	
CINCINNATI OBS	232			28.9	17.2	22.9	-0.1	33.9	10	10.6	13	9	0			38	- 68	15	10		0	0			7.6	SW	25					63
CLEVELAND	237	985.4	1014.3	25.0	13.3	19.2	-0.7	32.8	11	6.1	14	1	0	13.3	70	59	- 26	22	11	5	0	0	1.7	22	12.5	S	21+	5	6	19	7.1	57
COLUMBUS	247	985.1	1014.5	27.8	16.1	21.9	0.4	35.0	30	10.0	14	7	0	16.7	73	75	- 30	17	11	9	0	0	0.9	21	15.2	SW	25	5	12	13	6.3	57
DAYTON	305	978.7	1014.2	27.8	16.1	21.8	-0.1	33.3	9	9.4	13	3	0	14.4	65	93	- 11	53	13	6	0	0	1.7	22	15.6	SW	25	7	10	13	6.1	70
MANSFIELD	395			26.1	14.4	20.5	0.6	32.2	30+	10.0	21+	2	0	15.0	73	100	- 7	44	11	5	0	0	2.3	23	10.3	30	26+	7	13	10	5.9	
TOLEDO	204	988.8	1013.7	27.2	14.4	20.9	0.7	35.6	11	8.3	18	8	0	15.0	69	86	- 10	35	12	7	0	0	1.2	24	15.6	W	11	5	10	15	6.7	59
YOUNGSTOWN	359	972.2	1014.7	25.0	11.7	18.3	-1.2	31.7	30	3.3	14	0	0	13.3	74	80	- 11	18	15	9	0	0	1.4	24	10.7	35	19	5	8	17	6.9	
OKLAHOMA																																
OKLAHOMA CITY	392	967.2	1012.5	28.9	18.3	23.8	-1.8	34.4	30	12.2	27	6	0	18.9	76	61	- 53	28	6	7	0	0	3.0	17	15.2	[illegible]	29	10	6	14	5.8	70
TULSA	198	989.2	1012.9	30.6	19.4	24.9	-0.3	35.0	13	11.7	27	11	0	18.9	71	104	- 15	57	8	6	0	0	2.9	18	15.6	NE	14	9	10	11	5.4	72
OREGON																																
ASTORIA	2	1018.3	1018.9	17.8	8.9	13.4	-0.7	24.4	25	5.0	9+	0	0	9.4	77	142	45	61	13	0	0	0	2.1	28	10.3	18	1	4	7	19	7.6	
BURNS U	1265	873.4	1014.5	24.4	7.8	16.2	0.7	36.1	26	1.7	28	3	0	2.8	44	5	- 17	3	3		0	0	2.4	31				11	10	9	5.0	
EUGENE	109	1004.7	1018.1	23.9	8.9	16.4	0.4	34.4	25	4.4	12	1	0	10.0	70	24	- 12	12	4	0	0	0	1.2	31	8.0	31	28+	8	9	13	5.9	
MEACHAM	1234	877.4	1015.5	18.9	6.7	12.7	0.6	29.4	25	1.1	29+	0	0	3.3	57	37	- 26	13	8		T	0	1.6	29	8.9	30	27	9	10	11	5.6	
MEDFORD	396	969.5	1016.4	30.0	11.1	20.4	2.6	41.7	25	4.4	8	12	0	7.2	47	2	- 24	1	2	1	0	0	2.0	32	8.9	31	14+	15	10	5	3.7	
PENDLETON	452	962.4	1015.3	26.7	12.8	19.7	0.9	37.2	25	6.7	12	6	0	5.6	44	23	- 7	11	6	1	0	0	3.0	26	14.3	26	27+	13	8	9	5.0	
PORTLAND	6	1016.6	1017.8	22.8	11.1	16.8	0.1	33.9	25	7.2	3	1	0	10.0	67	56	13	25	11	1	0	0	1.7	32	10.7	SW	26	7	8	15	6.4	59
SALEM	60	1010.8	1018.0	22.8	7.8	15.3	-0.6	33.9	25	2.8	12	1	0	10.0	70	33	- 4	20	8	0	0	0	1.0	29	10.3	25	26	9	7	14	5.8	
SEXTON SUMMIT R	1169	885.5	1016.3	20.0	7.8	13.9	0.8	32.2	25	2.2	29+	1	0			5	- 34	4	2		0	0			18.8	18	1	18	6	6	3.8	
PACIFIC AREA																																
JOHNSTON	2	1014.2	1014.8	29.4	25.6	27.4	0.6	30.0	28+	23.9	5	0	0	22.2	74	38	16	16	15	1	0	0	7.6	8	17.0	E	29	13	10	7	5.2	53
KOROR R	29	1006.8	1010.5	32.2	24.4	28.4	1.2	33.3	18	22.8	11	21	0	24.4	83	178	-152	80	24	2	0	0	1.2	11	11.6	E	11	0	6	24	8.6	72
KWAJALEIN	2	1009.8	1010.7	30.6	24.4	27.4	-0.1	31.7	29	22.8	24+	0	0	24.4	83	294	73	85	22	2	0	0	3.2	9	14.3	13	12	0	6	24	8.8	
MAJURO	3	1010.8	1011.1	30.0	24.4	27.3	0.4	30.6	30+	23.3	29+	0	0	23.9	79	408	82	98	26	3	0	0	2.5	9	11.6	E	12	1	10	19	7.8	64
MARCUS ISLAND	6			31.1	23.9	27.3	-0.9	32.2	30+	21.1	14	2	0			32	- 35	10	6		0	0			10.7	W	16					67
PAGO PAGO	4	1013.2	1013.5	29.4	23.9	26.6		30.0	7+	20.6	3	0	0	22.8	81	69		16	20	0	0	0	5.2	10	13.4	E	19+	2	14	14	7.3	40
PONAPE R	37	1005.1	1010.3	31.1	22.8	26.7	0.0	32.8	11+	21.1	27+	6	0	23.9	87	268	-156	66	25	2	0	0	1.1	11	8.9	E	20	2	6	22	8.1	49
TAGUAC GUAM R	110			30.6	21.7	26.2	-0.6	31.1	27+	19.4	9+	0	0			157	8	33	23		0	0			8.5	SE	25+	3	18	9	6.5	61
TRUK MOEN ISLAND	2	1009.8	1010.2	30.6	24.4	27.5	0.4	31.7	26+	22.2	22	0	0	23.9	83	361	59	82	21	2	0	0	1.6	7	9.4	NW	25	1	9	20	8.4	68
WAKE	3	1013.5	1013.9	31.1	25.0	28.1	0.6	31.7	29+	22.2	13	0	0	22.2	73	57	9	27	11	1	0	0	5.1	10	15.2	SE	13	6	15	9	6.3	86
YAP R	13	1008.1	1010.2	31.1	23.9	27.3	-0.4	32.8	8	22.2	25+	4	0	23.9	82	146	-126	36	19	2	0	0	1.6	10	8.5	NE	11	1	9	20	8.2	61
PENNSYLVANIA																																
ALLENTOWN	118	1000.7	1014.3	25.6	13.3	19.6	-1.2	33.9	30	7.2	21	3	0	13.9	72	91	- 12	25	13	9	0	0	0.8	26	13.0	32	3	4	11	15	6.8	
ERIE	223	987.5	1014.0	23.9	12.8	18.3	-0.9	32.8	11	5.6	21	1	0	12.8	72	67	- 11	24	12	9	0	0	1.7	23	15.6	28	29	7	9	14	6.3	
HARRISBURG	103	1001.7	1014.2	27.2	15.0	21.3	-0.6	35.0	30	8.9	1	4	0	15.6	72	57	- 30	22	13	9	0	0	1.0	24	10.7	NW	26+	6	9	15	6.8	66
PHILADELPHIA	2	1013.2	1014.1	27.2	16.1	21.8	0.1	34.4	30	8.9	21	3	0	15.6	69	150	47	77	12	7	0	0	1.2	25	13.4	N	16	8	6	16	6.6	62
PITTSBURGH	347	971.2	1014.5	26.1	12.8	19.4	-0.8	32.2	30	4.4	21	1	0	13.3	68	60	- 36	25	13	5	0	0	1.8	26	13.9	30	12	5	9	16	6.7	60
READING U	81			27.2	16.1	21.7	-0.7	35.0	30	11.1	21+	4	0			88	- 7	21	11		0	0			17.0	E	10+	9	9	12	5.9	58
SCRANTON	283	980.7	1014.6	25.0	14.4	19.7	-0.4	32.8	30	7.2	21	3	0	15.6	78	122	23	31	13	8	0	0	1.1	23	11.2	SW	15	3	12	15	7.2	55
WILLIAMSPORT	160	995.6	1014.4	25.6	12.8	19.1	-1.6	33.3	30	6.7	21	1	0	15.0	81	132	50	39	16	9	0	0	0.8	24	17.9	32	15	3	13	14	6.8	
RHODE ISLAND																																
BLOCK ISLAND	34			20.0	13.3	16.8	-0.4	27.2	7+	10.0	5+	0	0			114	49	46	15		0	0						9	8	13	6.4	
PROVIDENCE	16	1011.5	1013.9	23.3	13.3	18.3	-0.7	32.2	7+	9.4	5	2	0	13.3	75	120	50	24	17	4	0	0	0.3	28	10.3	30	20	5	12	13	6.8	46
SOUTH CAROLINA																																
CHARLESTON	12	1013.5	1015.2	30.6	20.6	25.4	-0.8	36.1	26	14.4	1	5	0	18.9	71	239	113	70	11	8	0	0	1.2	16	29.1Y	NW	12	9	6	15	6.3	68
CHARLESTON U	3			29.4	22.8	25.9	-0.5	34.4	26	19.4	1	3	0			252	145	126	10		0	0			36.7	NW	12					
COLUMBIA	65	1007.1	1015.2	31.7	19.4	25.5	-1.0	35.6	30+	12.8	1	19	0	19.4	74	137	40	39	10	7	0	0	0.2	21	14.3	31	12	8	8	14	6.0	64
GNVLE-SPARTANBURG	292	981.4	1015.3	29.4	17.2	23.4	-1.6	34.4	30	10.0	28	5	0	16.7	70	145	72	103	9	8	0	0	0.2	29	14.8	SW	26	10	8	12	5.5	55

See footnotes at end of table

CLIMATOLOGICAL DATA
METRIC UNITS

State and Station	Elevation (ground)	Pressure: Station ⊙	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No. of days: Max 32.2 °C or above	Temperature: No. of days: Min. 0 C or lower	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No. of days: .25 mm or more	Precipitation: No. of days: With thunderstorms	Snow, Sleet: Total	Snow, Sleet: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile (1.6 kilometers): Speed	Wind: Fastest mile: Direction	Wind: Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	No. of days: Partly cloudy, 4-7	No. of days: Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	M.	Mb.	Mb.	C	C.	C.	C.	C.		C.				C.	%	Mm.	Mm.	Mm.			Mm.	Mm.	M.p.s.		M.p.s.							%
SOUTH DAKOTA																																
ABERDEEN	395	964.4	1010.7	24.4	12.2	18.3	-0.9	36.1	3	2.2	15	1	0	12.2	71	82	- 13	16	17	12	0	0	1.2	36	17.9	32	20	6	8	16	6.8	
HURON	391	964.4	1010.1	26.7	12.8	19.8	0.1	37.2	20	5.0	15	5	0	12.8	67	184	104	87	13	11	0	0	0.4	25	26.4	NW	20	5	11	14	6.7	60
RAPID CITY	964	902.5	1011.6	23.9	10.6	17.2	-1.1	34.4	3	5.6	26+	1	0	10.0	68	178	100	48	17	12	0	0	1.8	36	25.0	NW	20	11	6	13	6.1	57
SIOUX FALLS	432	960.0	1010.4	28.3	13.9	20.9	0.8	38.3	20	2.8	15	8	0	12.8	64	104	- 6	60	12	12	0	0	1.1	22	25.9	25	21	4	13	13	6.5	
TENNESSEE																																
BRISTOL	459	962.8	1016.1	28.3	15.0	21.6	-1.3	33.9	30	8.3	1	2	0	16.1	74	73	- 12	22	12	6	0	0	0.4	30	13.9	31	11	8	8	14	6.3	
CHATTANOOGA	203	990.9	1014.9	31.1	17.2	24.1	-1.6	35.0	30	10.0	28	11	0	17.2	69	22	- 72	17	6	7	0	0	0.6	25	11.2	NW	11	8	9	13	5.8	64
KNOXVILLE	299	980.4	1014.8	28.9	17.2	23.1	-1.2	32.8	30	11.1	14	1	0	17.2	75	101	16	23	11	7	0	0	0.4	29	14.3	SW	26	7	13	10	6.3	69
MEMPHIS	79	1004.4	1014.4	32.2	20.6	26.4	0.6	35.6	16	16.1	27	18	0	17.8	60	96	2	74	6	5	0	0	1.1	19	13.4	SW	25+	11	7	12	5.6	78
NASHVILLE	180	993.2	1014.6	30.6	17.2	23.8	-1.4	35.6	30	8.9	14	9	0	17.2	69	57	- 25	32	7	5	0	0	1.1	23	13.0	SW	25	9	10	11	5.8	64
OAK RIDGE R	276			29.4	17.2	23.3	-0.3	33.3	30	11.1	14	5	0			90	8	28	10		0	0			15.6Y		25	9	9	12	6.2	
TEXAS																																
ABILENE	537	951.6	1011.6	31.7	20.6	26.3	-0.6	36.1	28+	16.1	27	16	0	17.2	63	28	- 40	23	3	4	0	0	3.4	16	16.1	N	1	8	10	12	6.0	80
AMARILLO	1098	889.3	1009.4	31.1	16.7	23.8	-1.2	40.0	29+	9.4	26	15	0	12.2	54	43	- 31	29	8	8	0	0	3.2	17	15.6	SE	8	15	10	5	4.0	83
AUSTIN	182	991.2	1012.7	31.1	21.7	26.4	-1.3	35.6	12	16.1	27	14	0	20.6	75	79	- 3	22	13	6	0	0	2.2	15	15.2	NW	5	3	12	15	6.8	58
BROWNSVILLE	6	1011.2	1011.6	32.8	24.4	28.5	0.3	35.0	12	21.7	26	23	0	23.3	78	120	44	46	8	5	0	0	4.1	14	15.6	NW	26	7	17	6	5.6	80
CORPUS CHRISTI	12	1010.5	1012.1	30.0	23.3	26.6	-1.3	33.3	12	20.6	3	2	0	23.3	85	212	152	90	11	7	0	0	3.3	14	14.3	NW	26	1	17	12	6.7	58
DALLAS	147	995.9	1012.9	31.7	22.2	27.0	-0.4	37.8	12	18.3	27+	15	0	19.4	67	122	40	52	10	5	0	0	3.2	16	12.5	SE	29	4	10	16	6.9	63
DEL RIO	313	975.3	1010.6	34.4	21.7	27.9	-1.2	38.3	12	16.7	17+	26	0	19.4	63	44	- 14	34	4	6	0	0	4.2	12	17.0	36	25	6	13	11	6.0	
EL PASO	1194	879.8	1007.9	35.6	18.9	27.2	0.0	41.1	21	10.6	11	26	0	5.0	26	1	- 17	1	1	3	0	0	0.9	24	15.6	NE	15	20	8	2	2.8	90
FORT WORTH	164	992.9	1013.0	31.7	21.1	26.4	-1.1	35.6	13+	15.6	27	12	0	20.6	75	89	13	35	10	7	0	0	2.5	17	10.7	19	30+	4	9	17	6.9	
GALVESTON U	2			28.9	24.4	26.8	-0.8	33.9	13	21.7	21+	1	0			331	264	126	13		0	0			16.5	SW	24+					36
HOUSTON	15	1011.5	1013.5	31.1	22.8	26.9	-0.6	34.4	12	20.0	27	13	0	22.2	80	284	190	90	15	11	0	0	2.7	14	13.0	16	24	2	15	13	6.6	49
LUBBOCK	992	901.8	1010.6	31.7	15.6	23.6	-1.7	39.4	28	9.4	2	14	0	13.3	59	46	- 18	26	5	8	0	0	2.9	17	16.1	2	16	13	10	7	4.1	
MIDLAND	869	914.3	1010.2	32.8	17.8	25.3	-2.1	38.9	28	11.7	3	22	0	13.3	53	26	- 15	12	5	5	0	0	2.6	14	21.5	30	9	18	10	2	3.3	
PORT ARTHUR	5	1013.5	1014.3	31.1	21.7	26.4	-0.6	35.0	12	18.3	27	12	0	22.2	82	309	200	88	15	12	0	0	2.1	15	17.0	SW	24	5	12	13	6.5	48
SAN ANGELO	580	945.8	1010.8	32.8	19.4	26.3	-1.8	37.2	11	14.4	3	19	0	18.9	68	120	73	33	7	6	0	0	2.7	15	16.5	2	25	10	12	8	5.5	
SAN ANTONIO	240	984.8	1012.4	31.7	22.2	26.9	-0.8	35.0	13+	15.6	27	18	0	20.6	73	67	- 8	21	11	3	0	0	2.5	14	14.8	NW	1	1	16	13	6.8	52
VICTORIA	32	1008.5	1012.6	31.1	23.3	27.1	-0.3	35.0	13+	20.0	27	11	0	22.8	82	271	194	79	13	11	0	0	2.6	15	25.0Y	ESE	23	1	18	11	6.8	
WACO	153	995.3	1012.9	31.1	22.2	26.6	-1.2	36.7	13	17.8	27+	14	0	20.0	72	130	62	35	12	6	0	0	2.8	15	11.2	15	29	5	11	14	6.7	
WICHITA FALLS	303	976.3	1012.0	33.9	19.4	26.4	-1.2	40.6	29	13.9	27	23	0	18.9	67	30	- 51	35	4	6	0		3.5	15	14.3	5	15	8	8	14	6.1	
UTAH																																
MILFORD	1533	845.2		31.1	8.3	19.6	1.0	38.9	27	1.1	30	14	0			4	- 7	4	2		0	0						20	4	6	3.0	
SALT LAKE CITY	1286	870.3	1011.7	27.8	11.7	19.7	0.1	37.8	27	4.4	30	8	0	5.0	44	40	15	25	6	6	T	T	0.4	16	13.4	W	23+	14	6	10	4.7	79
WENDOVER	1291	869.6	1012.5	27.2	14.4	20.8	-0.2	37.8	27	6.7	30	9	0			25	13	11	6		0	0										
VERMONT																																
BURLINGTON	101	1000.7	1013.2	20.6	11.7	16.0	-1.9	27.8	30	6.7	20	0	0	12.2	81	93	4	18	15	7	0	0	0.8	19	13.4	S	12	1	7	22	8.5	54
VIRGINIA																																
LYNCHBURG	279			28.9	15.6	22.3	-0.5	36.7	30	9.4	14+	7	0			38	- 65	14	7		0	0			11.2	W	26	8	11	11	5.6	71
NORFOLK	7	1014.2	1015.2	28.9	18.9	23.8	-0.4	35.6	27+	13.3	6	6	0	18.3	73	78	- 14	28	11	7	0	0	1.7	19	13.9	SW	28	8	15	7	5.2	82
RICHMOND	50	1009.1	1015.0	30.0	17.2	23.7	-0.2	36.7	30	11.1	1	11	0	18.3	72	73	- 22	29	10	7	0	0	1.1	21	10.7	N	17	6	13	11	6.0	74
ROANOKE	350	973.9	1015.3	28.3	15.0	21.8	-1.2	36.1	30	7.8	14+	5	0	14.4	66	54	- 43	18	10	5	0	0	1.3	26	11.2	31	26+	8	10	12	5.7	
WALLOPS ISLAND	3			25.6	17.8	21.6		33.9	26	13.3	21+	2	0			64		23	10		0	0			17.0Y	WNW	27	7	12	11	6.0	
WASHINGTON																																
OLYMPIA	59	1010.5	1017.8	21.1	8.3	14.6	-0.4	31.1	25	2.8	3	0	0	9.4	72	62	16	35	10	0	0	0	1.4	23	10.3	27	27+	5	10	15	6.8	
QUILLAYUTE	55	1010.8	1018.5	17.2	7.8	12.7	-0.6	25.6	24	5.6	11+	0	0	9.4	83	116	30	30	16	0	0	0	1.1	25	7.6	NW	19+	3	8	19	7.8	33
SEATTLE TACOMA	122	1001.7	1017.9	20.6	11.1	15.9	0.5	30.6	25	8.9	29+	0	0	7.8	62	77	37	44	10	1	0	0	1.1	25	10.3	22	26	3	9	18	7.2	51
SPOKANE	718	930.9	1013.6	23.3	8.9	16.2	-0.4	33.3	26	3.3	29	1	0	5.0	52	22	- 16	11	8	0	0	0	2.7	20	14.8	SW	27	7	10	13	6.3	58
STAMPEDE PASS R	1206	881.1		13.3	5.6	9.3	-0.1	28.3	25	1.1	28+	0	0			157	53	51	19		25	T						3	10	17	7.6	
WALLA WALLA U	289			26.7	13.3	19.9	0.4	36.1	25	8.9	29	4	0			23	- 8	9	8		0	0			11.6	NW	27	12	7	11	5.6	71
YAKIMA	321	976.3	1014.3	26.1	9.4	17.7	-0.3	32.8	26+	2.2	12	3	0	5.0	44	1	- 20	1	1	0	0	0	2.2	29	14.3	29	27	10	12	8	5.1	
WEST INDIES																																
SAN JUAN P.R.	4	1015.6	1017.8	30.6	23.3	26.9	0.2	31.7	25+	22.2	6	0	0	23.9	86	152	8	33	17	7	0	0	3.0	9	13.9	E	30	4	16	10	6.4	53
SWAN ISLAND	9			30.0	25.0	27.4	-0.5	30.6	30+	22.2	13	0	0			193	29	38	19		0	0						1	7	22	8.1	

See footnotes at end of table

CLIMATOLOGICAL DATA
METRIC UNITS

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	No. of days: Max 32.2 °C or above	No. of days: Min. 0 C or lower	Average dew point	Average relative humidity	Precipitation: Total	Departure from normal	Greatest in 24 hours	No. of days: 25 mm or more	No. of days: With thunderstorms	Snow, Sleet: Total	Snow, Sleet: Maximum depth on ground	Wind: Resultant speed	Resultant direction	Fastest mile (1.6 kilometers): Speed	Direction	Date	No. of days (sunrise to sunset): Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	M.	Mb.	Mb.	C.	°C.	C.	C.	C.		C.				C	%	Mm.	Mm.	Mm.			Mm.	Mm.	M.p.s.		M.p.s.							%
WEST VIRGINIA																																
BECKLEY	763	928.9	1015.5	25.0	12.8	18.9	-1.0	31.1	30	2.8	14	0	0	13.3	73	78	- 29	41	8	7	0	0	1.4	24	16.5	28	26	5	8	17	6.9	
CHARLESTON	286	981.4	1015.0	28.3	15.0	21.4	-0.8	33.3	11+	7.2	14	5	0	15.6	73	72	- 22	24	11	10	0	0	0.9	22	11.2	22	26	5	10	15	6.6	
ELKINS	600	945.8	1016.2	26.1	11.1	18.5	-1.0	31.7	30	3.9	21	0	0	13.3	79	52	- 80	11	13	9	0	0	1.1	28	11.2	12	8	3	9	18	7.7	
HUNTINGTON	252	985.4	1015.3	27.8	14.4	21.3	-0.9	33.9	30	6.7	14	3	0	15.6	74	42	- 62	15	11	9	0	0	1.0	21	9.4	27	26	5	12	13	6.5	
PARKERSBURG U	187			27.8	15.6	21.7	-0.9	33.9	30	7.2	14	4	0			103	- 5	31	10		0	0			11.6	NW	24					58
WISCONSIN																																
GREEN BAY	208	986.8	1011.9	23.9	12.8	18.2	-0.4	31.7	7	5.0	13	0	0	13.3	74	177	92	58	17	11	0	0	0.5	23	17.9	S	11	8	12	10	6.3	55
LA CROSSE	198	987.5	1011.8	25.6	14.4	20.0	-0.4	33.9	6	7.2	28	5	0	14.4	73	242	135	72	13	9	0	0	0.6	18	13.4	28	30	3	11	16	7.2	
MADISON	262	981.0	1011.9	25.6	12.8	19.0	0.1	33.3	9	4.4	13	5	0	13.9	73	199	98	56	15	9	0	0	0.9	24	24.1	W	10	6	10	14	6.6	61
MILWAUKEE	205	987.5	1012.5	23.9	13.9	19.1	1.7	32.2	9	5.6	13	1	0	13.9	74	198	105	52	15	9	0	0	1.1	21	18.8	SW	29	8	9	13	6.0	61
WYOMING																																
CASPER	1627	836.8	1011.7	23.9	7.8	15.8	-1.4	32.8	19	1.7	30	2	0	5.6	59	47	15	19	11	6	T	0	1.7	28	15.6	29	30+	9	10	11	5.8	
CHEYENNE	1867	812.4	1011.4	25.0	8.9	17.0	-0.2	33.3	20	5.0	9	2	0	3.3	46	22	- 31	17	4	10	0	0	2.0	31	18.3	NW	13	9	15	6	4.9	61
LANDER	1696	828.3	1011.3	23.3	8.9	16.2	-0.5	32.2	27	1.7	30	1	0	5.0	52	54	20	35	8	7	0	0	1.3	27	17.4	SW	28	9	9	12	5.8	78
SHERIDAN	1208	877.8	1013.4	21.7	8.3	14.9	-1.7	33.3	19	3.3	1	1	0	8.3	67	99	34	39	12	8	0	0	1.5	32	18.8	NW	13	3	14	13	6.8	58

Data from airport unless otherwise specified. U indicates Urban, R indicates Rural, sites.

Precipitation data in column headed "Greatest in 24 hours" are computed on a 24-hour basis without regard to calendar day - data may include precipitation with a measurable amount from the last day of the previous month or the first day of the following month.

Wind directions under resultant direction are in tens of degrees.

Value entered in column "Fastest Mile" is the highest observed 1-minute wind speed when the direction is in tens of degrees. These stations are not equipped with a recording anemometer from which "Fastest Mile" data can be evaluated.

B Number of days maximum 21.1°C. or above for Alaskan Stations.
Y Peak Gust.
+ And also on an earlier date or dates.
Ø Station pressures apply to elevations shown in the "Elevations - Station Pressure" table of the annual issue of this publication.

Data in this table are obtained by conversion from data in the English Units table.

MONTHLY AND SEASONAL HEATING DEGREE DAYS

(Base 65°F)

State and Station	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Total for Season	Normals July-June
ALABAMA														
BIRMINGHAM	0	0	41	162	492	510	690	755	387	108	30	0	3175	2551
HUNTSVILLE	0	0	42	179	553	586	829	876	445	148	35	0	3693	3070
MOBILE	0	0	23	46	202	273	448	525	251	12	0	0	1780	1560
MONTGOMERY	0	0	30	108	338	379	614	645	308	41	8	0	2471	2291
ALASKA														
ANCHORAGE	172	200	501	901	1042	1513	1625	1209	1129	894	510	301	9997	10648
ANNETTE	214	128	290	513	723	884	1011	758	708	688	358	292	6567	7069
BARROW	848	887	1185	1617	2011	2287	2311	2628	2388	2119	1333	953	20567	20174
BARTER ISLAND	752	866	1079	1678	2001	2285	2307	2664	2325	2070	1284	924	20235	19862
BETHEL	354	325	584	1160	1273	1707	1662	1767	1603	1250	721	377	12783	13196
COLD BAY	369	417	555	823	804	1064	1133	1183	1067	917	682	577	9591	9880
FAIRBANKS	178	213	545	1239	1661	2064	2358	2029	1613	1069	533	169	13671	14279
JUNEAU	340	303	444	671	973	1162	1432	1043	984	808	508	374	9042	9075
KING SALMON	315	313	556	1078	1065	1640	1700	1512	1216	1039	648	423	11505	11343
KOTZEBUE	373	430	663	1274	1765	1941	1971	2397	2026	1631	1097	746	16314	16105
MC GRATH	272	304	589	1286	1527	2035	2167	1980	1676	1145	638	278	13867	14283
NOME	548	475	635	1171	1492	[illegible]	1748	1976	1769	1511	1106	641	14776	14171
ST. PAUL ISLAND	511	474	581	836	883	1040	1079	1367	1271	1184	954	769	10949	11199
SHEMYA	565	451	559	735	886	999	972	1014	1008	935	821	680	9625	9687
YAKUTAT	388	370	507	764	965	1259	1445	1033	1020	956	700	475	9882	9092
ARIZONA														
FLAGSTAFF	11	33	207	461	733	1292	1218	839	861	733	453	172	7013	7152
PHOENIX	0	0	0	6	72	512	384	151	167	39	0	0	1331	1765
TUCSON	0	0	0	14	89	502	384	170	200	91	0	0	1450	1800
WINSLOW	0	0	11	252	528	1344	1609	710	564	407	135	29	5589	4782
YUMA	0	0	0	0	37	385	296	69	41	14	0	0	842	1217
ARKANSAS														
FORT SMITH	0	0	32	158	464	726	781	734	420	131	22	0	3468	3292
LITTLE ROCK	0	0	39	162	472	685	840	778	440	147	30	0	3593	3219
TEXARKANA	0	0	24	83	318	556	646	636	326	61	5	0	2655	2533
CALIFORNIA														
BAKERSFIELD	0	0	0	5	137	604	523	177	181	81	24	0	1732	2122
BISHOP	0	0	9	174	462	953	833	509	514	324	113	19	3910	4227
BLUE CANYON	0	0	56	270	489	925	840	651	722	522	407	125	5009	5507
EUREKA U	257	249	170	243	345	611	565	337	441	498	384	279	4379	4643
FRESNO	0	0	0	29	239	686	619	258	278	139	37	2	2287	2492
LONG BEACH	0	0	0	0	37	312	282	135	130	72	25	3	996	1711
LOS ANGELES	1	0	0	3	49	331	236	118	135	115	61	5	1054	1799
LOS ANGELES U	0	0	0	0	32	287	207	70	99	70	50	7	822	1349
MT SHASTA R	3	2	55	431	594	1073	983	661	669	549	377	139	5526	5722
OAKLAND	54	36	10	64	185	491	548	272	278	237	183	73	2431	2870
RED BLUFF	0	0	0	33	230	567	671	289	250	138	45	5	2228	2515
SACRAMENTO	0	0	0	33	259	643	663	296	299	171	80	2	2446	2773
SANDBERG R	0	0	37	153	389	927	800	533	644	492	340	101	4416	4209
SAN DIEGO	0	0	0	3	42	288	239	119	135	85	47	8	966	1439
SAN FRANCISCO	85	63	11	75	217	521	564	297	317	293	264	116	2823	3012
SAN FRANCISCO U	184	173	67	47	158	398	465	235	254	263	280	174	2698	3001
SANTA MARIA	40	24	26	97	197	474	431	233	326	276	212	96	2432	2967
STOCKTON	0	0	0	25	267	687	691	317	331	182	84	7	2591	2676
COLORADO														
ALAMOSA	23	135	313	663	970	1651	1768	1227	975	823	499	145	9192	8529
COLORADO SPRINGS	6	52	138	397	758	1223	1057	932	812	669	411	49	6504	6423
DENVER	4	16	108	389	729	1186	1086	885	751	655	343	38	6190	6283
GRAND JUNCTION	0	0	28	320	714	1442	1532	805	648	552	218	24	6283	5641
PUEBLO	0	15	76	392	790	1282	1140	855	683	437	182	5	5857	5462
CONNECTICUT														
BRIDGEPORT	0	2	69	274	712	895	1216	1068	762	391	214	30	5633	5617
HARTFORD	0	10	112	380	803	1013	1353	1134	771	374	205	46	6201	6172
NEW HAVEN	0	9	93	329	741	924	1239	1081	774	435	247	48	5920	5897
DELAWARE														
WILMINGTON	0	0	80	327	722	866	1139	994	626	319	171	6	5250	4930
DIST.OF COLUMBIA														
WASH NATL AP	0	0	34	240	592	773	1033	886	471	216	87	0	4332	4224
FLORIDA														
APALACHICOLA U	0	0	10	24	192	214	391	456	249	3	0	0	1539	1308
DAYTONA BEACH	0	0	0	6	72	108	227	344	165	0	0	0	942	879
FORT MYERS	0	0	0	0	2	34	67	153	82	0	0	0	338	442
JACKSONVILLE	0	0	3		141	179	352	419	188	4	0	0	1304	1239
KEY WEST	0	0	0	0	0	1	5	10	17	0	0	0	33	108
LAKELAND U	0	0	0	2	48	81	172	263	140	0	0	0	706	661
MIAMI	0	0	0	0	0	25	56	101	57	0	0	0	239	214
ORLANDO	0	0	0	0	29	80	191	293	149	0	0	0	742	766
PENSACOLA	0	0	21	47	214	262	473	531	285	17	0	0	1850	1463
TALLAHASSEE	0	0	12	50	221	222	399	518	266	16	0	0	1704	1485
TAMPA	0	0	0	0	69	95	193	306	157	0	0	0	820	683
WEST PALM BEACH	0	0	0	0	1	37	74	155	77	0	0	0	344	253
GEORGIA														
ATHENS	0	0	36	159	485	524	784	735	378	146	40	0	3287	2929
ATLANTA	0	0	52		490	530	792	769	389	154	31	0	3400	2983
AUGUSTA	0	0	21	128	404	428	709	676	327	78	19	0	2790	2397
COLUMBUS	0	0	29	114	370	403	639	660	345	57	6	0	2623	2383
MACON	0	0	33	141	421	440	696	695	338	72	18	0	2854	2136
ROME	0	0	50	210	558	557	825	824	444	172	[illegible]	0	3690	3326
SAVANNAH	0	0	12	82	269	306	592	582	270	34	3	0	2150	1819
IDAHO														
BOISE	0	0	49	434	723	1146	1092	688	586	555	[illegible]	58	5566	5809
LEWISTON	0	0	31	352	719	969	926	629	539	493	[illegible]	50	4908	5542
POCATELLO	0	3	128	545	883	1398	1352	931	783	689	405	154	7271	7033
ILLINOIS														
CAIRO U	0	2	37	177	562	754	974	906	514	159	49	0	4134	3821
CHICAGO O HARE	39	53	160	395	827	1068	1274	1192	682	376	257	28	6351	6639
CHICAGO MIDWAY	26	16	104	381	803	1027	1243	1152	666	360	218	14	6010	6155
MOLINE	21	33	136	424	860	1127	1354	1221	711	409	248	18	6562	6408
PEORIA	10	30	113	394	841	1083	1323	1192	673	371	229	13	6272	6025
ROCKFORD	42	51	134	439	910	1149	1349	1266	754	453	275	24	6846	6830
SPRINGFIELD	9	34	104	337	789	1032	1271	1134	684	358	[illegible]	8	5963	5429

Data from airport unless otherwise specified.
U indicates Urban, R indicates Rural, sites.

MONTHLY AND SEASONAL HEATING DEGREE DAYS

(Base 65°F)

State and Station	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Total for Season	Normals July-June
INDIANA														
EVANSVILLE	1	11	72	264	684	844	1128	997	595	256	111	5	4968	4435
FORT WAYNE	27	31	154	442	914	1083	1382	1199	806	448	298	19	6803	6205
INDIANAPOLIS	3	9	83	327	761	964	1232	1112	680	333	205	11	5720	5699
SOUTH BEND	31	30	137	429	861	1064	1317	1233	779	444	311	35	6671	6439
IOWA														
BURLINGTON	17	28	109	390	826	1076	1292	1178	685	350	216	15	6182	6114
DES MOINES	14	18	109	440	850	1112	1317	1184	685	411	260	24	6424	6808
DUBUQUE	39	54	156	502	948	1204	1415	1282	763	446	299	54	7162	7376
SIOUX CITY	14	21	107	461	880	1235	1430	1187	654	385	252	25	6651	6951
WATERLOO	47	75	208	574	976	1231	1450	1319	786	431	338	41	7476	7320
KANSAS														
CONCORDIA	7	7	82	344	712	1028	1196	1012	567	369	233	10	5567	5479
DODGE CITY	0	6	45	265	669	974	1015	908	526	306	215	4	4933	4986
GOODLAND	10	12	87	367	771	1148	1043	904	662	484	316	20	5824	6141
TOPEKA	1	7	87	356	690	985	1184	965	572	338	202	5	5392	5182
WICHITA	2	1	63	280	645	936	998	899	525	285	153	1	4788	4620
KENTUCKY														
COVINGTON	0	2	82	313	736	867	1178	1063	609	284	151	6	5291	5265
LEXINGTON	1	4	83	289	722	800	1090	1065	581	298	124	8	5065	4683
LOUISVILLE	0	0	68	259	660	788	1069	1007	590	247	98	4	4790	4660
LOUISIANA														
ALEXANDRIA	0	0	26	113	307	472	615	679	365	64	3	0	2644	1921
BATON ROUGE	0	0	23		214	347	468	569	270	19	0	0	1975	1560
LAKE CHARLES	0	0	10	39	151	322	439	528	238	14	0	0	1741	1459
NEW ORLEANS	0	0	20	56	187	265	407	511	303	29	2	0	1780	1385
SHREVEPORT	0	0	15	72	244	500	604	614	308	49	0	0	2406	2184
MAINE														
CARIBOU	14	55	276	636	1000	1471	1823	1594	1211	715	468	171	9434	9767
PORTLAND	15	27	155	467	900	1147	1496	1320	981	590	424	164	7686	7511
MARYLAND														
BALTIMORE	0	0	75	318	684	851	1100	943	566	324	173	1	5035	4654
MASSACHUSETTS														
BLUE HILL OBS R	1	18	145	384	826	1017	1309	1215	860	478	316	116	6685	6368
BOSTON	0	4	110	347	739	923	1214	1122	797	454	270	76	6056	5634
NANTUCKET	14	27	135	324	665	837	1111	1082	818	585	364	146	6108	5891
PITTSFIELD	13	40	211	517	974	1169	1495	1326	917	491	378	109	7640	7578
WORCESTER	4	28	151	422	912	1087	1414	1300	904	490	343	126	7181	6969
MICHIGAN														
ALPENA	84	130	289	576	1017	1213	1441	1462	1017	603	526	165	8523	8506
DETROIT	34	19	123	357	781	970	1274	1148	766	373	259	22	6126	6232
DETROIT M WAYNE CO	32	29	158	452	886	1050	1360	1173	823	416	275	29	6683	6516
DETROIT WILLOW RUN	29	41	188	465	896	1059	1325	1190	870	473	351	54	6940	6258
FLINT	48	70	216	486	901	1059	1354	1276	881	481	375	77	7224	6885
GRAND RAPIDS	38	47	179	477	909	1080	1356	1255	827	482	342	70	7062	6998
HOUGHTON LAKE	69	116	288	579	1022	1260	1468	1453	1005	582	438	137	8417	8342
LANSING	38	66	217	503	931	1109	1385	1266	869	480	366	64	7294	6909
MARQUETTE U	85	118	203	598	1010	1243	1459	1411	963	676	501	263	8530	8393
MUSKEGON	16	32	162	438	832	1030	1301	1236	801	471	325	89	6733	6696
SAULT STE MARIE	146	160	283	664	1075	1320	1655	1570	1179	697	484	237	9470	9048
MINNESOTA														
DULUTH	80	144	269	694	1147	1504	1730	1611	1017	729	507	227	9659	10000
INTERNATIONAL FALLS	76	127	260	738	1260	1739	1899	1727	1142	785	511	163	10427	10606
MINNEAPOLIS	36	65	166	577	1024	1335	1567	1440	808	491	358	62	7929	8382
ROCHESTER	49	91	197	584	1048	1334	1556	1446	868	507	411	88	8179	8295
ST CLOUD	44	70	199	625	1039	1427	1680	1577	892	566	402	82	8603	8879
MISSISSIPPI														
JACKSON	0	0	35	141	368	461	662	721	362	64	12	0	2826	2203
MERIDIAN	0	0	40	160	379	434	626	649	341	45	7	0	2681	2289
MISSOURI														
COLUMBIA	1	9	67	288	672	929	1106	1018	572	263	149	6	5080	5046
KANSAS CITY	0	3	48	255	609	909	1125	941	528	245	131	3	4797	4711
ST JOSEPH	4	17	93	327	699	963	1195	959	553	284	174	4	5272	5484
ST LOUIS	3	7	67	268	682	928	1121	1031	587	290	137	2	5123	4900
SPRINGFIELD	4	10	63	261	609	819	979	965	590	281	154	7	4742	4561
MONTANA														
BILLINGS	1	17	149	463	827	1240	1285	880	658	589	334	125	6568	7049
GLASGOW	19	12	136	571	1024	1519	1664	1344	826	683	397	158	8353	8996
GREAT FALLS	2	8	136	453	858	1327	1329	914	753	724	472	198	7174	7750
HAVRE	7	11	125	519	980	1428	1647	1171	797	688	421	166	7960	8700
HELENA	0	1	130	539	954	1422	1525	1042	780	751	472	206	7822	8129
KALISPELL	32	22	176	627	972	1272	1379	953	795	735	468	211	7642	8191
MILES CITY	5	5	116	489	969	1447	1570	1180	767	636	361	122	7667	7723
MISSOULA	2	4	116	630	987	1299	1383	941	718	678	379	168	7305	8125
NEBRASKA														
GRAND ISLAND	4	15	93	389	820	1168	1272	1095	634	414	227	13	6144	6530
LINCOLN U	2	9	83	372	761	1082	1239	1060	587	371	211	11	5788	5864
NORFOLK	15	32	118	483	874	1260	1395	1193	700	469	308	30	6877	6979
NORTH PLATTE	19	29	132	479	926	1305	1321	1096	770	558	363	26	7024	6684
OMAHA	8	15	109	417	791	1129	1307	1085	631	380	228	11	6111	6218
SCOTTSBLUFF	0	24	125	431	904	1396	1265	917	738	648	382	39	6869	6673
VALENTINE	26	34	133	466	934	1389	1365	1154	798	614	393	56	7362	7425
NEVADA														
ELKO	0	0	56	459	695	1291	1168	725	700	664	334	100	6192	7433
ELY	3	10	210	530	814	1462	1293	840	870	802	483	182	7499	7733
LAS VEGAS	0	0	0	18	244	716	638	265	231	110	8	0	2230	2709
RENO	1	3	87	429	663	1132	1025	650	694	606	369	113	5772	6332
WINNEMUCCA	0	0	80	499	730	1174	1083	648	735	672	346	96	6063	6761
NEW HAMPSHIRE														
CONCORD	8	34	208	482	965	1144	1520	1358	928	598	424	118	7787	7383
MT WASHINGTON OBS	456	540	684	1026	1497	1650	1876	1986	1521	1147	994	650	14027	13817
NEW JERSEY														
ATLANTIC CITY	0	1	149	399	757	922	1195	1094	674	417	196	13	5817	4812
ATLANTIC CITY U	0	0	49	226	591	751	1016	937	618	371	156	1	4716	4741
NEWARK	0	1	58	285	677	823	1148	1012	676	325	167	12	5184	5067
TRENTON U	0	1	80	287	681	815	1130	994	614	298	181	8	5089	4980

Data from airport unless otherwise specified.
U indicates Urban, R indicates Rural, sites.

MONTHLY AND SEASONAL HEATING DEGREE DAYS

(Base 65°F)

1967 - 1968

State and Station	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Total for Season	Normals July-June
NEW MEXICO														
ALBUQUERQUE	0	0	13	220	557	1003	870	623	559	343	107	8	4303	4348
CLAYTON	0	31	85	286	650	1066	940	837	673	482	238	10	5298	5158
RATON	2	65	165	424	736	1272	1108	889	837	617	317	41	6473	6228
ROSWELL	0	2	9	205	517	915	796	609	529	283	52	0	3917	3793
SILVER CITY	0	1	24	182	448	890	790	565	574	383	91	17	3965	3705
NEW YORK														
ALBANY	0	19	153		899	1112	1557	1269	857	412	304	46	7057	6875
BINGHAMTON	26	40	178	505	953	1113	1477	1375	940	493	416	119	7635	7286
BUFFALO	12	26	162	403	853	985	1393	1281	901	469	352	84	6921	7062
J.F. KENNEDY	0	4	72	305	710	871	1214	1066	761	427	245	19	5694	5219
NEW YORK U	0	4	55	264	671	825	1179	1042	668	292	170	15	5185	4871
NEW YORK LA GUARDIA	0	1	56	262	662	812	1181	1034	698	323	176	14	5219	4811
ROCHESTER	25	28	164	401	856	1005	1399	1275	894	463	357	78	6945	6748
SYRACUSE	24	35	154	407	812	995	1438	1266	979	501	345	83	7039	6756
NORTH CAROLINA														
ASHEVILLE	7	2	158	351	660	713	947	939	566	306	150	7	4806	4466
CAPE HATTERAS R	0	0	11	77	399	418	708	758	391	196	70	0	3028	2612
CHARLOTTE	0	0	40	177	509	572	835	756	413	197	64	0	3563	3191
GREENSBORO	0	0	49	218	539	610	904	828	374	170	69	2	3763	3805
RALEIGH	0	0	35	199	539	574	855	824	391	213	87	0	3717	3393
WILMINGTON	0	0	4	88	362	402	701	709	342	106	20	0	2734	2347
NORTH DAKOTA														
BISMARCK	55	43	164	614	1095	1613	1795	1535	990	660	462	139	9165	8851
FARGO	65	49	158	645	1073	1544	1773	1592	952	628	375	79	8933	9226
WILLISTON	44	27	151	605	1056	1607	1741	1425	900	683	397	146	8782	9243
OHIO														
AKRON	17	22	146	368	841	949	1296	1198	763	379	246	19	6244	6037
CINCINNATI OBS	3	3	91	317	743	858	1153	1072	619	277	139	7	5282	4806
CLEVELAND	21	19	137	351	784	934	1295	1224	845	459	328	59	6456	6196
COLUMBUS	7	23	164	406	843	942	1276	1133	667	351	205	6	6023	5660
DAYTON	3	13	115	336	816	934	1241	1139	708	356	218	10	5889	5622
MANSFIELD	21	28	171	391	865	982	1300	1201	778	406	292	25	6460	6403
TOLEDO	27	57	206	437	900	1031	1324	1168	814	458	284	27	6733	6494
YOUNGSTOWN	34	48	214	445	908	1023	1378	1315	865	476	384	91	7181	6417
OKLAHOMA														
OKLAHOMA CITY	0	0	27	155	464	773	872	826	444	215	71	0	3847	3725
TULSA	0	0	37		498	781	892	803	479	184	67	0	3925	3860
OREGON														
ASTORIA	118	68	135	369	500	731	705	500	557	560	387	260	4890	5186
BURNS U	1	5	94	574	800	1221	1173	748	762	724	405	158	6665	6957
EUGENE	5	1	28	322	538	693	722	461	486	487	287	123	4153	4726
MEACHAM	47	22	136	567	889	1187	1186	861	804	805	556	310	7370	7874
MEDFORD	0	0	10	344	578	913	873	500	515	466	218	48	4465	5008
PENDLETON	0	0	24	306	711	866	850	638	505	462	174	46	4582	5127
PORTLAND	3	0	29	306	558	758	789	482	515	500	261	110	4311	4635
SALEM	11	2	47	323	549	706	778	481	541	536	318	167	4459	4754
SEXTON SUMMIT R	73	25	113	479	619	992	963	601	762	712	540	270	6149	6254
PENNSYLVANIA														
ALLENTOWN	0	20	146	431	825	1000	1336	1139	750	386	266	34	6333	5810
ERIE	25	32	164	374	835	955	1280	1277	881	494	377	81	6775	6451
HARRISBURG	0	5	85	369	750	931	1266	1032	654	331	216	12	5651	5251
PHILADELPHIA	0	0	55	271	660	814	1112	995	633	305	170	7	5022	5101
PITTSBURGH	10	13	146	391	840	931	1284	1232	758	406	313	60	6384	5987
PITTSBURGH U	9	10	123	345	782	862	1176	1150	668	325	245	30	5725	5291
READING U	0	5	80	314	698	856	1177	992	595	294	184	6	5201	4945
SCRANTON	5	17	139	427	844	1023	1388	1181	754	357	261	42	6438	6254
WILLIAMSPORT	5	12	109		807	973	1296	1113	739	385	265	50	6160	5934
RHODE ISLAND														
BLOCK ISLAND	2	9	115	294	695	865	1166	1109	846	543	365	103	6112	5804
PROVIDENCE	0	7	103	356	761	937	1246	1166	827	447	281	74	6205	5954
SOUTH CAROLINA														
CHARLESTON	0	0	15	112	334	367	657	667	307	67	4	0	2530	2033
CHARLESTON U	0	0	7	41	233	278	599	572	264	50	2	0	2046	1794
COLUMBIA	0	0	32	164	469	480	732	717	327	106	20	0	3047	2484
GNVLE SPARTANBURG		0	41	181	498	547	799	769	368	169	54	0	3426	3044
SOUTH DAKOTA														
ABERDEEN	35	39	134	575	1008	1500	1690	1421	883	623	423	77	8408	8473
HURON	38	24	118	521	933	1361	1533	1318	812	577	392	56	7683	8223
RAPID CITY	31	19	129	464	902	1311	1285	1083	755	669	432	107	7187	7345
SIOUX FALLS	36	32	141	549	963	1328	1490	1331	776	511	380	53	7590	7839
TENNESSEE														
BRISTOL	12	2	107	271	662	745	979	1004	553	276	137	1	4749	4143
CHATTANOOGA	1	0	45	200	538	587	857	881	465	227	58	0	3859	3254
KNOXVILLE	1	0	63	229	617	626	860	912	467	191	66	0	4032	3494
MEMPHIS	0	0	34	144	460	613	803	795	444	114	21	0	3437	3232
NASHVILLE	0	3	58	216	615	688	952	941	531	205	64	1	4274	3578
OAK RIDGE R	2	0	70	243	616	638	870	930	497	216	70	0	4149	3817
TEXAS														
ABILENE	0	0	17	118	321	654	648	611	366	134	15	0	2884	2624
AMARILLO	0	1	23	185	544	911	820	777	504	290	109	0	4164	3985
AUSTIN	0	0	7	41	192	477	538	510	265	37	1	0	2068	1711
BROWNSVILLE	0	0	1	4	8	174	262	218	126	4	0	0	797	600
CORPUS CHRISTI	0	0	0	17	63	299	373	362	202	9	0	0	1325	914
DALLAS	0	0	13	70	259	543	603	577	315	68	2	0	2450	2363
DEL RIO	0	0	1	36	159	475	466	419	246	28	0	0	1830	1504
EL PASO	0	0	2	106	352	720	691	415	377	128	0	0	2791	2700
FORT WORTH	0	0	13	80	282	548	631	598	330	100	2	0	2584	2405
GALVESTON U	0	0	3	12	78	243	381	404	233	8	0	0	1362	1235
HOUSTON	0	0	3	18	99	312	390	415	229	17	0	0	1483	1396
LUBBOCK	0	4	17	190	463	866	748	762	507	293	73	4	3927	3578
MIDLAND	0	0	9	95	324	708	634	582	360	143	14	0	2869	2591
PORT ARTHUR	0	0	10	33	133	313	435	485	244	18	0	0	1671	1447
SAN ANGELO	0	0	5	76	249	608	577	550	304	127	1	0	2497	2255
SAN ANTONIO	0	0	8	48	164	429	477	478	254	39	0	0	1897	1546
VICTORIA	0	0	4	15	83	332	414	409	208	16	0	0	1481	1173
WACO	0	0	6		196	480	560	519	288	79	0	0	2174	2030
WICHITA FALLS	0	0	14	93	366	674	699	687	357	133	23	0	3046	2832

Data from airport unless otherwise specified.
U indicates Urban, R indicates Rural, sites.

MONTHLY AND SEASONAL HEATING DEGREE DAYS

(Base 65°F)

State and Station	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Total for Season	Normals July-June
UTAH														
MILFORD	0	0	88	390	688	1403	1260	731	720	660	322	65	6327	6497
SALT LAKE CITY	0	0	57	387	653	1228	1246	772	622	583	276	57	5881	6052
WENDOVER	0	0	29	411	702	1159	1245	756	624	532	199	63	5720	5778
VERMONT														
BURLINGTON	11	35	223	495	957	1216	1751	1561	1089	562	407	140	8447	8269
VIRGINIA														
LYNCHBURG	0	0	97	330	688	744	1018	941	468	268	117	1	4672	4166
NORFOLK	0	0	36	211	566	644	928	895	471	294	88	0	4133	3421
RICHMOND	0	0	64	256	623	708	956	887	416	191	86	0	4187	3865
ROANOKE	0	0	105	321	643	728	984	902	423	255	111	3	4475	4150
WALLOPS ISLAND	0	3	77	263	648	786	1049	945	619	379	137	2	4908	
WASHINGTON														
OLYMPIA	51	13	94	379	631	786	820	604	575	534	334	201	5022	5236
QUILLAYUTE	153	83	163	396	570	760	761	580	596	589		301	5364	5745
SEATTLE TACOMA	16	0	44	310	524	718	737	472	503	485	232	139	4180	5145
SPOKANE	8	2	71	508	882	1146	1149	783	702	654	343	138	6386	6655
STAMPEDE PASS R	244	100	260	742	955	1191	1227	904	942	931	653	487	8636	9283
WALLA WALLA U	0	0	19	252	647	827	801	607	447	430	156	40	4226	4805
YAKIMA	4	0	49	401	732	1031	1049	721	583	508	253	79	5410	5941
WEST VIRGINIA														
BECKLEY	37	49	228	400	802	865	1133	1215	634	381	249	58	6051	5390
CHARLESTON	4	6	124	297	704	802	1104	1095	539	263	141	15	5094	4476
ELKINS	33	37	226	443	826	900	1233	1239	711	444	279	67	6438	5675
HUNTINGTON	7	4	111	326	724	805	1095	1085	590	279	160	18	5204	4446
PARKERSBURG U	2	4	119	289	736	816	1164	1093	604	300	163	14	5304	4754
WISCONSIN														
GREEN BAY	40	100	235	563	1017	1313	1506	1395	832	551	378	97	8027	8029
LA CROSSE	21	42	153	491	957	1223	1411	1312	754	411	275	54	7104	7589
MADISON	61	120	239	535	955	1229	1401	1327	792	510	330	76	7575	7863
MILWAUKEE	46	53	164	460	888	1112	1333	1277	758	521	363	74	7049	7635
WYOMING														
CASPER	6	21	149	516	1017	1470	1289	999	868	794	518	166	7813	7410
CHEYENNE	12	45	202	481	891	1308	1117	932	833	777	487	107	7192	7278
LANDER	0	9	157	515	1097	1541	1531	1165	881	780	474	153	8303	7870
SHERIDAN	17	21	183	546	1047	1404	1487	1016	813	740	477	199	7950	7683

Data from airport unless otherwise specified. U indicates Urban, R indicates Rural, sites.

Note: "Heating Degree Days" has been discontinued in the June issues of this publication. Data which would usually be shown in that table for June are shown in the last three columns of the above Table.

HURRICANE ABBY

June 1 - 13, 1968

Since the North Atlantic hurricane season is generally considered to begin on June 1, it was appropriate that hurricane Abby made her initial appearance on that date. Abby's journey took her through Cuba, Florida, Georgia, and the Carolinas before she dissipated east of New Jersey.

Every once in a while we are blessed with a relatively beneficial tropical cyclone; Abby was such a storm. So far there are no deaths directly attributable to the storm, and the estimated $350,000 damage figure was offset by the drought-relieving rains Abby brought to central Florida and Georgia. Damage was minimum. Tides 2 to 3 ft. above normal, along the east coast of Florida and the Georgia coast, caused some minor flooding and beach erosion. Gale force winds over the affected land areas broke tree limbs and knocked down small trees, signs, and power lines. Locally heavy rainfall added to the minor flooding damage. Some destruction was also caused by the three tornadoes spawned by Abby. Two occurred in Florida on the morning of the 4th; one touched down near Pineda Bar in Brevard County, and the other at Haines City in Polk County. The third tornado occurred in North Carolina, on the 7th, touching down once near Monroe and a second time near Charlotte. Damage in the Charlotte area was estimated in excess of $30, 000.

The first leg of Abby's track was strikingly similar to that of Alma's, which began a few days later in 1966. Abby was first detected, as an unorganized cloud mass, just off the northern coast of Honduras early on the 1st. Moving northward, she crossed the western tip of Cuba late on the 2d. On the 3d she turned north-northeastward, and the following day she made landfall near Punta Gorda, Fla., (some 60 mi. south of Tampa). Once inland, Abby moved northeastward across the State and exited near Cape Kennedy early on the 5th. Then the storm turned northward, skimmed along the northern Florida coast, and finally moved inland near the Florida - Georgia border. She continued slowly northward through eastern Georgia and South Carolina reaching North Carolina by the 9th. Abby then recurved across extreme northeastern South Carolina and into the offshore waters before returning to a northeast course. The depression then skimmed across eastern North Carolina and out into the North Atlantic. She finally dissipated on the 13th, some 120 miles off the New Jersey coast.

Abby was a minimal hurricane at best. She reached hurricane intensity for about 12 hours after crossing the Cuban coast on the 3d. For a while it appeared the storm would hit the Florida coast a full hurricane strength. The Keys were whipped by gale force winds for more than 24 hr. Fortunately, Abby weakened rapidly on the morning of the 4th, and by the time she reached the coast, sustained winds near the center were only about 40 m.p.h. Abby did reintensify after moving off Cape Kennedy. Northern Florida and southern Georgia felt the brunt of these gale force winds. Jacksonville recorded the highest sustained wind from a land station -- 52 m.p.h. and the highest gust -- 66 m.p.h., both on the 6th. Winds along the coast ran 35 to 40 m.p.h. with gusts to about 50 m.p.h. Once into Georgia, Abby weakened, and was a depression before she made it through the State.

The central Florida Peninsula was recovering slowly from a severe spring drought. To the citrus growers Abby's rains were a blessing. Rainfall was heaviest in the Titusville - Orlando area where more than 10 inches was recorded. Totals of 4 inches or more covered most of the Peninsula. The heaviest totals in Georgia, around 4 in., were recorded in the southeast portion of the State. Again, this rain was beneficial in restoring ground water that had been depleted by several months of subnormal rainfall. Locally heavy rainfall amounts were observed throughout the Carolinas as thunderstorm activity in Abby's rainshield was widespread. Charlotte recorded more than 5 inches as did several communities in the storm's path.

TROPICAL CYCLONE DATA

Hurricane Abby, June 1 - 13, 1968

Station	Date	Pressure (inches) Low	Time+	Wind (miles per hour) Fastest Mile		Time+	Gusts		Time+	Highest Tide (feet) #	Time+	Rain-fall (inches)	Remarks
FLORIDA													
Key West	3	29.51	2200	SE	43	0548 0917	SE	47	0440	.7	1200	6.97	Two tornadoes occurred in Florida; one at Pineda Bar, Brevard County - 4/0730; the other at Haines City, Polk County - 4/1010. No injuries and minor damage was reported.
Everglades City	4	29.52	0330				SSE	50	0255			4.66	
Fort Myers	4	29.38	0455		23	1325, 1435, 1758		35	0057, 1215			6.15	
Tampa	4	29.49	0655	NNE	23	0927 1026	NE	34	1030			2.50	
Lakeland	4	29.41	1430	NE	30	0316	NE	36	0307, 0309			5.35	
Plantation Key	3	29.68	0600					52	4/0255				
North Key Largo	4	29.74	1330					46	0530				
Flamingo	4	29.56	0310				SSW	53	1025			3.10	
Homestead AFB	4	29.55		S	29	0158	S	45	0158			3.18	
Miami Airport	4	29.56	0400	SW	32	1732	SSW	38				4.67	
National Hurricane Center	4	29.58	0350	SW	46	1200	SW	52				4.82	
Hillsboro Light	4	29.57	1500					41	3/1900				
West Palm Beach	5	29.54	4/1730	WSW	29	0639, 1457	WSW	41	1357, 1759			5.34	
South Melbourne Beach	5	29.38	1700					40	4/0430			6.12	
Patrick AFB	5	29.37		N	28	0351	N	38	0351			9.03	
Cape Kennedy	5	29.41	0300		28	1230	NE	46				8.55	
Merritt Island	5	29.45	0300				NE	64	1442			9.50	
Titusville	5	29.49	0615	NE	46	2157	NE	63	2157			13.87	
Orlando	5	29.47	4/1456	ENE	29	4/1456	NNE	46	0810			10.87	
Daytona Beach	5	29.48	6/0500	NNE	37	1756		62	2305	2.6		6.17	
Jacksonville	6	29.49	1816	N	52	0854	NNE	66	0908	2.2	0600	6.61	
GEORGIA													
Savannah	7	29.63	0200		30	6/2346	E	41	0443	2-3	1700	3.90	
Augusta	7	29.63	1657	NNE	20	0447	NNE	25	0447			3.43	
SOUTH CAROLINA													
Charleston	7	29.77	0445	SE	46	0054, 0211	SSE	40	1034	2.2	6/2200	1.94	
Columbia	7	29.71	1700	NE	19	0058	ENE	23	0744			1.25	
NORTH CAROLINA													
Charlotte	9	29.78	8/0400	NW	20	1947	NW	46	1938			5.11	Tornado just north of Monroe 7/1450 and touched down again outskirts of Charlotte at 7/1515.
Asheville	7	30.05	8/0358	E	16	2323	E	22	2323			2.18	
Greensboro	8	29.86	9/1600	S	19	2246						0.80	

+ Times are Eastern Standard.

Tide above normal.

TROPICAL STORM CANDY

June 22 - 26, 1968

Tropical storm Candy, the season's third tropical cyclone, although lacking time to reach hurricane strength, caused flooding from Texas to Illionis. Texas was hardest hit with an estimated $2,105,000 crop damage and $625,000 property damage. No deaths were reported with the storm. A total of 19 tornadoes were spawned over four states on the 23d and 24th. Ten tornadoes occurred in Texas, five in Arkansas, three in Louisiana, and one in Missouri. The most serious demolished a school in Morning Star, Ark.; damage was estimated at $100,000.

This was just the third time, since 1871, that the third tropical cyclone has developed before July 1 (1959, 1936, 1886). Candy followed a typical early season pattern when she formed in the Bay of Campeche on the 22d. She reached peak intensity the following day when central pressure dropped to 996 mb., winds gusted to 71 m.p.h. at Hoppers Landing, and tides ran 3 to 4 ft. above normal in Corpus Christi and San Antonio Bays. An unofficial rainfall maximum of 12.00 in. was reported at Hoppers Landing on San Antonio Bay.

Candy's brief sea life covered less than 500 mi., before she crossed the Texas coast near Port Aransas during the afternoon of the 23d. Gale force winds lashed the Texas coast from Corpus Christi to Galveston, tides ran 1 to 3 ft. above normal, and high waves temporarily marooned some tourists on Padre Island. Strong winds and high tides beached eight barges and sunk a drilling rig in San Antonio Bay. The 740-ft. fishing pier at Port O'Connor suffered severe damage. Nearing Fort Worth on the 24th, the storm continued to spread heavy rain over an already rain-soaked area. Coastal areas in the storm path received around 10 in. of rain while inland areas recorded from 3 to 8 in. in a 24- to 48-hour period. The resultant flooding damaged roads and bridges, wiped out vegetable and melon crops, and reduced sorghums yields. Flooding occurred on most middle and upper coastal rivers resulting from 8 to 10 days of rain which culminated in Candy's torrential downpours. Flood damage in Texas was minor except along the west and east forks of the San Jacinto River in Harris and Montgomery Counties.

The depression stage of Candy moved through Arkansas, Missouri, Illinois, and Indiana on the 24th and into northern Ohio by the 25th. Rainfall totaling 2 to 6 in. accompanied the storm in these and nearby States. On the 26th Candy turned extratropical as she crossed Lake Erie and moved eastward along the New York-Pennsylvania border.

TROPICAL CYCLONE DATA

Tropical Storm Candy, June 22 - 26, 1968

Station	Date	Pressure (inches)		Wind (miles per hour)				Highest Tide (feet) #	Time+	Rain-fall (inches)
		Low	Time+	Fastest Mile	Time+	Gusts	Time+			
TEXAS										
Austwell	23	29.49	1630	SE 60	1700-1800	SE 71	1700-1800			8.57
Port Lavaca	23	29.62	1630	SSE 45	1600	SSE 53	1630	3.0	1800	9.78
Point Comfort	23	29.65	1900			SE 58	1900			10.98
Brownsville	23	29.62	1155	W 26	1225					
Galveston	24	29.82	23/1800	SW 37		S 55	0442	2.7	0550	2.55
Palacios	23	29.67	1859			E 58	1606	4-5		4.34
Aransas Pass	23	29.45	1645	ENE 41	0645	ENE 41	0645			1.70
Victoria	23	29.52	1759			ESE 56	1747			3.10

\+ Times are Central Standard.

\# Tide above normal.

STORM SUMMARY

STATE	TORNADOES					HAILSTORMS				WINDSTORMS				LIGHTNING				‡ HEAVY SNOWSTORMS AND BLIZZARDS				# ICE STORMS				ø ALL OTHER			
	NUMBER	DAYS	DEATHS	INJURIES	†DAMAGE	DEATHS	INJURIES	†DAMAGE PROPERTY	†DAMAGE CROPS	DEATHS	INJURIES	†DAMAGE PROPERTY	†DAMAGE CROPS	DEATHS	INJURIES	†DAMAGE PROPERTY	†DAMAGE CROPS	DEATHS	INJURIES	†DAMAGE PROPERTY	†DAMAGE CROPS	DEATHS	INJURIES	†DAMAGE PROPERTY	†DAMAGE CROPS	DEATHS	INJURIES	†DAMAGE PROPERTY	†DAMAGE CROPS
Alabama						0	0	3	5	0	0	5	0	1	0	0	0												
Alaska																										0	0	3	0
Arizona *																													
Arkansas	2	2	0	2	4					0	0	5	0	2	0	4	0												
California *																													
Colorado	2	1	0	0	5	0	0	5	5	0	0	4	4	2	2	0	0												
Connecticut										0	0	4	0													0	0	4	4
Delaware						0	0	?	?	0	0	4	0	0	0	3	0												
Florida	7	6	0	1	5	0	0	3	0	0	1	°8	C	1	0	0	0									0	0	5	0
Georgia	3	3	0	0	4	0	0	3	4	0	0	5	0	1	1	4	0									0	0	4	0
Hawaii *																													
Idaho								4	6		S	5																	
Illinois						0	0	°4	C	0	8	°6	C	0	0	4	0									0	0	4	5
Indiana	4	2	0	5	5	0	0	1	4	0	0	3	0	2	3	5	0									0	0	5	5
Iowa	6	4	0	17	6	0	0	6	6	0	3	6	5	0	2	6	0												
Kansas	7	6	0	10	5	0	2	6	6	0	3	6	6	0	0	5	0									0	0	5	5
Kentucky						0	0	?	?	0	0	°6	C	1	5	5	0									0	0	?	?
Louisiana	3	3	0	0	4	0	0	?	?	0	0	4	0	1	0	5	0												
Maine						0	0	1	4					0	0	2	0												
Maryland						0	0	?	?	0	1	5	0	0	0	4	0												
Massachusetts						0	0	0	3	0	0	4	0	0	2	4	0												
Michigan	4	2	1	0	5	0	0	4	5	0	49	6	5	3	10	5	0									4	0	6	0
Minnesota	13	7	10	127	6	0	0	5	5	0	3	6	4	0	1	4	0												
Mississippi	2	2	0	0	?					0	0	?	?																
Missouri	6	2	0	0	4	0	0	4	4	0	4	5	4																
Montana	1	1	0	0	2	0	0	0	5	0	0	5	0	1	0	0	0												
Nebraska	9	7	0	1	4	0	0	6	6	0	0	5	6													0	0	4	5
Nevada *																													
New Hampshire						0	0	0	4	0	0	4	0	0	0	3	0												
New Jersey																												5	
New Mexico	1	1	0	3	5	0	0	°5	C					1	0	0	0												
New York												5	4	1	6	4												6	6
North Carolina	1	1	0	0	5	0	0	4	6	0	0	5	4	0	1	5	0									0	0	5	5
North Dakota	2	2	0	0	0	0	0	?	?	0	0	?	?																
Ohio	4	2	0	5	5	0	0		4	1	1	5		1	0	5										0	0	5	5
Oklahoma	9	6	0	2	5	0	0	6	6	0	5	5	5	0	1	4	0									0	0	5	5
Oregon	1	1	0	0	7																								
Pacific Area *																													
Pennsylvania	1	1		1	5	0	0	3	2	0		5	3	1	4	6	0									0	0	5	0
Puerto Rico *																													
Rhode Island *																													
South Carolina						0	0	0	3	0	0	4	3													0	0	4	3
South Dakota	11	3	0	1	5	0	0	5	7	0	11	7	5																
Tennessee						0	0	?	?	0	1	5	0	0	0	5	0									0	0	4	0
Texas	21	14	0	0	5	0	1	7	5	0	2	4	0	2	3	0	0									0	0	6	6
Utah										0	0	4	3	0	0	3	0												
Vermont						0	0	0	4					0	0	3	0									0	0	3	0
U. S. Virgin Is. *																													
Virginia						0	0	0	3	0	0	5	0																
Washington N																													
West Virginia	1	1	0	0	1									0	0	4	0											3	
Wisconsin	3	1	0	2	5	0	0	5	5	0	6	6	5	3	9	5	0									0	0	6	6
Wyoming	8	6	0	0	5	0	0	°6	C					0	2	0	0												

° Includes crop damage
C Crop damage
S Several
N No report received by printing deadline

* No occurrence of storms or unusual weather phenomena.
‡ Includes heavy sleet storm.
\# Freezing drizzle and freezing rain, commonly known as glaze.
ø For breakdown of "All Others", and for detailed listing of other storms, see the Environmental Data Service, ESSA, monthly publication STORM DATA.

† Storm damages are placed in categories varying from 1 to 9 as follows:
1 Less than $50
2 $50 to $500
3 $500 to $5,000
4 $5,000 to $50,000
5 $50,000 to $500,000
6 $500,000 to $5,000,000
7 $5,000,000 to $50,000,000
8 $50,000,000 to $500,000,000
9 $500,000,000 to $5,000,000,000

GENERAL SUMMARY OF RIVER AND FLOOD CONDITIONS

JUNE 1968

Elmer R. Nelson, Office of Hydrology

Major flooding resulted on the San Jacinto River at Lake Houston, Tex., during the latter part of June due to torrential rains associated with tropical storm Candy. The Navidad River at Ganado, Tex., reached its highest stage since November 1940. The lower Wabash River reached its highest stage during June, since 1950. The total flood loss in the Wabash Basin during May and June was estimated at $12 million and at over $40 million for the entire Ohio Basin.

ST. LAWRENCE DRAINAGE

Lake Michigan.--Heavy rain in south-central Lower Michigan from the 21st through the 26th caused extensive flooding on the Red Cedar and Grand Rivers in Michigan between June 26 and July 3. The crests on the Red Cedar ranged from 2.5 feet above flood stage at Williamston on the 27th to 1.8 feet above flood stage at East Lansing, Mich., on the 28th. Crests on the Grand River were generally less than 1.5 feet above flood stage on the 28th and 29th. The total estimated flood damage was $100,000 which occurred mainly on the Red Cedar River in the East Lansing, Mich., area. Some streets and roads were damaged and adjacent parks were flooded on the Grand River in Lansing, Mich.

Lake Erie and Lake Ontario.--The remnants of tropical storm Candy brought widespread heavy rains to western New York on the 25th and 26th with many reports of up to 3 inches or more. New record rainfalls for the day were set in Buffalo on the 26th and 27th. A total of 3.04 inches fell in about 24 hours with 2.66 inches for 12 hours overnight. Streams rose to bankfull levels in some areas. Many basements were flooded by water backing up in storm drains and sewers. Traffic was slowed or stalled by flooded underpasses and other low areas.

The St. Joseph River at Montpelier, Ohio, which rose above flood stage on May 28 receded within its banks on June 1. Minor flooding occurred again towards the end of the month on the St. Joseph at Montpelier. The crest on the 29th was 0.8 foot above flood stage.

ATLANTIC SLOPE DRAINAGE

Cumulative moderate to heavy rains from the 25th to the 29th with some totals of 6 inches or more produced high stream levels in the Mohawk Basin from Utica, N. Y., downstream. The Canada Creeks experienced high flows. Flooding was minor and confined to lowland areas.

Streams in northern New Jersey continued very high in the beginning of June. They were all below flood stage, except the Wanaque and Pompton Rivers which receded below flood stage on June 1 and the Passaic which continued above flood stage at Chatham, N. J., until June 3 and at Little Falls, N. J., until June 6. The recessions were very slow due to the poor drainage from the Great Swamp area. Heavy rains on June 2 complicated the recession as the soil was already waterlogged. The slow recession prevented the return of a few evacuees to their homes and delayed the cleanup operations. Heavy rain on June 12-13 produced additional flooding on the Millstone and Raritan Rivers and on the Assunpink and Rancocas Creeks between the 12th and 15th. The Neshaminy, Perkiomen, and Brandywine Creeks in southeastern Pennsylvania which had rainfall up to 3 inches also overflowed their banks. The heaviest rainfall reported in New Jersey for the June 12-13 storm was 5.02 inches at Lakehurst, 4.99 at Long Branch, 4.90 at Fortesque, 4.50 at Moorestown, and 4.43 at Trenton. A newspaper report said 5.50 inches occurred in the Coatesville, Pa., area. Stages on the Assunpink, Rancocas, Brandywine, and Perkiomen Creeks were higher in June than during the May floods. Damages, however, were insignificant. The flash and local drainage flooding was general and occurred in areas that experience these floods frequently. The Millstone and Raritan River floods were a few feet below the May floods.

New low water records were established on the Cape Fear River at Fort Bragg, N. C., (0.7 foot) and on the Roanoke River at Randolph, Va., (3.9 feet) for the month of June. On the Haw River at Haw River, N. C., the low water stage of 1.7 feet tied the previous low water record.

The Rocky River at Norwood, N. C., exceeded flood stage by about 2 feet on the 9-10th. The Saluda River at Chappels, S. C., exceeded flood stage by 1.7 feet on the 10th and remained in flood from the 9th to the 11th. The Broad River at Blair, S. C., was out of its banks from the 9th to the 12th and exceeded flood stage by 2.8 feet on the 10th. There was considerable flooding in the lowlands of the Congaree River below Columbia, S. C. At Columbia, S. C., the crest was about 16.6 feet, or 2.4 feet below flood stage on the 10th. The lower Santee River approached bankfull stage on the 14-17th due to spillage from Santee Cooper Dam at Lake Marion. The North Fork of the Edisto River at Orangeburg, S. C., was in light flood on the 11-14th. The main stem of the Edisto at Givhans Ferry, S. C., crested at flood stage on the 20th-21st. The rainfall producing the overflow was caused by tropical storm Abby. This storm followed a very erratic course from Florida, across Georgia into South Carolina, where it remained 2 days before moving on. From June 7 to 10, Abby deposited 3.5 inches of rain over the Rocky Basin and 4.5 to over 6 inches in the central and upper reaches of the Saluda, Broad, and Edisto River Basins. The Rainfall over the Edisto Basin ranged from 6 to 8 inches. Most of the damage from the flooding occurred in the lowlands below Columbia, where considerable farming activities occur.

Minor flooding occurred on the lower Savannah River at Clyo, Ga., on the 17th-22d. Damage, if any, was light.

MISSISSIPPI SYSTEM

Upper Mississippi Basin.--Heavy precipitation on the 21st-24th and 25-27th resulted in minor flooding of some streams in Wisconsin. The heaviest rainfall occurred over the Chippewa, Black Kickapoo, and Wisconsin Rivers which exceeded flood stage. Antecedent conditions were favorable for above average runoff as these two storm periods were preceded by a rainy period on the 9-14th. The Chippewa River at Durand, Wis., had three distinct rises with crests of 9.1 feet, 11.4 and 11.0 feet, respectively. Flood stage at Durand is 11 feet. Because of the runoff from the Wisconsin streams, the Mississippi River from Red Wing, Minn., downstream through Guttenberg, Iowa, ran generally two-thirds to three-quarters full. The crest at Guttenberg on July 4 was 13.4 feet or 1.6 feet below flood stage.

The Skunk River at Ames, Iowa, exceeded flood stage by 2 feet on the 25th. This flooding was due to heavy rains on the 24th.

Heavy rains on the 24th produced rapid rises to above flood stage on several streams in Illinois. The Ver-

million River at Lowell, Ill., was out of its banks on the 26-28th and crested on the 27th, 1.3 feet above flood stage. Minor flooding occurred on the Mackinaw River at Green Valley, Ill. The Illinois River exceeded flood stage at Morris and La Salle, Ill., on the 26th and at Havana, Ill., on the 30th. Flooding continued into July at all points except at Morris where it receded within its banks on June 29. The crests at Morris and La Salle on June 27 averaged about 5 feet above flood stage.

The flooding on the Sangamon and Kaskaskia Rivers in Illinois during the latter part of May and the first part of June was due to heavy rainfall on May 15 and May 22-25. The crests on the Sangamon River on May 27-29 ranged from 9 feet above flood stage at Riverton, Ill., to 1 foot above flood stage at Oakford, Ill., on May 29. The crests on the upper Kaskaskia ranged from 6 to 7 feet above flood stage on May 27-29. The Sangamon River receded within its banks at all points by June 2. The Kaskaskia River receded within its banks at Vandalia, Ill., on June 5.

Missouri Basin.--Minor flooding occurred on the Gallatin River at Gallatin Gateway, Mont., and at Logan, Mont., during June. Crests occurred at Gallatin Gateway on the 4th, 13th, and 20th and at Logan on the 13th and 21st. Crests ranged from 0.3 to 0.7 foot above flood stage. There was minor flooding on some creeks on the Judith River tributaries in the Lewistown, Mont., area. No damage was reported from the flooding.

Minor overflow occurred on the upper Tongue River in northeast Wyoming, on the Big Horn River in southeast Montana, and on the upper Yellowstone River from near Livingston to Big Tiber, Mont., during June. Flood stage was reached on the Boulder River at Big Timber, Mont. Damage, if any, was minor.

Locally heavy thunderstorms in south-central Nebraska, in the Central City and Grand Island areas on the evening of the 23d and the morning of the 24th caused flooding along Wood River and Prairie Creek. Rainfall amounts varied from 1.75 inches at Riverdale, Nebr., in Buffalo County to 7.5 inches near Doniphan, Nebr., in Hall County. Unofficial amounts of 9 inches was reported in Hamilton County south of Aurora and 8.75 inches near Stromsburg in Polk County. The crests reported in this storm were below those recorded last year with similar amounts of heavy rain due to the drought conditions that existed before this storm. Precipitation for the period October through May, was 2.70 inches below normal. Howard and Sherman Counties were included in the list of 8 counties declared at the Governor's request, as drought disaster areas. Communities and farmsteads in the counties of Howard, Merrick, Sherman, Hamilton, Polk, York, Hall, Buffalo, Kearney, Adams, and Clay were principally affected. Poor surface drainage in the flatland resulted in lowland farms being inundated. In some towns, many basements of private homes had water damage. Numerous county roads were subjected to overflows from field runoff.

The Little White River at White River, S. Dak., overflowed its banks on the 6th and continued in flood until the 9th. It crested on the 7th, 4.2 feet above flood stage. The Bad and White Rivers rose to bankfull stage but did not overflow. This rise was due to heavy rainfall from thunderstorms from the 5th through the 7th. Cooperative observers at and near the flood area reported 5 to 7 inches of rain with unofficial reports of 11 to 12 inches in a 3- to 5-day period. Most of the damage occurred at or near the town of White River, S. Dak. Several road grades and small bridges as well as the approaches to the concrete bridge where state route 40 crosses the Little White River were washed out. The USGS river gage equipment at White River was washed away. Water rose into a few farm houses.

Moderate tributary flooding occurred in the Big Blue River basin on the Black Vermillion River at Frankfort, Kans., and on the Little Blue River at Deweese, Nebr. Beaver Creek, south of Aurora, Nebr., overflowed considerably on the 24th. Flash flooding developed in the Saline River basin on Paradise Creek at Natoma, Kans., on the evening of the 9th and in the Republic River Basin on the South Fork of Beaver Creek, 5 miles northwest of Goodland, Kans., on the morning of the 16th. Overflow on the Black Vermillion River at Frankfort, Kans., resulted from general 3 inches of rainfall over the drainage area. Amounts ranged up to 4 inches locally on the headwaters of the Little Blue River above Deweese, Nebr. Flash flooding on Paradise Creek at Natoma, Kans., was preceded by an estimated 7 to 10 inches of rainfall in the area 4 to 6 miles upstream. Rainfall of 2.45 inches was reported at Goodland, Kans., preceding the flash rise on the South Fork of Beaver Creek. Heavy local rains on the headwater tributaries of the Big Blue River varied from 2 to 4 inches on the 24th and 1 to 2 inches on the 25th. Overflow was largely confined to Beaver Creek in the area south of Aurora, Nebr. Reported rainfall of 9 inches, 12 miles south of Aurora, was found to be limited to a homstead by a field survey. The survey disclosed 2.5 to 3.5 inches of rainfall. Rainfall of 2 to 4 inches, mostly above Waconda Reservoir, produced substantial rises on the lower Solomon River on the 10-12th. Damages were relatively minor from the flash flooding with more moderate losses indicated in the Big Blue River basin.

Moderate to heavy rain on May 30 to June 1 caused flooding on the Blackwater River and Little Blue River in Missouri. Several periods of scattered showers and thunderstorms between the 10th and 15th produced additional overflow on the Little Blue River near Lake City, Mo., on the 15th.

Ohio River.--The Scioto River at Piketon, Ohio, continued in flood from May 24 to June 2. There were two crests during May. The first occurred on May 25 and was 13.6 feet above flood stage. The second crest occurred on May 28 and was 11.5 feet above flood stage. This flood was due to high intensity rainfall, measuring 5 to 6 inches during the 24 hours ending the morning of May 24. Flash floods developed on all tributaries of the lower Scioto River during the night of May 23 and the morning of May 24. Damage was extensive during May to agriculture, commerce, and to communities involved. There was no additional flood damage during June.

Locally heavy rain on the morning of June 12 at Williamson, W. Va., caused flooding of streets in the low section of the city. This flooding was due to back up of sewers which were unable to carry off the water.

The Green River rose above flood stage at Calhoun, Ky., on May 30 and continued in flood to June 8. It crested on June 3, 3.8 feet above flood stage. The total damages in the Green Basin during May and June were estimated at nearly $1 million.

The flooding in the lower Wabash Basin during June was due to heavy rains during the last 8 to 10 days of May. These rains caused major flooding during May on the East Fork and the lower half of the White and

Wabash Rivers in Indiana. As the month began, the streams were receding except in the extreme lower portion of the White and Wabash Rivers. The White River crested at Hazleton, Ind., on June 1, 10.9 feet above flood stage. At Mt. Carmel, Ill., the Wabash River rose to a crest of 26.58 feet, 9.6 feet above flood stage on the same date. This was the highest stage reached at this point since 1950. An earthen levee was hastily constructed at Mt. Carmel on the basis of Weather Bureau crest forecasts and saved a considerable area from inundation. Much bottom land was inundated. Crops which had been planted were ruined and the flooding so late in the season made it highly uncertain whether the waters would recede rapidly enough to permit later planting. The Wabash River rose above flood stage again towards the end of the month in the reach from Lafayette, Ind., to Montezuma, Ind. The crests ranged from 2 feet above flood stage at Lafayette on the 27th to 0.3 foot above flood stage at Covington, Ind. The river was back within its banks at all points by the 30th. The total flood loss in the Wabash Basin during May and June was estimated at $12 million.

The Tennessee River at Gilbertsville, Ky., was out of its banks from May 29 to June 12. The crest on June 7 was nearly 5 feet above flood stage. This highwater was due to backwater from the Ohio River.

The Ohio River was above flood stage in the beginning of the month in the reach from Cincinnati, Ohio, to Cairo, Ill. It had crested as far downstream as Leavenworth, Ind., by May 31. The crest moved downstream to Cairo, Ill., by June 7. Crests ranged up to more than 15 feet above flood stage at Fords Ferry, Ky., on June 6. This was the first known occasion of a flood stage in June at Cincinnati. The previous latest seasonal occurrence of flooding at Cincinnati was on May 18, 1933. It receded within its banks at all points by June 13. Roads and streets were seriously damaged in many places. Preliminary estimates of flood damage along the main stem of the Ohio River during May and June was placed at over $9 million and at over $40 million for the entire basin by the Corps of Engineers.

White Basin.--The Cache River at Patterson, Ark., continued in flood from March 13 to June 12. The crests ranged from 1.6 feet to 2.8 feet above flood stage. Heavy rains on June 25-26 caused the Cache to rise above flood stage again on June 30. It continued in flood until July 4. The crest on July 1-2 was 0.7 foot above flood stage.

The lower White River continued in flood at Clarendon, Ark., from March 26 to June 6, a period of 73 calendar days. The last crest on May 20 was 4 feet above flood stage. At St. Charles, Ark., there were two periods of flooding. The first occurred on April 1 to May 7 and the second on May 14 to June 8. The second crest on May 21-22 was 2.3 feet above flood stage.

Arkansas Basin.--The Neosho River at Commerce, Okla., crested at flood stage on June 2. Brief flooding of small streams and low areas occurred in southeast Tulsa, Okla., on June 1. An intense thundershower on the 16th produced brief flash flooding on a tributary to Red Rock Creek west of Billings, Okla. A rise to above flood stage occurred in less than 1 hour after the beginning of extremely heavy rainfall over Mingo Creek in east Tulsa on the 25th. Moderate flooding resulted. During the last 2 years several houses had been built in the most vulnerable area of the flood plain. Joe Creek, in southeast Tulsa, also rose slightly out of its banks. No serious flooding has occurred along Joe Creek since 1964. Extensive flood damages were confined to Mingo Creek flood area, where some 22 homes or buildings were affected. Eleven of these homes were within a relatively low area extending for about four blocks along the creek. The total flood damages in Tulsa and vicinity were estimated at nearly $50 thousand.

Minor flooding occurred on the North Canadian River at Woodward, Okla., on the 2d and 3d. Heavy rains in the Oklahoma Pnahandle on the 8-9th resulted in additional flooding at Woodward on the 11th and 12th. There was some flooding near Fort Supply on the 11th and near Seiling on the 12-13th. Heavy thunderstorms over the upper portions of the North Canadian Basin on the 15-16th resulted in near bankfull conditions or minor flooding on the North Canadian near Fort Supply, Woodward, and Seiling on the 17-18th.

Red Basin.--Heavy thunderstorms on May 31 over the Washita River Basin caused near bankfull conditions near Mountain View, Okla., on June 1. The Washita reached three-quarters bankfull at Carnegie, Okla., on the 2-3d, and at Pauls Valley, Okla., on the 2d. Minor flooding occurred on Beaver Creek near Waurika, Okla., on the 2d.

The Clear Boggy River at Caney, Okla., continued in flood from May 13 to June 3. It crested on May 17, 4.8 feet above flood stage. The total damages were estimated at $144 thousand.

There were three rises on the Sulphur River at Hagansport, Tex. The first rise occurred on the 8th and was 0.8 foot above flood stage. The second rise, on the 12-13th, resulted in a crest of 7.6 feet above flood stage. The final rise, on the 24-30th, was 7.4 feet above flood stage. At Naples, Tex., the Sulphur was out of its banks from June 29 to July 6. There were no reports of any damage.

The major flooding which began on Ouachita River below Remmel Dam during May continued at Camden, Ark., from May 12 to June 2 and at Monroe, La., from May 28 to June 23. The crest of 43.08 feet at Camden on May 17 was the highest stage reached at that point since May 5, 1958. Persons living north of the river in lower areas were evacuated. The biggest loss from the flooding was to spring crops and livestock. Several bridges were washed out. Estimates of damage from flooding during May and June are not complete but will total in the millions of dollars.

Minor flooding occurred on the lower Red River at Grand Ecore, La., on May 22 to June 2 and at Alexandria, La., from May 23 to June 3. No damages were reported.

Lower Mississippi Basin.--Minor flooding occurred on the lower Mississippi River at Caruthersville, Mo., on the 4-10th. The crest on the 8-9th was 0.4 foot above flood stage. It is likely that unprotected lowland crops were flooded once flood stage was reached.

WEST GULF OF MEXICO DRAINAGE

The Sabine River was in flood in the beginning of June in the reach from Edgewood, Tex., to Logansport, La., except at Tatum, Tex. It rose out of its banks at Deweyville, Tex., on June 4 and continued in minor flood until June 18. It receded within its banks in the reach from Edgewood, Tex., to Logansport, La., between June 2 and June 16. It rose above flood stage at Deweyville on the 25-28th.

Chambers Creek near Corsicana, Tex., rose about 3 feet over its banks on the 25-26th. Richland Creek during the same period exceeded bankfull stage near Richland, Tex., by about 2 feet. This rise was due to 2 to 4 inches of rain on the 24th.

In the beginning of June, flooding was in progress on the Neches River near Alto, Tex.; on the Trinity River from Liberty, Tex., to below the mouth, and on the San Jacinto at Lake Houston due to rainfall during May. Excessive rains continued to June 6 over the middle and lower Brazos, the Navasota, the San Jacinto, and the Neches. These rains produced an additional rise on the San Jacinto at Lake Houston before it receded below the top of the spillway. Recession was retarded on the Neches River near Alto, Tex., and on the Trinity at Liberty, Tex., and below. Only moderate rises occurred on the middle and lower Brazos. Excessive rains began on June 16 and continued until June 23 over the middle Brazos, the San Jacinto, Neches, and Trinity Basins. Tropical storm Candy which developed over the western Gulf of Mexico near Brownsville, Tex., moved northward towards Corpus Christi, Tex., on the 23d. It passed inland near Victoria, Tex., and weakened as it passed over land between Waco and Fort Worth on the morning of the 24th. Torrential rains fell over eastern and central Texas with the passage of Candy northward. Rains continued until the 26th. Major flooding resulted on the San Jacinto at Lake Houston, Tex., which continued in flood into July. It crested on June 26, 3 feet over the top of the spillway. The crest of 47.5 feet was the second highest stage on record, and was 0.37 foot lower than the highest stage of record (47.87 feet) which resulted from Hurricane Carla on September 12, 1961. Minor flooding occurred on the Little and Neches Rivers. Extended flooding occurred on the lower Trinity River at Liberty, Tex., and below where flooding continued until July 11 at Moss Bluff, Tex. Minor flooding occurred on the Brazos River on the 26th to the 29th and on the Navasota River near Easterly, Tex., from the 25th to the 30th. Considerable damage occurred to crops, agricultural property, and loss of business to some areas.

The lower Colorado River of Texas exceeded flood stage at Columbus, Tex., by 0.4 foot on the 24th. It was out of its banks at Wharton, Tex., on the 25th and 26th and crested 2.1 feet above flood stage on the 26th.

Heavy rainfall on the 19th through the 24th over the Guadalupe, Lavaca, and Navidad Rivers produced flooding on these rivers. The heaviest rainfall on the 23d-24th was associated with tropical storm Candy. Rainfall amounts of more than 8 inches was reported locally. The Navidad River at Ganado, Tex., crested 12.2 feet above flood stage on the 26th. This is the highest stage reported at this point since November 1940 when a stage of 36.5 feet was reported. The Lavaca and Guadalupe Rivers crested 4 to 5.6 feet above flood stage. Damage was generally limited to grazing land along the rivers.

The Nueces River near Tilden, Tex., continued in flood from May 26 to June 1. The crest on May 28 was 3.8 feet above flood stage. Minor flooding occurred below Wesley Seale Dam, Tex., during the first few days of the month. Flash flooding occurred along Gulf drainage streams on the morning of the 3d due to 2- to 6-inch rains within about 50 miles of the Texas middle coast. There was considerable street and road flooding. Heavy rains of over 10 inches at Austwell, Tex., during tropical storm Candy contributed to severe flooding of the Aransas Wildlife Refuge. Extensive damage resulted to roads. Considerable young wildlife was destroyed.

GREAT BASIN

Heavy rainfall in the northern Wasatch and Uinta Mountains of Utah beginning during the night of the 5th and continuing into the 6th caused some flooding in the Sheep Creek area, some 32 miles northwest of Flaming Gorge Dam, Utah. Just north of this area, Smiths Fork of the Blacks Fork overflowed in the small community of Robertson, Wyo. The heaviest showers apparently fell in the Uinta Mountains. One report indicated 1.5 inches in 12 hours. A bridge on Utah highway 44 and a section of the highway was washed out. Additional flooding (mostly farmlands) did occur in the three-state area in Mountain View, Wyo., north of Vernal, Utah and in northwest Colorado.

PACIFIC SLOPE DRAINAGE

Minor flooding occurred on Henrys Fork at Rexburg, Idaho, on the 9-17th. The crest stage was 9.7 feet (flood stage 9 feet) on the 15th. Overflow was limited to marsh grass areas. Minor flooding was reported on June 7 on a tributary of Henrys Fork upstream on the main Teton River. About 200 acres of pasture and lowland between Teton and St. Anthony, Idaho, were inundated. Flood damage was minor.

The Snohomish, Skagit, and Nooksack Rivers in Washington exceeded flood stage on June 2-3. There was some local flooding of roads in the upper reaches of rivers in Mt. Rainier National Park. The high water was due to heavy rain and snowmelt. It rained almost continuously for about 42 hours. Several stations reported storm totals over 4 inches. Flood damage was minor.

The intense storms that moved across the Pacific Northwest on the 1st and 2d moved eastward across the Cascades, causing sharp rises in the middle Columbia River tributaries. Significant rises resulted in the Kootenay, Flathead, Clearwater, and upper Columbia tributaries. Slight rises occurred in a few eastern Oregon tributaries and Snake River tributaries above Clarkston, Wash. The lower Columbia River at Vancouver, Wash., rose from a stage of 9.5 feet on June 1 to a crest of 14.25 feet on June 13 (flood stage 16 feet).

FLOOD STAGE DATA

(All dates in June unless otherwise specified)

JUNE 1968

River and station	Flood stage	Above flood stages -dates From–	Above flood stages -dates To–	Crest * Stage	Crest * Date
ST. LAWRENCE DRAINAGE	*Ft*			*Ft.*	
Lake Michigan					
Red Cedar: Williamston, Mich.	7	26	July 3	9.5	27
East Lansing, Mich.	7	26	July 2	8.8	28
Grand: Lansing, Mich.	11	27	July 1	12.45	29
Eaton Rapids, Mich.	6	27	July 1	6.8	28
Lake Erie					
St. Joseph: Montpelier, Ohio	10	May 28 28	1 30	13.0 10.8	May 30 29
ATLANTIC SLOPE DRAINAGE					
Wanaque: Wanaque Raymond Dam, N.J.	5	May 29	1	8.35	May 30
Pompton: Pompton Plains, N. J.	12	29	1	18.6	30
Passaic: Chatham, N. J.	6	29	3	8.2	29
Little Falls, N. J.	6	29	6	10.7	31
Millstone: Blackwells Mills, N. J.	7	13	14	8.9	13
Raritan: Manville, N. J.	12	13	13	13.6	13
Bound Brook, N. J.	8	12	13	9.5	13
Assunpink Creek: Trenton, N. J.	5	12	13	7.3 7.25	12 12
Rancocas Creek: Pemberton, N. J.	2.7	13	15	3.4	14
Neshaminy Creek: Langhorne, Pa.	9	12	12	U	12
Perkiomen Creek: Graterford, Pa.	11	12	15	11.5	12
Brandywine Creek: Chadds Ford, Pa.	9	12	13	10.0	13
Rocky: Norwood, N. C.	15	9	10	E17.0	9-10
Saluda: Chappells, S. C.	14	9	11	15.7	10
Broad: Blair, S. C.	14	9	12	16.8	10
North Fork Edisto: Orangeburg, S.C.	8	11	14	#8.65	12
Edisto: Givhans Ferry, S. C.	10	20	21	10.0	20-21
Savannah: Clyo, Ga.	11	17	22	#11.8	20
MISSISSIPPI SYSTEM					
Upper Mississippi Basin					
Chippewa: Durand, Wis.	11	24 30	25 30	11.4 11.0	24 30
Black: Galesville, Wis.	12	29	30	12.5	29
Kickapoo: Soldiers Grove, Wis.	723	23 27	24 29	723.5 723.3	23 28
Gays Mills, Wis.	698	29	29	698.0	29
Steuben, Wis.	8	24	July 2	9.3 9.2	26 30
Wisconsin: Portage, Wis.	17	28	30	17.7	29
Skunk: Ames, Iowa	10	25	25	12.05	25
Vermillion: Lowell, Ill.	10	26	28	11.3	27
Mackinaw: Green Valley, Ill.	11	27	29	11.3	27
Sangamon: Riverton, Ill.	13	May 20	2	21.9	May 27
Petersburg, Ill.	497	May 27	2	500.0	May 28
Oakford, Ill.	471	May 28	1	472.0	May 29
Illinois: Morris, Ill.	12	26	29	17.05	27
La Salle, Ill.	20	26	July 1	24.7	27
Havana, Ill.	14	30	July 11	15.2	July 4
Beardstown, Ill.	14	May 30 July 3	5 July 9	14.9 14.3	2 July 5
Kaskaskia: Shelbyville, Ill.	13	May 21	2	19.7	May 27
Vandalia, Ill.	18	May 25	5	23.8	May 29
Missouri Basin					
Gallatin: Gallatin Gateway, Mont.	32	4 13 19	5 13 21	32.4 32.3 32.6	4 13 20
Logan, Mont.	7	4 19	15 25	7.8 7.7	13 21
Wood: Gibbon, Nebr.				16.4 15.9 16.0	24 25 26
Alda, Nebr.				11.2	26-27
Grand Island, Nebr.				5.3	26

River and station	Flood stage	Above flood stages -dates From–	Above flood stages -dates To–	Crest * Stage	Crest * Date
MISSISSIPPI SYSTEM	*Ft.*			*Ft.*	
Prairie Creek: Cairo (4E), Nebr.				9.7	25
Little White: White River, S.Dak.	7	6	9	11.2	7
South Fork Solomon: Osborne, Kans.	14	9	9	14.8	9
Paradise Creek: Paradise, Kans.	14	9	9	16.7	9
Little Blue: De Weese, Nebr.	8	26	26	10.6	26
Black Vermillion: Frankfort, Kans.	19	11	11	24.2	11
Little Blue: Lake City(nr), Mo.	18	May 31 15	1 15	20.5 #19.45	1 15
Blackwater: Valley City, Mo.	20	1	2	#26.7	1
Blue Lick, Mo.	25	3	5	#26.1	4
Osage: Schell City, Mo.	25	May 25	4	31.4	May 30
Ohio Basin					
Scioto: Piketon, Ohio	16	May 24	2	29.6 27.5	May 25 May 28
Green: Lock 4, Woodbury, Ky.	33	May 27	May 31	35.5	May 28
Lock 2, Calhoun, Ky.	23	May 30	8	26.8	3
Embarrass: Ste. Marie, Ill.	18	May 25	1	20.6	May 26
Lawrenceville, Ill.	15T	May 25	5	18.5	May 31
East Fork: Bedford, Ind.	20	May 27	3	30.6	May 26
Williams, Ind.	10	May 27	2	18.2	May 28
Shoals, Ind.	25	May 28	2	29.5	May 30
White: Elliston, Ind.	18	May 24	1	28.6	May 27
Edwardsport, Ind.	15	May 25	4	24.8	May 28
Petersburg, Ind.	16	May 26	8	24.9	May 31
Hazleton, Ind.	16	May 27	10	26.85	1
Little Wabash: Wilcox, Ill.	16	May 25	1	20.1	May 30
Wabash: Lafayette, Ind.	11	27	29	13.0	27
Covington, Ind.	16	28	28	16.3	28
Montezuma, Ind.	14	28	30	14.65	28
Vincennes, Ind.	16	May 25	4	20.4	May 29
Mt. Carmel, Ill.	17	May 27	8	26.6	1
New Harmony, Ind.	15	May 28	9	#19.4	3
Tennessee: Gilbertsville, Ky.	320	May 29	12	324.8	7
Ohio: Cincinnati, Ohio	52	May 27	1	56.[illegible]	May 30
Fernbank, Ohio	52	May 27	1	E56.7	May 30
Warsaw-Markland Dam, Ohio	51	May 28	1	52.8	May 30
Madison, Ind.	46	May 27	2	48.3	May 31
McAlpine Dam(U.G.), Louisville, Ky.	23	May 27	3	28.0	May 31
McAlpine Dam(L.G.), Louisville, Ky.	55	May 28	3	#59.8	May 31
Dam 43, Evans Landing, Ind.	57	May 28	3	#61.3	May 31
Dam 44, Leavenworth, Ind.	53	May 26	4	#61.1	May 31
Dam 45, Addison, Ky.	47	May 27	5	#53.7	1
Tell City, Ind.	38	May 27	6	45.0	1
Dam 46, Owensboro, Ky.	41	May 29	5	43.7	2
Dam 47, Newburgh, Ind.	38	May 27	8	45.5	2
Evansville, Ind.	42	May 31	5	43.0	3
Dam 48, Cypress, Ind.	38	May 28	9	45.4	4
Mt. Vernon, Ind.	35	May 28	10	43.5	4
Dam 49, Uniontown, Ky.	37	May 29	10	46.2	5
Shawneetown, Ill.	33	May 28	11	46.5	5
Dam 50, Fords Ferry, Ky.	34	May 28	12	49.3	6
Dam 51, Golconda, Ill.	40	1	11	44.6	6
Dam 52, Brookport, Ill.	37	May 31	12	40.3	7
Dam 53, Grand Chain, Ill.	42	May 30	12	45.6	6,7,8
Cairo, Ill.	40	May 29	13	43.9	7
White Basin					
Cache: Patterson, Ark.	7	Mar. 13	June 12	#9.3 9.0 8.6 9.8	Mar. 29 Apr.10,11,12 Apr. 24 May 17

FLOOD STAGE DATA

(All dates in June unless otherwise specified)

River and station	Flood stage	Above flood stages -dates From–	To–	Crest * Stage	Date
MISSISSIPPI SYSTEM	Ft.			Ft	
Cache: Patterson, Ark.		30	July 4	7.7	July 1-2
White: Clarendon, Ark.	26	Mar. 26	6	28.3 30.0	Apr. 3,4 May 20
St. Charles, Ark.	25	Apr. 1 May 14	May 7 8	26.3 27.3	Apr.8-10 May 21-22
Arkansas Basin					
Neosho: Commerce, Okla.	15	2	2	15.0	2
North Canadian: Woodward, Okla.	10	2 11	3 12	10.1 11.4	3 11
Seiling, Okla.	11	18	19	11.1	19
Red Basin					
Washita: Durwood, Okla.	27	2	2	27.8	2
Clear Boggy: Caney, Okla.	19	May 13	3	23.8	17
Sulphur: Hagansport, Tex.	38	8 12 24	8 13 30	38.8 45.6 45.4	8 12 25
Naples, Tex.	22	29	July 6	26.7	July 1
Ouachita: Camden, Ark.	26	May 12	2	43.1	May 17
Monroe, La.	40	May 28	23	44.3	5
Red: Grand Ecore, La.	33	May 22	2	33.55	May 31
Alexandria, La.	32	May 23	3	32.5	May 26
Lower Mississippi Basin					
Mississippi: Caruthersville, Mo.	32	4	10	32.4	8-9
WEST GULF OF MEXICO DRAINAGE					
Sabine: Edgewood, Tex.	12	May 8	2	14.7	May 18
Mineola, Tex.	14	May 4	6	18.0	May 12
Gladewater, Tex.	26	May 10	6	35.3	May 16
Carthage, Tex.	25	May 20	U	U	U
Logansport, La.	25	May 10	16	30.5	May 28
Deweyville, Tex.	14	4 25	18 28	14.4 14.2	11 27
Neches: Alto(nr), Tex.	16	May 14 25	4 29	21.8 17.0	May 17 27

River and station	Flood stage	Above flood stages -dates From–	To–	Crest * Stage	Date
WEST GULF OF MEXICO DRAINAGE	Ft.			Ft	
Neches: Beaumont, Tex.	5	27	July 4	6.8	30
Trinity: Liberty, Tex.	24	May 12 23	June 9 July 5	28.15 #28.5	May 27-28 29
Moss Bluff, Tex.	4	Mar. 14	July 11	7.15 8.3 7.9 8.1	Mar.27-28 Apr.15-16 May 27-29 30
San Jacinto: Lake Houston, Tex.	44.5	Apr. 9	1/	45.45 47.0 47.5	Apr. 13 May 13 26
Little: Cameron, Tex.	30	24	24	#30.5	24
Navasota: Easterly(nr), Tex.	14	25	30	17.1	26
Brazos: Wm. Harris Res., Tex.	39	27	27	39.2	27
East Columbia, Tex.	30	26	29	31.9	27
Colorado: Columbus, Tex.	24	24	24	24.4	24
Wharton, Tex.	26	25	26	28.1	26
Navidad: Ganado, Tex.	21	22	29	33.2	26
Lavaca: Edna, Tex.	21	24	27	25.0	25
Guadalupe: Victoria, Tex.	21	24	30	26.6	24
Nueces: Tilden (11S), Tex.	14	May 26	1	17.8	May 28
Calallen, Tex.	7	1	4	7.9	3
PACIFIC SLOPE DRAINAGE					
Henrys Fork: Rexburg, Idaho	9	9	17	9.7	15
Snohomish: Snohomish, Wash.	25	2	3	E27.3	2
Skagit: Concrete, Wash.	29	2	2	E29.5	2
Mt. Vernon, Wash.	21	2	3	E21.5	3
Nooksack: Deming, Wash.	12	2	2	E12.8	2

* Provisional
\# Highest stage observed
E Estimated
U Unknown
__ Exceeded previous maximum stage of record
1/ Continued at end of month
T Tentative

RAWINSONDE DATA

Average monthly values

JUNE 1968

ALBANY, N. Y. 1005 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	86	15.6	13.4	22	1.1
1000	30	124	15.3	12.5	23	1.5
950	30	559	14.3	10.0	27	3.0
900	30	1,015	12.7	7.1	29	4.7
850	30	1,494	10.8	5.1	28	6.3
800	30	1,998	8.5	1.8	28	7.9
750	30	2,530	5.9	-2.7	28	9.8
700	30	3,094	3.6	-6.4	28	10.9
650	30	3,691	.5	-10.6	27	12.1
600	30	4,330	-3.3	-15.8	27	13.1
550	30	5,012	-7.2	-22.8	27	14.1
500	30	5,751	-11.8	-26.9	27	15.3
450	30	6,549	-16.9	-31.9	28	16.5
400	30	7,425	-22.9	-37.5	27	17.6
350	30	8,391	-29.7	-43.5	28	18.0
300	30	9,473	-37.4	-50.7	28	20.0
250	30	10,708	-46.5		28	21.3
200	30	12,157	-55.5		29	22.1
175	30	13,002	-58.8		28	21.7
150	30	13,965	-59.9		28	19.4
125	30	15,106	-59.3		28	14.4
100	30	16,500	-59.7		28	11.6
80	29	17,898	-58.5		30	6.1
70	29	18,738	-57.6		30	3.7
60	29	19,714	-55.9		35	1.7
50	28	20,878	-53.6		05	3.1
40	28	22,318	-51.6		08	3.5
30	28	24,194	-49.1		08	4.3
25	28	25,395	-47.3		08	4.7
20	26	26,876	-44.7		08	5.4
15	22	28,831	-40.7		08	6.6
10	22	31,621	-35.4		09	7.7
7	12	34,134	-30.9			
5	6	36,499	-27.6			

ALBUQUERQUE, N. MEX. 838 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	1,619	16.2	1.7	09	2.0
1000	30	81				
950	30	531				
900	30	1,003				
850	30	1,498				
800	30	2,017	18.1	-.2	25	.3
750	30	2,559	14.6	-3.3	28	4.0
700	30	3,144	10.5	-7.0	28	5.2
650	30	3,748	5.8	-10.8	28	6.5
600	30	4,405	.5	-14.0	27	5.8
550	30	5,086	-4.7	-18.1	26	6.5
500	30	5,839	-10.4	-23.5	26	7.6
450	30	6,635	-15.8	-30.5	27	8.0
400	30	7,521	-22.1	-37.1	27	7.8
350	30	8,489	-29.6	-43.4	26	8.2
300	30	9,570	-38.2	-50.7	26	9.8
250	29	10,802	-47.6		26	11.5
200	29	12,244	-56.8		26	13.2
175	29	13,084	-60.3		26	13.4
150	29	14,040	-62.6		26	12.3
125	29	15,157	-64.8		25	10.9
100	29	16,514	-65.9		25	7.2
80	29	17,873	-63.9		24	2.4
70	29	18,696	-61.3		09	1.8
60	29	19,657	-59.3		10	4.1
50	29	20,808	-55.9		09	6.0
40	28	22,239	-53.0		09	7.6
30	28	24,107	-49.8		09	7.6
25	27	25,310	-47.1		09	7.6
20	25	26,798	-44.5		08	9.0
15	22	28,744	-40.6		08	9.5
10	10	31,528	-3[illegible].3			
7						
5						

AMARILLO, TEXAS 890 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	1,095	16.9	11.8	20	2.9
1000	30	83				
950	30	531				
900	30	1,004				
850	30	1,489	18.8	8.5	22	7.6
800	30	2,010	17.6	3.5	24	6.8
750	30	2,553	14.6	.1	25	5.1
700	30	3,139	10.6	-2.5	27	3.8
650	30	3,750	6.1	-6.5	27	3.2
600	30	4,402	1.1	-10.7	26	2.9
550	30	5,088	-4.2	-15.4	29	3.3
500	30	5,841	-9.7	-22.7	28	3.7
450	30	6,644	-15.0	-29.5	28	4.5
400	30	7,529	-21.1	-35.7	28	5.5
350	30	8,501	-28.4	-41.9	27	6.7
300	30	9,588	-36.9	-48.8	27	8.6
250	30	10,825	-46.7		26	10.3
200	30	12,271	-56.6		25	11.5
175	30	13,110	-60.7		25	12.6
150	30	14,065	-62.7		26	14.0
125	30	15,183	-64.9		26	11.7
100	30	16,539	-66.0		25	6.8
80	30	17,895	-64.6		23	1.8
70	30	18,714	-62.1		10	2.0
60	30	19,673	-59.5		10	3.3
50	30	20,822	-56.3		09	5.8
40	29	22,246	-53.7		09	6.8
30	29	24,111	-49.8		09	7.3
25	25	25,310	-47.2		09	7.5
20	24	26,795	-45.0		08	8.2
15	23	28,737	-41.3		09	10.4
10	18	31,525	-36.7		08	12.5
7						
5						

* ANCHORAGE, ALASKA 1009 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	45	10.1	4.3	18	2.3
1000	30	119	10.7	4.0	17	2.6
950	30	548	8.6	1.9	18	1.7
900	30	990	5.8	.4	13	.5
850	30	1,455	2.7	-1.7	09	1.4
800	30	1,943	-.6	-4.3	09	2.7
750	30	2,456	-3.8	-7.7	09	3.4
700	30	2,997	-7.4	-12.1	09	4.7
650	30	3,568	-10.9	-18.1	09	5.2
600	30	4,182	-14.9	-22.2	09	6.4
550	30	4,832	-19.2	-25.9	09	7.6
500	30	5,538	-24.0	-31.2	09	8.6
450	30	6,294	-29.6	-37.4	10	8.0
400	30	7,129	-35.9	-42.2	10	8.7
350	30	8,042	-43.1	-45.2	10	9.2
300	30	9,064	-50.3		10	10.0
250	30	10,243	-54.0		11	8.1
200	30	11,687	-49.7		10	5.0
175	30	12,565	-48.0		11	4.3
150	30	13,582	-47.6		12	4.0
125	30	14,788	-47.2		11	3.5
100	30	16,266	-46.7		12	3.7
80	29	17,744	-46.7		11	3.1
70	29	18,629	-46.7		11	3.7
60	29	19,652	-46.6		10	4.0
50	29	20,861	-46.5		10	4.7
40	29	22,344	-45.7		09	6.6
30	29	24,265	-44.3		09	8.7
25	29	25,489	-43.3		09	10.2
20	29	26,997	-41.2		09	11.9
15	26	28,965	-38.0		09	13.2
10	22	31,777	-32.8		09	16.0
7	12	34,317	-28.4		09	19.8
5						

* ANNETTE, ALASKA 1012 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed
SURFACE	30	37	9.4	6.6	09	1.1
1000	30	135	9.6	5.5	12	.7
950	30	556	7.2	2.6	16	2.9
900	30	1,002	4.3	.3	17	4.0
850	30	1,466	1.3	-2.7	18	4.9
800	30	1,952	-1.3	-6.1	18	5.6
750	30	2,462	-4.3	-9.7	19	5.2
700	30	3,005	-7.4	-14.8	19	5.4
650	30	3,576	-10.7	-18.7	19	5.7
600	30	4,191	-14.3	-23.8	19	5.5
550	30	4,843	-18.3	-27.6	20	6.5
500	30	5,551	-23.1	-32.3	20	6.5
450	30	6,310	-28.5	-36.9	19	7.0
400	30	7,149	-34.7	-42.3	19	6.7
350	30	8,068	-41.6	-42.8	19	8.3
300	30	9,096	-48.9		20	9.0
250	30	10,280	-52.8		22	9.8
200	29	11,725	-49.8		23	8.5
175	28	12,603	-48.8		23	7.3
150	28	13,615	-49.0		23	6.0
125	28	14,811	-49.2		22	5.1
100	28	16,276	-48.9		21	3.4
80	28	17,738	-49.7		19	3.0
70	28	18,611	-49.9		17	1.8
60	28	19,619	-49.9		12	1.9
50	28	20,811	-49.7		10	3.6
40	28	22,273	-49.0		09	5.4
30	27	24,168	-47.4		09	8.0
25	27	25,376	-46.1		09	10.1
20	27	26,865	-44.2		09	10.9
15	27	28,808	-40.3		09	13.1
10	26	31,609	-34.4		09	15.4
7	24	34,119	-30.0		09	18.7
5	13	36,547	-25.2			

ATHENS, GEORGIA 987 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	246	19.2	17.0	34	.7
1000	30	132				
950	30	575	21.0	15.1	29	1.8
900	30	1,043	19.0	11.8	27	2.1
850	30	1,533	15.9	8.2	29	3.0
800	30	2,046	13.3	3.0	28	3.2
750	30	2,584	10.5	-1.6	28	3.4
700	30	3,160	7.6	-5.9	30	2.6
650	30	3,762	4.2	-9.1	29	3.2
600	30	4,414	.3	-13.1	28	3.2
550	30	5,098	-3.7	-18.0	29	2.7
500	30	5,854	-8.4	-23.4	29	3.9
450	30	6,658	-13.5	-29.3	28	4.5
400	30	7,552	-19.7	-33.9	28	5.1
350	30	8,530	-26.9	-39.4	29	6.8
300	30	9,624	-35.2	-47.1	28	7.9
250	30	10,867	-45.0		28	9.5
200	30	12,324	-55.4		29	12.3
175	30	13,165	-60.3		29	13.5
150	30	14,116	-64.2		28	12.9
125	30	15,225	-67.0		28	10.0
100	29	16,570	-67.6		29	4.8
80	29	17,920	-65.5		03	1.0
70	29	18,733	-63.8		06	3.6
60	29	19,685	-60.3		08	6.2
50	29	20,832	-56.6		09	6.5
40	29	22,259	-53.1		09	7.8
30	25	24,122	-50.2		09	7.8
25	23	25,315	-48.0		09	8.6
20	17	26,793	-45.4		09	9.3
15	13	28,730	-41.9		08	11.4
10	6	31,513	-37.1			
7						
5						

* BARROW, ALASKA 1016 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	28	8	-.6	-1.7	08	1.1
1000	28	133	-.3	-2.7	11	1.1
950	28	544	.4	-5.3	20	1.3
900	28	977	-.3	-6.8	20	1.8
850	28	1,433	-1.9	-9.3	23	2.7
800	28	1,913	-4.1	-13.2	23	3.5
750	28	2,416	-6.7	-16.3	23	3.7
700	28	2,956	-9.6	-19.6	23	4.1
650	28	3,521	-13.0	-24.1	23	5.7
600	28	4,130	-17.0	-27.6	23	6.5
550	28	4,773	-21.5	-31.7	24	6.7
500	28	5,473	-26.4	-36.3	24	7.4
450	28	6,216	-32.1	-41.6	24	8.2
400	28	7,048	-38.2	-47.1	24	8.6
350	28	7,954	-44.1		25	9.5
300	28	8,974	-49.6		25	9.2
250	28	10,164	-49.6		25	6.9
200	28	11,638	-46.0		24	4.3
175	28	12,526	-45.7		23	3.1
150	28	13,553	-45.4		24	2.5
125	28	14,768	-45.4		23	1.1
100	28	16,256	-45.0		15	.4
80	28	17,749	-44.3		12	1.3
70	27	18,642	-44.0		08	1.6
60	27	19,677	-43.4		09	3.0
50	27	20,906	-42.8		10	3.9
40	26	22,413	-41.9		09	4.8
30	25	24,365	-40.5		08	6.4
25	25	25,610	-39.5		09	8.0
20	18	27,138	-37.8		09	7.8
15	5	29,112	-35.4			
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BARTER IS., ALASKA 1015 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	15	.0	-.9	09	2.0
1000	30	132	.8	-1.2	10	2.3
950	30	547	4.2	-3.6	11	2.3
900	30	988	4.4	-4.5	14	1.4
850	30	1,452	2.8	-6.8	21	1.3
800	30	1,941	.1	-8.6	24	3.0
750	30	2,452	-3.1	-12.1	24	4.2
700	30	2,998	-6.5	-15.6	24	5.8
650	30	3,567	-10.2	-20.9	24	6.6
600	30	4,186	-14.2	-25.1	24	7.5
550	30	4,834	-18.8	-29.3	23	8.5
500	30	5,544	-24.0	-34.5	23	9.6
450	30	6,293	-29.6	-40.2	23	10.8
400	30	7,134	-36.1	-46.5	23	12.3
350	30	8,047	-43.2		24	13.8
300	30	9,069	-50.0		24	15.1
250	30	10,248	-53.3		25	11.6
200	30	11,703	-47.5		24	5.7
175	30	12,588	-46.7		25	3.8
150	30	13,611	-46.3		25	2.4
125	30	14,824	-45.8		25	1.1
100	30	16,312	-45.0			.0
80	30	17,803	-44.7		09	.8
70	30	18,696	-44.3		07	1.4
60	30	19,730	-43.8		08	2.9
50	30	20,957	-43.0		08	3.9
40	30	22,464	-42.0		08	5.3
30	29	24,419	-40.5		08	7.4
25	28	25,671	-39.2		09	8.7
20	27	27,207	-37.3		09	9.4
15	26	29,206	-34.4		08	10.4
10	16	32,076	-29.2		09	13.2
7	6	34,639	-25.5			
5						

BETHEL, ALASKA 1010 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	39	8.1	6.5	31	2.3
1000	29	119	8.5	5.5	32	2.8
950	29	542	8.1	.9	36	1.6
900	29	987	5.5	-2.1	04	.6
850	29	1,452	2.2	-4.3	03	.6
800	29	1,939	-1.3	-6.5	09	1.1
750	29	2,445	-4.5	-11.1	08	1.8
700	29	2,991	-7.9	-15.9	08	2.3
650	29	3,559	-11.3	-20.8	07	3.3
600	29	4,173	-15.2	-25.4	06	4.6
550	29	4,820	-19.7	-29.4	06	5.6
500	29	5,526	-24.7	-34.4	05	5.7
450	29	6,275	-30.2	-39.3	05	6.2
400	29	7,111	-36.2	-44.8	04	6.4
350	29	8,024	-43.2		04	9.4
300	29	9,045	-50.4		04	11.2
250	29	10,219	-55.2		03	10.0
200	29	11,653	-50.9		05	5.8
175	29	12,526	-49.1		06	4.5
150	28	13,541	-48.5		07	3.7
125	28	14,739	-48.2		09	2.9
100	28	16,210	-47.6		09	3.6
80	28	17,682	-47.6		09	3.7
70	27	18,567	-47.6		10	4.3
60	27	19,584	-47.5		10	5.1
50	27	20,789	-47.2		09	5.3
40	25	22,274	-46.5		09	6.5
30	25	24,189	-45.0		09	8.9
25	25	25,409	-43.8		09	9.9
20	23	26,916	-42.0		09	11.6
15	15	28,861	-38.7		09	13.6
10	7	31,648	-34.0			
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5						

* BISMARCK, N. DAK. 953 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	505	11.1	10.1	02	.9
1000	30	100				
950	30	531			35	.2
900	30	986	13.3	6.0	34	2.0
850	30	1,466	11.2	3.2	31	2.6
800	30	1,970	8.7	-.8	29	3.7
750	30	2,497	5.5	-2.6	29	5.2
700	30	3,062	2.0	-5.3	28	7.4
650	30	3,655	-2.0	-8.3	28	9.5
600	30	4,290	-5.3	-13.4	28	11.7
550	30	4,962	-9.4	-18.4	28	14.5
500	30	5,700	-13.5	-23.6	28	17.4
450	30	6,487	-18.7	-29.8	27	18.1
400	30	7,363	-24.9	-36.4	27	19.2
350	30	8,321	-32.1	-42.7	27	20.3
300	30	9,392	-40.2	-49.5	27	22.9
250	30	10,613	-49.4		26	23.5
200	30	12,049	-56.8		25	25.8
175	30	12,891	-58.3		26	24.5
150	30	13,867	-56.2		27	19.2
125	30	15,025	-56.7		27	12.5
100	30	16,441	-56.3		27	8.1
80	30	17,861	-56.0		27	4.3
70	30	18,709	-55.9		29	2.3
60	30	19,692	-55.0		34	.8
50	30	20,861	-53.5		06	1.7
40	30	22,302	-51.4		07	4.1
30	29	24,182	-49.1		09	5.8
25	28	25,379	-47.2		09	6.5
20	27	26,865	-44.8		08	7.6
15	23	28,815	-40.5		09	9.2
10	20	31,627	-34.4		09	9.5
7	17	34,164	-29.5		09	13.0
5	11	36,597	-25.1			

BOISE, IDAHO 915 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	867	13.6	1.9	19	.3
1000	30	105				
950	30	546				
900	30	1,005	15.2	2.3	30	.8
850	30	1,489	14.4	1.0	32	3.5
800	30	1,999	11.2	-1.5	32	4.1
750	30	2,532	7.6	-3.8	30	4.8
700	30	3,100	3.7	-5.9	28	6.7
650	30	3,694	-.4	-9.9	27	8.8
600	30	4,334	-4.4	-15.6	27	10.4
550	30	5,008	-8.5	-20.6	26	12.3
500	30	5,748	-13.5	-25.6	26	12.7
450	30	6,537	-19.2	-30.9	26	15.2
400	30	7,409	-25.6	-36.5	26	17.3
350	30	8,363	-32.9	-43.2	26	17.9
300	30	9,430	-41.0	-49.0	26	18.5
250	30	10,646	-50.1		26	19.2
200	30	12,078	-56.9		26	19.5
175	30	12,921	-58.5		26	18.5
150	30	13,891	-58.4		26	17.6
125	30	15,038	-58.2		26	13.5
100	30	16,440	-58.6		26	8.5
80	30	17,844	-57.8		25	3.8
70	30	18,687	-57.0		24	1.6
60	30	19,663	-56.0		10	.6
50	30	20,826	-54.8		09	2.2
40	30	22,261	-52.4		08	3.3
30	26	24,136	-49.7		08	4.4
25	24	25,338	-47.6		08	4.5
20	21	26,818	-44.9		08	5.9
15	18	28,763	-41.3		09	5.0
10	10	31,601	-34.7		10	7.1
7						

BOOTHVILLE, LA. 1014 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	1	24.4	23.1	20	.3
1000	30	125	25.4	22.8	20	.8
950	30	576	22.8	18.4	18	1.8
900	30	1,046	19.9	13.7	17	2.8
850	30	1,537	16.7	9.6	17	3.6
800	30	2,051	13.6	4.5	17	3.5
750	30	2,593	10.6	-.1	19	2.3
700	30	3,165	7.4	-4.3	21	1.6
650	30	3,769	4.1	-9.8	21	1.0
600	30	4,418	.5	-15.0	25	.8
550	30	5,108	-3.6	-20.1	23	.8
500	30	5,859	-8.1	-24.6	25	.6
450	30	6,669	-12.9	-29.2	29	1.5
400	30	7,558	-19.0	-35.2	29	2.2
350	30	8,539	-25.8	-40.8	28	4.8
300	30	9,639	-33.5	-47.2	28	7.3
250	30	10,894	-43.1		28	9.4
200	30	12,363	-53.8		28	11.6
175	30	13,209	-59.5		27	12.5
150	30	14,161	-65.0		27	9.9
125	30	15,257	-70.0		28	6.9
100	30	16,579	-71.0		31	1.3
80	30	17,909	-67.9		08	4.1
70	30	18,716	-65.2		09	6.8
60	30	19,663	-61.2		09	8.9
50	30	20,804	-57.5		09	10.5
40	30	22,226	-53.7		09	11.5
30	30	24,089	-49.9		09	12.4
25	30	25,286	-47.8		09	13.4
20	29	26,762	-45.5		08	14.0
15	27	28,695	-42.2		09	14.9
10	17	31,455	-37.4		09	19.2
7	5	34,008	-33.5			

* BROWNSVILLE, TEXAS 1011 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	7	24.9	23.2	15	2.0
1000	30	98	24.6	23.0	16	4.1
950	30	544	22.1	20.3	17	8.8
900	30	1,019	20.2	15.6	17	9.3
850	30	1,512	18.4	10.3	18	7.6
800	30	2,030	15.6	6.3	18	5.9
750	30	2,571	12.5	2.5	18	4.5
700	30	3,152	9.0	-1.3	18	2.6
650	30	3,758	5.3	-6.6	22	1.8
600	30	4,413	1.3	-11.0	26	1.3
550	30	5,102	-2.9	-16.0	28	2.1
500	30	5,859	-7.4	-20.8	27	2.3
450	30	6,667	-11.6	-25.9	24	2.6
400	30	7,564	-18.3	-33.0	24	3.6
350	30	8,548	-25.3	-39.6	25	6.6
300	30	9,650	-33.3	-47.2	25	9.6
250	30	10,907	-42.7		25	11.9
200	30	12,377	-53.8		25	13.5
175	30	13,223	-59.8		25	12.6
150	30	14,172	-66.2		25	9.5
125	30	15,260	-72.0		24	5.6
100	30	16,565	-73.7		18	1.2
80	29	17,878	-70.0		09	6.6
70	29	18,677	-66.7		09	9.7
60	29	19,620	-63.0		09	10.4
50	29	20,750	-59.8		09	12.9
40	29	22,158	-55.7		09	14.5
30	29	24,009	-51.3		09	16.4
25	28	25,197	-49.0		09	16.3
20	27	26,673	-46.1		09	16.2
15	26	28,595	-43.6		08	16.9
10	24	31,342	-38.7		09	21.6
7	16	33,805	-34.0		10	18.1

BUFFALO, N. Y. 988 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	218	15.2	12.2	22	2.2
1000	30	118				
950	30	558	16.0	9.7	25	4.5
900	30	1,013	13.9	6.5	27	6.1
850	30	1,493	11.6	3.9	27	6.7
800	30	1,999	9.0	-.7	27	7.7
750	30	2,532	6.7	-4.8	27	8.9
700	30	3,096	3.7	-8.4	27	9.8
650	30	3,693	.5	-12.8	27	10.9
600	30	4,333	-3.0	-17.3	27	12.5
550	30	5,013	-7.2	-22.9	27	13.1
500	30	5,754	-11.8	-28.6	28	14.3
450	30	6,550	-17.0	-33.1	28	15.9
400	30	7,428	-23.0	-38.6	27	16.8
350	30	8,392	-30.3	-44.9	27	19.5
300	30	9,472	-38.0	-50.0	27	20.3
250	30	10,704	-46.5		28	22.4
200	30	12,156	-55.3		28	24.2
175	30	13,000	-58.3		28	21.7
150	30	13,966	-60.0		28	16.2
125	30	15,107	-59.4		28	14.7
100	29	16,505	-59.7		28	9.7
80	29	17,904	-59.0		30	5.8
70	29	18,743	-57.6		30	2.6
60	29	19,718	-55.7		34	1.1
50	27	20,886	-53.5		07	2.3
40	25	22,336	-51.2		09	3.7
30	25	24,218	-48.2		09	5.2
25	1[illegible]	25,414	-46.5		09	4.7
20	1[illegible]	26,901	-43.7		08	4.3
15	12	28,881	-39.0			
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CAPE HATTERAS, N. C. 1015 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	4	22.1	20.0	21	1.4
1000	30	136	22.2	18.0	22	2.7
950	30	584	20.3	13.4	25	4.8
900	30	1,048	17.9	9.6	25	5.1
850	30	1,535	15.2	4.3	25	5.5
800	30	2,047	12.6	-.1	25	5.2
750	30	2,589	10.3	-5.0	25	5.0
700	30	3,158	7.3	-9.1	25	4.6
650	30	3,763	3.9	-13.5	26	5.1
600	30	4,411	.0	-17.7	25	5.5
550	30	5,097	-4.1	-20.2	27	5.6
500	30	5,850	-8.5	-25.3	27	6.8
450	30	6,661	-13.5	-30.9	27	7.3
400	30	7,547	-19.7	-36.8	27	7.0
350	30	8,525	-26.7	-42.7	27	7.8
300	29	9,621	-34.6	-49.5	27	8.2
250	29	10,870	-44.3		27	10.3
200	29	12,329	-55.6		28	10.7
175	29	13,169	-61.0		27	11.8
150	29	14,118	-64.6		28	12.8
125	29	15,228	-65.3		29	9.0
100	29	16,583	-66.0		30	7.2
80	29	17,943	-64.0		36	2.8
70	29	18,763	-62.0		05	3.7
60	29	19,722	-59.1		07	5.6
50	29	20,875	-55.6		08	6.5
40	29	22,308	-52.2		09	7.0
30	27	24,182	-48.1		09	5.4
25	26	25,393	-46.5		09	5.6
20	23	26,888	-44.3		09	6.7
15	13	28,800	-40.7		08	6.2
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See reference note at end of table

RAWINSONDE DATA

Average monthly values

* CARIBOU, MAINE 991 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	191	12.5	9.3	29	.5
1000	30	112				
950	30	542	10.9	5.1	28	1.8
900	30	993	9.2	1.7	30	3.1
850	30	1,465	6.8	-1.8	30	4.6
800	30	1,960	4.3	-5.7	30	5.7
750	30	2,486	1.9	-10.2	29	6.6
700	30	3,038	-.8	-13.5	29	8.2
650	30	3,626	-3.8	-16.6	29	10.7
600	30	4,257	-7.1	-19.5	28	12.2
550	30	4,929	-10.9	-23.4	28	14.3
500	30	5,660	-15.2	-28.5	28	16.7
450	30	6,447	-20.3	-32.1	28	19.2
400	30	7,314	-26.0	-37.9	28	23.3
350	30	8,267	-32.8	-44.2	28	27.1
300	30	9,335	-40.6	-49.5	28	30.2
250	30	10,556	-48.4		28	32.5
200	30	12,004	-54.2		28	30.8
175	30	12,857	-55.6		28	28.2
150	30	13,839	-55.8		28	21.2
125	30	15,001	-55.3		28	16.9
100	29	16,426	-56.2		29	12.0
80	28	17,850	-55.1		29	6.6
70	28	18,703	-54.0		30	3.9
60	28	19,696	-53.2		32	1.5
50	28	20,873	-51.8		02	2.0
40	28	22,325	-50.1		06	2.8
30	27	24,208	-48.2		09	4.3
25	26	25,415	-46.4		08	5.2
20	24	26,902	-44.1		09	7.5
15	19	28,839	-40.4		10	9.0
10	15	31,615	-34.4		10	8.8
7	7	34,076	-29.5			

CHARLESTON, S. C. 1014 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	28	13	21.7	18.7	03	.9
1000	28	133	22.2	18.5	36	.3
950	28	580	21.1	15.0	22	1.3
900	28	1,047	18.4	11.7	24	1.7
850	28	1,536	15.7	8.1	25	2.0
800	28	2,049	13.4	3.0	25	2.0
750	28	2,589	10.8	-2.0	25	1.8
700	28	3,163	7.8	-5.2	24	1.7
650	28	3,766	4.3	-9.4	26	1.3
600	28	4,418	.5	-14.0	25	1.8
550	28	5,108	-3.3	-18.8	24	2.0
500	28	5,860	-7.9	-23.2	27	2.3
450	28	6,668	-13.2	-27.7	29	2.6
400	28	7,561	-19.4	-33.0	30	3.1
350	28	8,540	-26.3	-39.6	29	4.3
300	28	9,636	-34.8	-46.9	28	5.7
250	28	10,883	-44.5		27	9.9
200	28	12,342	-55.2		28	12.1
175	28	13,184	-60.3		29	14.0
150	28	14,136	-64.4		29	13.2
125	28	15,243	-67.2		29	11.0
100	28	16,585	-68.0		31	5.2
80	28	17,931	-65.9		03	2.6
70	28	18,745	-63.5		06	4.1
60	28	19,698	-60.0		08	6.9
50	28	20,846	-56.3		09	8.7
40	28	22,274	-52.5		09	9.2
30	27	24,146	-49.2		09	8.6
25	26	25,340	-47.8		09	9.4
20	25	26,822	-45.5		08	10.6
15	16	28,762	-41.3		09	13.4

CHIHUAHUA, MEXICO 856 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	1,428	19.2	5.6	20	.4
1000	30	63				
950	30	509				
900	30	986				
850	30	1,492	19.7	6.3	21	.3
800	30	2,015	18.9	5.5	02	.9
750	30	2,559	15.4	2.6	04	2.2
700	30	3,148	11.6	-.9	03	3.3
650	30	3,756	7.0	-4.7	03	4.0
600	30	4,415	1.8	-9.1	04	4.7
550	30	5,097	-3.5	-13.8	04	4.8
500	30	5,857	-8.9	-18.9	02	3.4
450	30	6,656	-14.5	-25.0	35	3.1
400	30	7,549	-20.4	-32.8	33	3.0
350	30	8,524	-27.4	-39.3	30	4.2
300	30	9,615	-35.8	-46.7	29	5.8
250	30	10,856	-45.3		28	8.4
200	29	12,311	-55.5		27	12.3
175	29	13,152	-60.4		27	12.6
150	28	14,103	-64.5		27	10.9
125	27	15,208	-68.6		27	9.0
100	24	16,534	-71.4		26	3.4
80	22	17,866	-68.2		07	3.3
70	22	18,673	-64.5		08	6.3
60	21	19,626	-60.7		09	8.8
50	21	20,768	-58.0		09	11.6
40	19	22,184	-54.6		09	13.2
30	17	24,035	-50.9		09	14.2
25	12	25,236	-48.8		09	16.0
20	9	26,697	-46.0			
15	6	28,617	-43.2			

COLUMBIA, MO. 985 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	238	19.5	16.6	20	1.9
1000	30	108				
950	30	552	20.7	15.1	23	5.9
900	30	1,018	18.4	12.5	26	8.0
850	30	1,507	15.8	9.0	26	6.3
800	30	2,020	13.0	3.9	27	8.0
750	30	2,559	10.1	-.7	27	7.6
700	30	3,131	6.7	-5.3	27	7.4
650	30	3,733	3.0	-9.5	27	7.7
600	30	4,379	-.8	-14.1	27	8.5
550	30	5,062	-5.3	-19.8	27	8.6
500	30	5,811	-10.0	-25.9	27	10.1
450	30	6,610	-15.4	-32.2	27	10.6
400	30	7,494	-21.7	-36.7	27	11.3
350	30	8,464	-28.9	-43.0	27	11.3
300	30	9,547	-37.5	-49.7	27	11.5
250	30	10,780	-47.0		27	14.6
200	30	12,224	-57.0		27	17.2
175	30	13,061	-61.0		27	16.9
150	30	14,016	-62.2		27	16.4
125	30	15,140	-63.4		26	12.1
100	30	16,509	-63.9		27	8.3
80	30	17,881	-62.4		27	2.9
70	30	18,707	-60.7		31	.5
60	30	19,671	-58.4		08	2.0
50	30	20,824	-55.7		09	4.5
40	28	22,252	-53.1		09	5.2
30	28	24,116	-50.4		09	5.7
25	26	25,309	-48.2		08	5.4
20	25	26,789	-45.1		08	5.4
15	25	28,722	-41.9		09	6.0
10	10	31,465	-36.9			

DAYTON, OHIO 980 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	297	16.8	14.7	21	.7
1000	30	125				
950	30	568	18.5	12.0	24	4.8
900	30	1,028	16.2	9.5	26	6.9
850	30	1,513	13.5	5.3	27	7.3
800	30	2,022	11.7	.3	27	7.1
750	30	2,555	8.3	-4.9	27	7.7
700	30	3,125	5.4	-7.8	27	9.1
650	30	3,723	2.5	-13.0	27	10.1
600	30	4,371	-1.1	-16.8	27	11.4
550	30	5,050	-5.3	-21.1	28	11.9
500	30	5,802	-10.2	-26.4	27	12.4
450	30	6,599	-15.6	-32.4	28	13.4
400	30	7,485	-21.9	-37.2	28	13.7
350	30	8,454	-28.9	-43.7	28	15.0
300	30	9,539	-37.2	-49.8	28	15.9
250	30	10,773	-46.6		28	17.2
200	30	12,221	-56.3		28	20.8
175	30	13,061	-59.9		28	20.6
150	30	14,019	-61.7		28	18.5
125	30	15,147	-62.5		28	14.9
100	30	16,523	-62.5		27	11.1
80	30	17,901	-61.6		29	4.2
70	30	18,731	-59.7		34	1.2
60	30	19,698	-57.6		06	2.4
50	30	20,857	-54.8		08	3.9
40	30	22,294	-52.2		08	4.7
30	29	24,169	-48.9		08	5.6
25	29	25,371	-47.0		08	5.5
20	28	26,855	-44.1		08	6.1
15	26	28,792	-40.4		09	7.4
10	18	31,575	-35.1		09	10.8
7	6	34,107	-31.5			

DEL RIO, TEXAS 976 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	314	23.2	20.4	12	4.2
1000	30	97				
950	30	564	22.0	19.7	13	6.3
900	30	1,016	19.6	17.6	16	7.3
850	30	1,508	17.5	14.8	17	6.2
800	30	2,026	15.2	9.6	17	2.9
750	30	2,572	13.2	1.3	07	.3
700	30	3,149	10.0	-5.6	36	2.3
650	30	3,758	6.3	-11.0	35	4.3
600	30	4,413	1.7	-14.9	35	5.3
550	30	5,102	-3.1	-18.4	35	5.2
500	30	5,857	-8.0	-22.0	34	3.1
450	30	6,663	-13.6	-27.9	31	2.8
400	30	7,553	-19.9	-33.3	31	3.9
350	30	8,530	-26.8	-41.1	29	4.8
300	29	9,623	-35.3	-49.3	28	5.9
250	29	10,870	-44.4		26	7.4
200	29	12,332	-54.2		25	12.6
175	29	13,180	-58.7		25	14.5
150	29	14,137	-63.5		25	14.2
125	28	15,246	-68.4		25	9.4
100	28	16,574	-71.5		23	4.5
80	28	17,898	-68.1		09	2.1
70	28	18,706	-64.7		09	6.4
60	28	19,655	-60.9		10	8.6
50	28	20,799	-57.3		09	10.3
40	28	22,220	-54.1		09	11.8
30	27	24,077	-50.4		09	12.5
25	26	25,272	-47.8		09	12.9
20	24	26,749	-44.8		08	13.6
15	21	28,683	-41.8		08	15.7
10	16	31,452	-36.7		09	18.3
7	[illegible]	33,929	-34.0			

DENVER, COLO. 837 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	1,611	12.0	5.5	18	1.5
1000	30	86				
950	30	528				
900	30	992				
850	30	1,482				
800	30	1,995	15.3	2.8	26	2.0
750	30	2,537	13.0	-1.0	30	3.1
700	30	3,117	9.1	-4.3	28	3.8
650	30	3,720	4.8	-8.3	28	5.2
600	30	4,374	-.2	-13.1	28	8.3
550	30	5,053	-5.2	-18.0	27	10.9
500	30	5,806	-10.8	-24.6	27	10.7
450	30	6,603	-16.2	-31.7	26	10.8
400	30	7,485	-22.6	-38.2	26	12.0
350	30	8,450	-30.1	-44.8	26	12.6
300	30	9,527	-38.9	-50.7	26	13.2
250	30	10,752	-48.2		25	14.3
200	30	12,192	-57.2		25	15.8
175	30	13,030	-60.3		25	16.3
150	30	13,987	-61.3		26	15.8
125	30	15,115	-62.3		26	13.3
100	30	16,493	-62.4		25	8.1
80	30	17,877	-60.6		21	2.6
70	30	18,712	-58.9		11	1.1
60	30	19,682	-57.6		09	2.3
50	30	20,838	-55.2		08	3.7
40	30	22,272	-52.4		08	5.3
30	29	24,141	-49.5		09	6.4
25	29	25,340	-47.5		09	6.1
20	28	26,821	-44.9		08	6.1
15	25	28,763	-41.2		08	5.6
10	15	31,542	-36.0			

DODGE CITY, KANS. 922 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	791	17.7	14.1	18	2.9
1000	30	84				
950	30	529				
900	30	995	18.8	12.0	19	7.5
850	30	1,486	18.7	8.7	21	10.3
800	30	2,005	16.7	3.1	23	7.9
750	30	2,548	13.4	-.7	25	6.3
700	30	3,129	9.9	-6.1	27	5.4
650	30	3,734	5.2	-9.6	27	5.3
600	30	4,388	.3	-13.3	27	6.7
550	29	5,071	-4.7	-18.4	28	7.8
500	29	5,822	-9.8	-25.9	27	7.3
450	29	6,621	-15.5	-32.7	26	7.3
400	29	7,506	-22.1	-38.6	26	7.8
350	29	8,475	-29.2	-44.1	26	8.4
300	29	9,558	-37.7	-50.1	26	8.7
250	29	10,792	-47.0		25	10.3
200	29	12,236	-57.4		25	14.4
175	28	13,076	-61.2		25	14.2
150	28	14,028	-63.0		26	14.3
125	28	15,149	-63.6		26	13.0
100	28	16,513	-64.8		26	7.0
80	28	17,880	-63.0		24	8.7
70	28	18,705	-60.9		15	1.3
60	28	19,666	-58.9		09	3.4
50	28	20,818	-56.0		08	4.5
40	28	22,246	-53.4		09	5.8
30	25	24,114	-50.3		09	6.7
25	24	25,307	-48.1		09	6.8
20	24	26,788	-45.1		08	6.8
15	21	28,729	-41.5		08	7.6
10	14	31,474	-37.0		09	9.3
7	5	33,937	-32.0			

EL PASO, TEXAS 881 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	1,193	20.6	6.2	24	1.0
1000	30	73				
950	30	526				
900	30	1,003				
850	30	1,499	21.7	5.1	18	1.1
800	30	2,021	18.9	2.6	25	2.3
750	30	2,568	15.4	-.3	27	3.7
700	30	3,152	11.2	-3.5	28	4.7
650	30	3,761	6.6	-7.2	27	4.7
600	30	4,417	1.6	-11.2	27	4.2
550	30	5,107	-4.2	-15.5	28	3.2
500	30	5,855	-9.8	-21.9	28	3.1
450	30	6,656	-15.3	-28.0	28	4.7
400	30	7,541	-21.2	-35.4	29	5.5
350	30	8,513	-28.4	-41.7	28	6.3
300	30	9,599	-37.1	-48.8	27	7.5
250	30	10,834	-46.4		27	9.9
200	29	12,282	-56.5		26	12.8
175	29	13,120	-60.7		26	13.0
150	29	14,072	-63.4		26	11.7
125	29	15,184	-66.3		26	9.8
100	29	16,526	-68.2		25	6.1
80	29	17,867	-66.2		10	.7
70	29	18,685	-63.2		09	3.9
60	29	19,639	-60.0		10	5.9
50	29	20,786	-56.8		09	8.2
40	28	22,214	-54.1		09	9.7
30	28	24,076	-50.6		09	10.8
25	27	25,270	-48.3		09	10.3
20	27	26,748	-45.7		08	12.1
15	26	28,678	-42.5		08	13.1
10	16	31,422	-37.7			

ELY, NEV. 809 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	1,908	7.2	-1.1	19	3.1
1000	30	121				
950	30	557				
900	30	1,017				
850	30	1,498				
800	30	2,003	12.2	.0	17	2.5
750	30	2,544	11.5	-3.0	32	.3
700	30	3,118	7.6	-6.2	29	2.3
650	30	3,719	3.5	-9.5	26	4.6
600	30	4,370	-1.2	-13.2	26	8.0
550	30	5,051	-6.1	-18.9	26	8.9
500	30	5,798	-11.4	-24.7	26	9.3
450	30	6,594	-17.0	-30.6	26	11.0
400	30	7,473	-23.7	-36.4	26	12.2
350	30	8,435	-31.4	-43.2	26	12.2
300	30	9,508	-40.3	-49.8	27	12.6
250	30	10,729	-49.2		27	14.6
200	30	12,165	-57.7		27	16.4
175	30	13,002	-60.5		27	16.4
150	30	13,959	-61.9		26	14.1
125	30	15,085	-62.6		26	12.0
100	30	16,462	-63.1		27	8.5
80	30	17,838	-61.5		27	1.8
70	30	16,669	-59.7		15	.5
60	30	19,635	-58.0		09	2.1
50	30	20,789	-55.9		08	3.1
40	30	22,215	-53.7		09	4.6
30	30	24,079	-50.1		08	5.2
25	30	25,275	-48.2		08	5.0
20	30	26,753	-45.6		08	5.7
15	25	28,696	-41.6		09	6.7
10	15	31,492	-36.7		09	8.5
7	6	34,017	-33.1			

EMPALME, MEXICO 1010 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	12	22.7	19.8	10	1.2
1000	30	102	23.9	20.3	12	2.1
950	30	548	24.2	11.3	15	4.3
900	30	1,024	23.8	6.9	16	3.1
850	30	1,522	21.8	5.6	17	1.6
800	30	2,045	19.5	-.1	15	1.0
750	30	2,594	16.3	-4.5	34	.4
700	30	3,179	12.1	-7.8	33	.5
650	30	3,788	7.7	-10.5	25	.8
600	29	4,446	2.4	-13.8	23	1.1
550	29	5,135	-3.0	-17.6	26	1.1
500	29	5,888	-8.1	-23.6	30	1.1
450	29	6,694	-13.3	-30.8	29	1.4
400	29	7,584	-19.7	-36.9	30	3.2
350	28	8,561	-27.3	-43.4	29	4.8
300	28	9,652	-35.8	-50.4	29	5.7
250	28	10,892	-45.1		28	8.6
200	28	12,346	-55.6		27	11.9
175	28	13,186	-60.8		26	12.4
150	28	14,133	-65.5		26	12.7
125	28	15,232	-68.5		25	10.0
100	28	16,559	-71.0		25	2.0
80	28	17,886	-67.5		11	2.7
70	28	18,696	-64.4		09	6.0
60	28	19,648	-60.5		10	7.5
50	28	20,792	-57.5		09	10.2
40	28	22,213	-53.6		09	12.7
30	27	24,075	-50.4		09	13.9
25	26	25,273	-47.7		09	14.5
20	16	26,747	-45.6		09	13.2
15	9	28,688	-41.9			
10						
7						

* FAIRBANKS, ALASKA 996 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	135	11.3	6.5	35	1.2
1000	30	[illegible]				
950	30	527	11.6	3.8	28	1.6
900	30	978	8.5	1.5	27	2.8
850	30	1,448	4.9	-.5	28	2.2
800	30	1,940	1.3	-3.5	27	2.6
750	30	2,454	-2.4	-6.2	26	2.1
700	30	3,000	-6.0	-10.1	24	1.3
650	30	3,575	-9.7	-15.3	22	1.1
600	30	4,191	-13.5	-19.8	17	1.6
550	30	4,843	-18.1	-24.8	16	2.4
500	30	5,553	-23.1	-31.6	17	2.8
450	30	6,313	-29.0	-37.2	18	1.6
400	30	7,148	-35.5	-42.8	17	3.9
350	30	8,062	-42.9		17	4.8
300	30	9,085	-50.3		17	5.2
250	30	10,257	-56.2		18	4.2
200	30	11,[illegible]	-50.7		18	2.3
175	28	12,565	-48.6		17	1.9
150	28	13,581	-47.9		15	1.7
125	27	14,787	-47.2		13	1.9
100	27	16,266	-46.7		12	2.5
80	27	17,746	-46.7		11	3.0
70	27	18,631	-46.5		10	3.3
60	27	19,656	-46.0		10	3.7
50	27	20,870	-45.5		09	5.2
40	27	22,361	-44.5		09	6.7
30	27	24,292	-43.1		09	9.0
25	27	25,524	-41.9		09	10.4
20	27	27,039	-40.4		09	11.8
15	26	29,010	-37.6		09	13.8
10	24	31,828	-32.3		09	16.5
7	17	34,390	-27.4		09	17.0

FLINT, MICH. 986 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	234	15.0	12.8	20	1.0
1000	30	111				
950	30	550	15.8	9.8	25	4.4
900	30	1,006	14.0	6.6	27	4.9
850	30	1,487	11.5	4.3	27	6.8
800	30	1,992	8.8	.7	28	7.3
750	30	2,524	6.3	-4.7	28	8.0
700	30	3,089	3.5	-8.9	28	9.9
650	30	3,682	.4	-12.8	28	11.1
600	30	4,326	-3.3	-17.1	27	13.0
550	30	5,002	-7.3	-22.2	28	13.7
500	30	5,747	-11.6	-27.9	28	14.4
450	30	6,541	-17.3	-32.3	28	16.3
400	30	7,419	-23.5	-38.2	28	17.5
350	30	8,382	-30.7	-44.4	28	19.4
300	30	9,460	-38.5	-49.1	28	21.5
250	30	10,691	-47.1		27	22.8
200	29	12,133	-55.4		27	23.7
175	29	12,979	-58.2		28	22.4
150	29	13,947	-59.1		28	17.4
125	29	15,088	-59.6		28	13.8
100	29	16,481	-59.8		27	10.1
80	29	17,877	-59.0		28	5.1
70	29	18,715	-58.2		31	2.9
60	29	19,690	-56.2		01	1.6
50	29	20,854	-53.9		08	2.9
40	29	22,294	-51.8		09	3.7
30	28	24,170	-49.2		08	5.2
25	27	25,368	-47.2		09	6.3
20	24	26,850	-44.4		08	6.5
15	20	28,785	-41.1		08	6.7
10	16	31,583	-35.0		09	7.7

FORT WORTH, TEXAS 992 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	180	21.9	20.1	18	1.5
1000	30	112				
950	30	565	21.0	17.6	18	5.9
900	30	1,026	19.3	13.7	19	7.3
850	30	1,517	17.3	8.4	19	5.9
800	30	2,033	14.7	4.2	18	4.4
750	30	2,575	11.8	-.8	18	3.0
700	30	3,150	8.3	-3.9	16	.8
650	30	3,756	4.5	-8.6	03	.7
600	30	4,406	.4	-13.0	01	1.3
550	30	5,091	-3.9	-18.5	34	1.6
500	30	5,845	-8.7	-23.6	30	2.0
450	30	6,652	-14.2	-28.5	27	2.2
400	30	7,538	-20.2	-35.3	27	3.5
350	30	8,514	-27.3	-40.8	26	5.7
300	30	9,607	-35.6	-48.0	26	6.5
250	30	10,850	-45.3		25	7.8
200	30	12,304	-55.5		25	11.7
175	30	13,148	-59.6		25	14.1
150	30	14,103	-63.5		25	13.6
125	30	15,213	-66.5		26	10.5
100	30	16,555	-68.2		26	5.1
80	28	17,903	-66.3		11	1.2
70	28	18,715	-63.9		09	3.7
60	28	19,670	-60.2		09	6.2
50	28	20,816	-57.0		09	7.2
40	28	22,237	-54.0		09	8.0
30	27	24,095	-50.5		09	8.3
25	25	25,283	-47.8		09	9.1
20	23	26,758	-45.6		08	8.3
15	20	28,702	-41.8		09	11.3
10	14	31,483	-36.8		09	13.9

FT. HUACHUCA, ARIZ. 856 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	14	1,439	20.8	4.0	20	2.2
1000	14	63				
950	14	514				
900	14	993				
850	14	1,494	22.2	3.3	20	1.7
800	14	2,020	20.7	.9	26	.8
750	14	2,569	16.6	-3.0	24	2.3
700	14	3,156	12.5	-6.4	23	4.1
650	14	3,765	7.6	-11.1	23	4.5
600	14	4,424	2.1	-13.8	24	5.5
550	14	5,111	-3.5	-16.9	22	3.3
500	14	5,865	-8.9	-22.6	21	3.8
450	14	6,662	-14.1	-29.5	28	2.4
400	14	7,556	-20.5	-34.3	27	3.2
350	14	8,529	-28.3	-41.5	28	5.2
300	14	9,616	-36.8	-48.6	27	5.5
250	14	10,853	-46.3		29	8.7
200	14	12,303	-56.1		28	13.2
175	14	13,142	-61.2		27	11.4
150	13	14,107	-65.0		27	9.8
125	11	15,220	-67.3			

See reference note at end of table

NOTE: Cold Bay, Alaska with delayed data.

RAWINSONDE DATA

Average monthly values

JUNE 1968

GLASGOW, MONT. 932 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	696	10.6	6.5	08	1.1
1000	30	99				
950	30	529				
900	30	986	13.2	4.9	31	1.0
850	30	1,466	11.1	2.0	29	2.7
800	30	1,970	7.8	-.6	29	4.2
750	30	2,496	4.3	-3.3	29	4.9
700	30	3,057	.7	-6.3	28	6.3
650	30	3,643	-3.1	-10.7	28	8.1
600	30	4,279	-6.7	-15.7	28	10.1
550	30	4,946	-10.7	-19.8	28	11.2
500	30	5,680	-15.4	-26.1	28	12.9
450	30	6,459	-20.6	-31.1	27	15.2
400	30	7,329	-26.7	-37.0	27	18.1
350	30	8,278	-33.7	-42.4	27	21.1
300	30	9,341	-41.6	-49.5	26	23.8
250	30	10,554	-50.0		26	25.4
200	30	11,989	-55.4		26	22.8
175	30	12,841	-55.2		26	21.4
150	30	13,825	-54.8		26	17.2
125	30	14,991	-54.5		26	12.3
100	30	16,419	-54.7		27	8.2
80	30	17,845	-55.0		28	4.2
70	30	18,698	-54.4		30	2.2
60	30	19,686	-53.7		03	.7
50	30	20,860	-52.7		08	2.3
40	30	22,305	-51.3		08	4.3
30	30	24,183	-48.8		09	6.2
25	30	25,385	-47.3		09	7.6
20	30	26,868	-44.8		09	8.6
15	26	28,809	-40.7		09	10.0
10	20	31,610	-34.4		09	11.1
7	11	34,134	-28.9			

GRAND JUNCTION, COLO. 851 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	1,474	15.6	-.5	13	2.1
1000	30	71				
950	30	516				
900	30	987				
850	30	1,480			13	2.3
800	30	1,998	17.1	-.8	14	3.8
750	30	2,545	13.9	-3.2	21	2.5
700	30	3,124	9.6	-6.0	26	4.0
650	30	3,732	4.9	-9.2	26	6.5
600	30	4,381	-.2	-12.5	27	8.9
550	30	5,062	-3.5	-16.0	26	10.0
500	30	5,811	-10.9	-22.0	25	11.1
450	30	6,608	-16.5	-29.7	26	12.2
400	30	7,489	-22.9	-36.5	25	12.0
350	30	8,453	-30.5	-43.1	26	13.9
300	30	9,529	-39.1	-49.9	26	15.3
250	30	10,753	-48.5		26	14.1
200	30	12,191	-56.8		26	15.8
175	30	13,030	-59.8		26	15.7
150	30	13,988	-61.5		26	14.6
125	30	15,116	-62.3		26	11.3
100	30	16,491	-62.9		26	7.4
80	30	17,869	-61.0		26	2.4
70	30	18,701	-59.2		11	.9
60	30	19,671	-57.5		10	2.8
50	30	20,826	-55.7		09	4.8
40	30	22,254	-53.1		08	5.3
30	29	24,118	-49.6		08	6.5
25	29	25,317	-47.6		08	7.1
20	28	26,801	-45.1		08	6.9
15	22	28,721	-42.3		08	5.5
10	14	31,486	-36.5			

* GREAT FALLS, MONT. 886 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	1,123	10.7	4.7	24	2.2
1000	30	98				
950	30	532				
900	30	995				
850	30	1,470	11.2	1.1	27	[illegible].4
800	30	1,974	7.7	-1.1	28	[illegible].3
750	30	2,503	3.8	-3.6	28	5.8
700	30	3,060	-.1	-6.7	28	7.6
650	30	3,651	-3.6	-11.5	27	9.3
600	29	4,280	-7.0	-16.6	27	11.9
550	29	4,956	-11.2	-21.1	27	13.[illegible]
500	29	5,681	-16.2	-25.8	27	14.7
450	29	6,464	-21.3	-29.5	26	16.5
400	29	7,327	-27.4	-36.6	26	17.[illegible]
350	29	8,275	-34.6	-42.2	26	18.8
300	29	9,334	-42.7	-46.5	26	21.5
250	29	10,543	-50.6		26	23.[illegible]
200	29	11,977	-56.0		26	22.[illegible]
175	29	12,826	-55.7		26	20.[illegible]
150	29	13,811	-54.8		26	17.3
125	29	14,978	-54.6		26	11.2
100	29	16,403	-55.3		26	7.7
80	29	17,828	-54.8		26	4.1
70	29	18,681	-54.7		27	1.8
60	29	19,667	-54.1		02	.2
50	29	20,840	-53.0		04	.[illegible]
40	29	22,283	-51.5		08	3.2
30	28	24,162	-49.1		08	6.[illegible]
25	28	25,362	-47.6		08	7.1
20	28	26,844	-44.9		09	8.1
15	28	28,781	-41.3		09	9.1
10	22	31,561	-35.4		08	10.8
7	16	34,068	-30.0		08	12.0

GREEN BAY, WIS. 987 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	210	14.1	11.9	28	.3
1000	30	97				
950	30	532	15.4	10.1	26	2.4
900	30	989	13.8	7.8	26	4.9
850	30	1,469	11.5	4.9	27	5.7
800	30	1,975	8.9	1.1	27	7.5
750	30	2,506	6.1	-2.3	27	[illegible].5
700	30	3,070	3.0	-6.0	27	[illegible].9
650	30	3,661	-.5	-10.5	27	[illegible].8
600	30	4,303	-4.1	-15.9	27	11.7
550	30	4,977	-8.1	-21.6	28	12.8
500	30	5,720	-12.7	-27.4	28	14.6
450	30	6,510	-18.4	-31.8	28	16.1
400	30	7,386	-24.2	-37.3	28	17.1
350	30	8,347	-31.2	-42.7	28	19.6
300	30	9,422	-39.3	-48.8	28	21.0
250	30	10,650	-47.5		28	24.0
200	30	12,097	-55.7		28	24.3
175	30	12,942	-58.4		28	22.6
150	30	13,912	-58.0		28	17.3
125	30	15,059	-58.6		28	12.9
100	30	16,462	-58.5		28	9.6
80	30	17,865	-58.2		28	5.2
70	30	18,706	-57.6		28	3.8
60	30	19,683	-56.2		35	2.3
50	30	20,848	-53.8		07	2.5
40	29	22,285	-51.8		08	3.4
30	29	24,161	-49.3		08	4.5
25	28	25,363	-47.5		08	5.5
20	26	26,845	-44.8		09	6.0
15	22	28,791	-40.9		08	6.[illegible]
10	7	31,600	-35.8			

GREENSBORO, N. C. 984 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	273	18.2	16.7	23	.5
1000	30	136				
950	30	578	19.6	13.4	28	2.0
900	30	1,043	17.8	9.9	29	3.1
850	30	1,531	15.3	5.6	28	4.3
800	30	2,042	12.6	1.9	28	5.3
750	30	2,582	10.1	-3.2	28	5.3
700	30	3,154	7.4	-7.7	27	5.2
650	30	3,760	4.1	-11.6	27	5.6
600	30	4,407	.5	-17.0	27	5.5
550	30	5,093	-4.0	-21.4	28	6.0
500	30	5,846	-8.5	-26.1	28	7.5
450	30	6,654	-13.7	-31.3	28	8.1
400	29	7,536	-20.1	-37.7	29	8.5
350	29	8,513	-27.3	-42.8	29	9.2
300	29	9,605	-35.5	-50.7	28	10.4
250	29	10,849	-45.0		27	11.1
200	29	12,303	-56.2		28	12.6
175	29	13,142	-60.4		28	13.9
150	29	14,095	-63.6		28	14.1
125	29	15,209	-65.2		28	12.0
100	29	16,566	-65.2		29	7.4
80	29	17,928	-63.8		34	2.6
70	29	18,749	-61.8		04	2.4
60	28	19,706	-58.8		08	3.9
50	27	20,857	-56.2		09	5.2
40	26	22,289	-52.6		09	5.1
30	26	24,161	-49.2		09	5.7
25	25	25,359	-47.1		09	6.0
20	23	26,837	-44.9		09	7.6
15	14	28,770	-41.2		09	8.9

* GUAM, MARIANA IS. 999 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	111	25.0	23.7	09	1.7
1000	30	102				
950	30	551	23.4	21.2	10	5.2
900	30	1,026	20.9	17.5	10	5.3
850	30	1,520	18.1	14.6	10	4.6
800	30	2,038	15.2	11.3	09	4.7
750	30	2,581	12.7	6.1	09	5.1
700	30	3,161	9.8	-.6	09	6.4
650	30	3,770	6.3	-5.2	09	6.5
600	30	4,426	2.5	-9.5	09	6.7
550	30	5,121	-1.5	-12.9	09	7.2
500	30	5,877	-6.2	-19.0	09	6.9
450	30	6,692	-10.9	-23.8	09	7.5
400	30	7,592	-16.7	-30.8	08	6.0
350	30	8,581	-23.8	-37.3	09	5.5
300	30	9,687	-32.2	-44.2	09	4.7
250	30	10,947	-42.4		10	5.1
200	30	12,414	-54.8		09	5.2
175	29	13,253	-61.7		09	5.0
150	29	14,191	-69.0		08	6.0
125	29	15,260	-75.8		08	7.6
100	28	16,536	-79.3		08	9.9
80	28	17,814	-75.6		09	9.8
70	28	18,593	-71.5		08	11.4
60	28	19,514	-67.4		09	13.3
50	28	20,626	-62.4		09	17.3
40	28	22,019	-57.9		09	21.6
30	28	23,849	-54.1		09	27.8
25	27	25,030	-51.1		09	30.8
20	27	26,492	-47.7		09	33.4
15	26	28,410	-44.4		09	32.6
10	24	31,153	-40.6		09	27.6
7	22	33,603	-37.0		09	23.3
5	13	35,960	-33.4		09	21.7
4	[illegible]	37,540	-34.0			

HILO, HAWAII 1017 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	11	21.7	19.3	24	1.8
1000	29	157	22.1	18.4	23	1.5
950	29	600	19.0	16.6	11	2.9
900	29	1,066	15.9	14.2	10	4.6
850	29	1,551	13.1	11.5	09	4.4
800	29	2,059	10.6	7.7	09	5.1
750	29	2,598	9.7	-5.8	10	7.7
700	29	3,168	8.3	-12.8	10	8.1
650	29	3,773	5.2	-15.5	10	7.6
600	29	4,426	1.5	-18.6	11	7.5
550	29	5,116	-3.0	-20.8	11	6.3
500	29	5,870	-8.0	-25.3	12	5.3
450	28	6,678	-13.7	-30.6	12	4.1
400	28	7,567	-20.0	-36.0	17	3.2
350	28	8,545	-26.8	-42.3	22	4.7
300	28	9,639	-35.2	-49.9	24	6.1
250	28	10,884	-45.0		25	8.8
200	28	12,339	-56.2		25	12.6
175	28	13,176	-62.0		25	12.1
150	27	14,117	-67.0		26	9.3
125	26	15,206	-70.3		24	3.7
100	26	16,528	-71.6		11	2.3
80	26	17,845	-70.6		09	6.2
70	26	18,641	-68.0		09	9.6
60	26	19,574	-64.4		09	12.2
50	26	20,699	-60.4		09	14.4
40	26	22,104	-56.3		09	17.6
30	26	23,947	-52.4		09	21.1
25	26	25,133	-49.7		09	22.5
20	25	26,604	-47.0		09	22.4
15	23	28,517	-44.5		09	22.0
10	17	31,244	-40.9			

HUNTINGTON W. VA. 987 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	266	15.9	14.4	17	1.1
1000	30	136				
950	30	579	19.3	12.2	24	3.0
900	30	1,039	17.0	8.9	28	4.8
850	30	1,525	14.5	4.9	28	[illegible].8
800	30	2,036	11.9	.8	27	6.0
750	30	2,572	9.0	-2.5	27	6.2
700	30	3,143	6.1	-6.9	27	7.1
650	30	3,745	3.1	-11.5	27	8.1
600	30	4,392	-.6	-15.6	28	9.0
550	30	5,076	-4.6	-20.1	28	9.3
500	30	5,826	-9.5	-24.7	28	9.7
450	30	6,631	-14.7	-30.1	28	10.1
400	30	7,516	-20.7	-35.2	28	11.[illegible]
350	30	8,489	-27.9	-42.1	28	12.2
300	30	9,579	-36.1	-48.4	27	13.1
250	30	10,819	-45.6		27	14.5
200	30	12,272	-55.8		28	15.9
175	30	13,113	-60.3		28	15.5
150	30	14,069	-62.1		28	15.0
125	30	15,193	-63.3		28	12.1
100	30	16,562	-63.6		28	8.6
80	30	17,935	-61.8		32	3.7
70	30	18,764	-60.2		03	1.3
60	30	19,731	-57.8		08	2.6
50	30	20,888	-54.9		08	3.[illegible]
40	30	22,324	-52.2		08	4.7
30	28	24,204	-48.6		08	5.0
25	26	25,410	-46.9		08	[illegible].3
20	21	26,910	-43.8		08	6.1
15	19	28,863	-39.0		09	7.1
10	12	31,668	-35.4			

* INTERNATIONAL FALLS, MINN. 969 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	360	11.0	8.7	13	.7
1000	30	98				
950	30	527	12.1	7.3	21	[illegible].2
900	30	980	11.1	4.5	26	2.4
850	30	1,456	9.2	1.5	28	4.0
800	30	1,957	6.4	-1.6	28	5.5
750	30	2,480	3.5	-5.7	28	7.4
700	30	3,042	.3	-9.1	28	8.2
650	30	3,626	-3.4	-12.7	28	9.3
600	30	4,262	-6.9	-17.2	28	11.5
550	30	4,929	-10.7	-22.9	28	13.0
500	30	5,664	-15.5	-28.4	28	13.6
450	30	6,444	-20.8	-33.9	28	14.6
400	30	7,314	-26.6	-37.4	28	18.4
350	30	8,265	-33.2	-43.2	28	21.8
300	30	9,332	-40.6	-47.5	28	25.7
250	30	10,553	-48.7		27	26.5
200	30	11,997	-54.5		27	27.[illegible]
175	30	12,849	-55.6		27	24.1
150	30	13,831	-55.0		28	17.5
125	30	14,997	-54.7		27	12.6
100	30	16,422	-55.3		27	8.[illegible]
80	30	17,846	-55.0		29	4.7
70	30	18,700	-54.4		30	3.0
60	30	19,690	-53.4		35	1.1
50	30	20,867	-52.0		05	1.9
40	30	22,317	-50.3		08	4.0
30	29	24,198	-48.4		08	5.3
25	29	25,402	-46.6		08	6.1
20	29	26,889	-44.0		08	7.4
15	29	28,836	-39.9		09	[illegible].9
10	27	31,643	-34.2		09	9.9
7	18	34,138	-29.1		10	12.6
5	9	36,506	-23.7			
4	5	38,108	-22.5			

JACKSON, MISS. 1004 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	94	21.0	19.6	22	.6
1000	30	128	21.4	19.5	21	.9
950	30	579	22.4	16.1	23	2.9
900	30	1,046	19.8	12.0	23	3.1
850	30	1,537	16.8	7.9	22	3.2
800	30	2,051	13.6	4.7	22	2.8
750	30	2,586	10.3	.8	23	2.6
700	30	3,164	7.2	-3.7	24	2.4
650	30	3,767	3.9	-8.8	25	2.2
600	30	4,418	.1	-12.1	24	2.4
550	30	5,103	-4.0	-17.0	23	2.1
500	30	5,857	-8.5	-22.1	24	2.2
450	30	6,663	-13.7	-27.0	24	3.0
400	30	7,554	-20.0	-32.8	25	3.4
350	30	8,531	-26.9	-40.2	26	4.9
300	30	9,624	-35.1	-47.5	27	7.4
250	30	10,870	-44.5		27	9.6
200	30	12,328	-55.5		27	12.4
175	30	13,169	-60.6		27	14.5
150	30	14,119	-64.5		27	12.3
125	28	15,218	-68.1		27	9.9
100	27	16,555	-69.0		29	3.0
80	27	17,896	-66.3		07	1.6
70	27	18,708	-63.8		08	4.4
60	27	19,661	-60.4		09	6.4
50	27	20,806	-57.2		09	8.1
40	27	22,227	-53.9		09	8.5
30	27	24,090	-50.3		09	10.0
25	26	25,285	-48.3		09	10.6
20	26	26,763	-45.4		09	10.8
15	23	28,687	-43.1		08	12.6
10	13	31,408	-39.0			

JACKSONVILLE, FLA. 1015 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	5	22.9	21.6	30	1.0
1000	30	131	23.0	21.0	30	.8
950	30	577	21.8	17.0	30	1.5
900	30	1,048	19.3	13.4	34	1.0
850	30	1,538	16.4	9.7	01	1.7
800	30	2,053	13.7	4.8	01	1.3
750	30	2,588	10.8	-.1	36	1.7
700	30	3,167	7.7	-5.4	01	1.6
650	30	3,768	4.4	-10.7	35	1.5
600	30	4,422	1.0	-15.4	03	1.2
550	30	5,105	-3.2	-19.3	03	1.6
500	30	5,866	-7.8	-23.8	36	1.9
450	30	6,668	-12.8	-29.2	34	1.7
400	30	7,567	-18.9	-34.2	31	2.6
350	30	8,549	-25.7	-39.5	30	4.3
300	30	9,649	-33.6	-47.0	29	5.8
250	30	10,903	-43.2		28	6.8
200	30	12,369	-54.3		29	8.9
175	29	13,213	-60.2		29	9.9
150	28	14,159	-65.6		29	10.1
125	28	15,258	-68.9		31	7.7
100	28	16,588	-69.3		33	2.4
80	28	17,923	-67.6		04	4.2
70	27	18,730	-64.6		07	6.5
60	27	19,680	-61.0		09	9.1
50	27	20,822	-56.7		09	10.5
40	27	22,248	-53.0		10	11.0
30	27	24,117	-49.7		09	10.8
25	26	25,316	-47.5		09	11.3
20	25	26,796	-45.5		08	12.9
15	25	28,726	-42.0		09	16.0
10	17	31,509	-35.9		09	17.3
7						
5						

JOHN F. KENNEDY INT. AP NY 1015 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	5	18.1	14.5	31	1.0
1000	30	128	17.5	13.3	31	1.5
950	30	567	16.9	10.9	29	3.3
900	30	1,027	15.2	8.6	28	5.5
850	30	1,510	12.7	5.3	27	7.7
800	30	2,017	10.1	1.1	27	9.5
750	30	2,552	7.6	-3.2	27	10.7
700	30	3,118	4.7	-8.7	27	11.5
650	30	3,717	1.3	-12.6	27	12.5
600	30	4,359	-1.8	-16.7	28	13.8
550	30	5,041	-6.0	-22.2	28	14.5
500	30	5,787	-10.4	-27.3	27	14.6
450	30	6,589	-15.7	-32.2	28	15.1
400	30	7,470	-21.8	-37.8	27	16.1
350	30	8,440	-28.9	-44.1	28	17.3
300	30	9,524	-37.1	-50.4	28	18.5
250	30	10,761	-46.0		28	20.8
200	30	12,212	-56.0		28	20.7
175	30	13,053	-60.0		28	19.3
150	30	14,010	-61.6		28	17.5
125	30	15,140	-61.5		28	12.0
100	30	16,522	-61.3		29	9.1
80	30	17,911	-60.1		30	4.1
70	30	18,746	-58.5		35	1.7
60	30	19,720	-56.4		04	1.9
50	30	20,883	-54.0		09	3.5
40	29	22,321	-51.4		09	5.0
30	28	24,202	-48.3		08	5.0
25	24	25,405	-46.1		09	5.0
20	22	26,898	-43.6		09	4.7
15	17	28,861	-39.9		10	6.4
10	6	31,678	-34.0			

JOHNSTON IS., PACIFIC AREA 1015 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	3	26.2	22.1	08	7.2
1000	30	133	25.2	21.4	08	8.5
950	30	584	21.4	19.1	08	[illegible].8
900	30	1,050	18.6	14.7	09	10.5
850	30	1,539	16.0	10.4	09	9.0
800	30	2,053	13.4	5.4	09	7.4
750	30	2,596	11.4	-1.9	09	6.7
700	30	3,169	8.5	-6.1	10	6.3
650	30	3,778	5.0	-9.8	09	6.2
600	30	4,427	1.4	-15.8	08	6.8
550	30	5,117	-2.4	-20.1	08	6.3
500	30	5,874	-6.9	-24.7	06	4.6
450	30	6,685	-12.6	-28.4	05	3.3
400	30	7,578	-18.4	-35.1	04	2.4
350	30	8,561	-25.4	-41.7	34	1.7
300	30	9,661	-33.9	-48.0	30	2.9
250	30	10,913	-43.8		28	6.3
200	30	12,374	-55.8		27	[illegible].0
175	30	13,212	-62.0		28	10.1
150	30	14,152	-68.1		28	[illegible].6
125	29	15,232	-72.7		29	6.2
100	29	16,536	-74.3		01	2.2
80	29	17,843	-71.4		08	6.8
70	28	18,638	-68.8		09	9.9
60	28	19,567	-65.2		09	12.9
50	28	20,689	-60.8		09	15.5
40	28	22,091	-57.1		09	19.4
30	27	23,928	-53.1		09	24.2
25	27	25,111	-50.0		09	26.4
20	25	26,587	-46.7		09	27.7
15	23	28,506	-43.9		09	26.1
10	14	31,248	-39.5		08	25.0

KEY WEST, FLA. 1013 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	26	3	25.9	21.9	19	[illegible].3
1000	26	118	25.1	21.4	18	[illegible].7
950	26	565	22.3	18.0	18	2.6
900	26	1,038	19.5	14.5	20	3.6
850	26	1,529	16.7	11.3	20	4.1
800	26	2,043	13.5	8.1	21	3.5
750	26	2,581	10.5	4.8	21	3.9
700	26	3,158	7.5	.8	23	4.0
650	26	3,761	3.9	-2.2	23	3.6
600	26	4,412	.3	-9.2	24	2.6
550	26	5,102	-3.1	-14.1	26	2.9
500	26	5,855	-7.6	-17.8	27	3.7
450	26	6,663	-12.4	-23.9	26	4.1
400	26	7,558	-18.1	-29.0	26	4.[illegible]
350	26	8,542	-25.0	-36.2	26	3.6
300	26	9,644	-33.4	-44.8	27	3.8
250	26	10,897	-43.5		27	3.4
200	26	12,359	-55.4		28	4.[illegible]
175	26	13,198	-61.5		31	4.7
150	26	14,141	-67.5		33	5.6
125	26	15,230	-71.9		35	5.0
100	26	16,540	-73.2		03	5.7
80	26	17,852	-70.5		06	7.8
70	26	18,651	-66.9		07	10.0
60	26	19,589	-63.4		08	11.7
50	26	20,720	-59.2		09	13.1
40	26	22,133	-55.4		09	13.5
30	26	23,983	-51.9		09	14.7
25	26	25,171	-49.4		09	16.7
20	25	26,638	-46.8		08	18.1
15	20	28,557	-43.6		08	20.4
10	17	31,308	-39.4		08	20.2
7	12	33,741	-36.6		08	19.3
5	6	36,101	-37.0			

KING SALMON, ALASKA 1011 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	15	6.7	1.8	13	1.8
1000	30	105	7.5	2.2	11	1.8
950	30	522	6.8	1.6	09	2.1
900	30	970	4.3	-.2	07	2.1
850	30	1,433	1.1	-2.5	06	3.7
800	30	1,918	-1.8	-6.1	06	4.2
750	30	2,427	-5.1	-10.4	07	5.1
700	30	2,969	-8.3	-15.0	07	5.5
650	30	3,536	-11.9	-19.6	07	6.4
600	30	4,149	-15.9	-23.8	07	7.7
550	30	4,796	-20.3	-26.8	07	8.6
500	30	5,500	-25.0	-33.3	07	9.7
450	30	6,252	-30.7	-38.9	07	10.2
400	30	7,084	-36.9	-43.8	08	10.5
350	30	7,994	-43.7	-48.2	08	12.1
300	30	9,015	-49.9		08	11.8
250	30	10,200	-51.5		07	10.2
200	29	11,661	-48.3		07	6.0
175	29	12,543	-47.3		08	3.9
150	29	13,561	-47.4		08	3.4
125	29	14,766	-47.3		10	2.4
100	29	16,243	-46.8		10	2.7
80	28	17,719	-47.0		11	2.9
70	28	18,601	-47.2		11	3.2
60	28	19,622	-47.4		10	3.8
50	28	20,827	-47.4		10	4.2
40	27	22,302	-47.2		09	6.4
30	26	24,210	-46.1		09	7.6
25	25	25,429	-44.7		09	9.5
20	22	26,924	-42.6		09	10.8
15	17	28,890	-39.5		09	13.5
10	11	31,680	-35.2			

See reference note at end of table

RAWINSONDE DATA

Average monthly values

JUNE 1968

* KOROR, CAROLINE IS. 1008 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	30	29.1	24.8	12	1.6
1000	30	97	28.2	23.9	12	1.6
950	30	547	23.9	19.5	11	2.5
900	30	1,023	21.1	15.8	11	3.0
850	30	1,517	18.4	12.6	11	3.1
800	30	2,035	15.5	9.2	11	3.6
750	30	2,573	12.7	5.3	10	4.3
700	30	3,158	9.6	1.0	09	4.7
650	30	3,767	6.3	-2.0	09	5.4
600	30	4,423	2.6	-6.7	09	5.8
550	30	5,115	-1.4	-11.0	09	6.2
500	30	5,877	-5.5	-16.9	09	5.9
450	30	6,692	-10.2	-22.5	09	6.1
400	30	7,596	-15.6	-29.5	09	6.0
350	30	8,590	-22.4	-37.1	08	5.4
300	30	9,703	-31.0	-45.0	09	5.3
250	30	10,969	-41.3		09	5.2
200	30	12,444	-53.7		08	6.0
175	30	13,288	-60.6		07	5.8
150	30	14,231	-67.8		07	5.8
125	30	15,307	-74.9		07	5.4
100	30	16,5[illegible]	-78.1		08	5.4
80	30	17,875	-74.5		08	7.6
70	30	18,658	-70.5		09	7.9
60	30	19,580	-67.0		09	10.1
50	30	20,691	-63.2		09	15.5
40	30	22,080	-58.3		09	26.9
30	30	23,913	-53.3		09	32.2
25	29	25,095	-49.9		09	36.0
20	28	26,566	-45.6		09	37.5
15	27	28,510	-39.9		09	29.2
10	27	31,308	-35.5		09	11.9
7	12	33,786	-31.8			
5						

KOTZEBUE, ALASKA 1014 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	5	2.9	-.1	29	3.6
1000	30	121	4.8	-1.4	29	3.6
950	30	538	5.5	-3.4	30	3.6
900	30	981	3.4	-5.8	28	3.4
850	30	1,443	1.2	-7.9	27	3.4
800	30	1,929	-1.4	-11.6	25	3.6
750	30	2,438	-4.2	-14.5	25	4.3
700	29	2,981	-7.2	-17.7	25	4.9
650	29	3,551	-10.8	-20.7	25	4.8
600	29	4,165	-14.7	-24.6	25	5.[illegible]
550	29	4,816	-19.0	-28.8	25	6.9
500	29	5,522	-23.9	-33.4	25	7.3
450	29	6,282	-29.4	-38.1	26	8.5
400	29	7,115	-35.5	-43.4	26	9.6
350	29	8,030	-42.5		26	11.5
300	29	9,055	-49.7		26	11.9
250	29	10,232	-54.2		27	9.[illegible]
200	29	11,681	-48.7		26	3.8
175	29	12,561	-47.4		25	2.1
150	28	13,582	-47.0		22	1.2
125	28	14,790	-46.7		12	.8
100	28	16,271	-46.1		11	1.6
80	28	17,756	-45.7		10	2.6
70	28	18,644	-45.6		09	3.0
60	28	19,673	-45.2		10	3.5
50	28	20,892	-44.5		09	4.7
40	28	22,389	-43.6		09	6.2
30	26	24,331	-42.0		09	[illegible].7
25	26	25,569	-40.7		09	9.2
20	23	27,092	-38.7		09	11.[illegible]
15	14	29,067	-35.5		09	12.4
10						
7						
5						

KWAJALEIN, MARSHALL IS. 1011 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	4	27.1	24.4	08	3.5
1000	29	103	26.3	23.7	08	3.9
950	29	555	23.3	21.0	08	5.1
900	29	1,027	20.6	16.9	09	5.8
850	29	1,520	18.0	14.0	09	5.7
800	29	2,039	15.4	11.2	09	5.0
750	29	2,585	12.7	7.7	09	5.4
700	29	3,162	9.6	4.1	09	4.9
650	29	3,775	5.9	1.0	09	4.6
600	29	4,427	2.1	-3.8	08	4.3
550	29	5,125	-2.0	-7.3	08	4.2
500	29	5,878	-6.3	-12.1	09	3.7
450	29	6,695	-11.1	-17.8	09	4.3
400	29	7,591	-16.8	-23.9	09	4.6
350	29	8,581	-23.4	-33.0	09	4.6
300	29	9,690	-32.0	-41.9	09	3.2
250	29	10,951	-42.1	-51.6	07	2.4
200	29	12,421	-54.6	-62.7	34	.8
175	28	13,260	-61.7	-68.6	30	1.4
150	28	14,198	-69.1		29	2.6
125	28	15,269	-75.6		32	3.3
100	28	16,548	-78.2		09	2.[illegible]
80	28	17,826	-75.5		09	5.0
70	28	18,607	-71.4		08	7.5
60	28	19,525	-67.9		09	10.5
50	27	20,634	-64.0		09	15.[illegible]
40	26	22,014	-60.3		09	24.3
30	26	23,828	-54.7		09	30.5
25	26	25,001	-52.1		09	33.2
20	25	26,457	-48.3		09	34.4
15	25	28,374	-43.6		09	31.6
10	21	31,111	-40.3		09	19.2
7	18	33,567	-36.0		09	12.4
5	6	35,895	-32.1			

LAKE CHARLES, LA. 1013 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	5	22.9	22.1	09	1.1
1000	30	121	24.0	21.8	14	2.7
950	30	571	21.9	18.8	17	5.5
900	30	1,040	19.3	14.3	18	6.4
850	30	1,531	16.8	8.3	18	6.9
800	30	2,045	13.9	4.1	18	6.3
750	30	2,585	11.0	.5	19	4.2
700	30	3,160	7.3	-2.7	20	3.5
650	30	3,766	4.0	-8.8	20	3.3
600	30	4,414	.4	-10.9	21	2.9
550	30	5,103	-3.4	-16.8	21	1.9
500	30	5,856	-7.7	-23.9	22	2.4
450	30	6,667	-13.0	-28.6	23	2.7
400	30	7,558	-19.0	-34.6	26	4.4
350	30	8,538	-26.0	-41.3	25	5.8
300	30	9,636	-34.1	-48.4	26	7.9
250	30	10,888	-43.4		26	10.8
200	30	12,353	-54.2		26	14.2
175	30	13,199	-59.1		26	15.4
150	30	14,155	-63.7		26	12.0
125	30	15,260	-68.6		26	7.9
100	30	16,589	-70.4		26	[illegible].9
80	30	17,923	-67.1		09	3.0
70	30	18,732	-64.7		09	6.6
60	30	19,682	-60.9		09	8.5
50	30	20,824	-57.8		09	9.9
40	30	22,244	-54.3		09	11.1
30	30	24,102	-50.6		09	12.5
25	29	25,295	-47.8		09	12.8
20	28	26,779	-45.1		09	13.3
15	20	28,722	-41.6		09	15.4
10	16	31,494	-37.6		09	18.[illegible]
7						
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LANDER, WYO. 829 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	1,696	10.5	4.1	29	1.5
1000	30	95				
950	30	533				
900	30	994				
850	30	1,481				
800	30	1,989	12.0	1.8	32	1.7
750	30	2,522	9.4	-1.6	30	2.4
700	30	3,097	6.0	-5.4	30	4.7
650	30	3,693	1.7	-8.8	28	7.3
600	30	4,341	-2.7	-13.0	28	10.0
550	30	5,014	-7.2	-18.7	27	12.5
500	30	5,763	-12.4	-24.3	26	13.9
450	30	6,553	-18.0	-29.9	26	14.9
400	30	7,431	-24.3	-36.6	26	15.7
350	30	8,390	-31.7	-43.3	26	16.7
300	30	9,462	-40.1	-49.4	26	18.1
250	30	10,682	-49.5		26	16.8
200	29	12,121	-57.3		27	19.6
175	29	12,962	-58.9		27	19.6
150	29	13,928	-59.5		27	18.1
125	29	15,071	-59.2		27	12.5
100	29	16,465	-60.4		27	8.4
80	29	17,862	-58.4		26	3.9
70	29	18,704	-57.3		24	1.5
60	29	19,681	-56.4		11	2.7
50	29	20,842	-54.9		09	4.8
40	29	22,275	-52.8		09	4.5
30	29	24,144	-49.8		08	6.6
25	28	25,335	-47.7		08	7.2
20	28	26,816	-45.2		09	7.1
15	25	28,763	-41.2		09	7.1
10	19	31,538	-34.8		08	6.2
7	10	34,035	-32.1			
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* LIHUE KAUAI, HAWAII 1015 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	36	23.5	20.6	07	5.1
1000	30	166	23.0	19.9	07	6.3
950	30	609	19.8	17.7	08	8.2
900	30	1,077	16.6	14.2	08	9.0
850	30	1,563	13.9	10.4	09	9.1
800	30	2,073	12.0	1.6	09	9.5
750	30	2,607	10.6	-7.6	09	9.9
700	30	3,185	8.8	-12.3	09	9.3
650	30	3,791	5.3	-15.0	09	8.3
600	30	4,443	.9	-18.2	10	6.9
550	30	5,127	-4.1	-21.6	09	7.0
500	30	5,881	-9.0	-25.9	09	6.7
450	30	6,686	-14.8	-30.9	08	6.0
400	29	7,570	-20.9	-37.1	08	5.6
350	29	8,544	-27.7	-43.5	06	3.8
300	29	9,635	-35.9	-50.4	36	3.7
250	29	10,875	-45.9		34	3.4
200	29	12,324	-56.6		31	3.5
175	29	13,160	-62.2		30	3.5
150	29	14,101	-66.5		28	2.7
125	29	15,196	-69.3		26	1.2
100	29	16,520	-71.5		09	1.5
80	29	17,861	-69.6		09	5.4
70	29	18,660	-67.0		09	8.0
60	29	19,577	-63.7		09	11.3
50	29	20,705	-60.3		09	14.2
40	29	22,110	-55.9		09	16.6
30	28	23,956	-52.1		09	19.2
25	28	25,140	-50.3		09	20.2
20	28	26,604	-47.9		09	21.5
15	28	28,516	-44.7		09	21.0
10	25	31,253	-41.4		08	21.8
7	23	33,703	-37.2		09	25.6
5	19	36,0[illegible]	-33.0		09	26.9
4	12	37,601	-30.9			

LITTLE ROCK, ARK. 1005 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	79	20.3	19.2	23	1.5
1000	30	122	20.9	19.2	23	2.0
950	30	572	22.4	16.8	23	5.5
900	30	1,039	19.5	13.6	23	5.6
850	30	1,530	16.4	9.7	23	5.3
800	30	2,044	13.4	5.6	23	4.8
750	30	2,583	10.3	.5	23	4.0
700	30	3,157	7.1	-2.9	24	3.8
650	30	3,756	3.8	-8.4	24	3.5
600	30	4,410	.1	-13.9	24	2.9
550	30	5,095	-4.2	-18.8	23	2.5
500	30	5,848	-8.8	-23.4	24	3.2
450	30	6,650	-14.3	-28.3	25	4.1
400	30	7,542	-20.3	-32.4	26	5.4
350	30	8,517	-27.5	-39.1	26	5.7
300	30	9,607	-35.9	-46.9	26	7.7
250	30	10,849	-45.4		26	9.3
200	29	12,299	-56.1		27	13.7
175	27	13,146	-60.3		26	14.2
150	27	14,100	-63.2		27	12.6
125	27	15,213	-65.9		28	10.1
100	27	16,561	-67.1		27	5.6
80	27	17,913	-64.7		35	1.6
70	27	18,731	-62.7		07	3.6
60	27	19,688	-59.5		09	4.8
50	27	20,836	-56.0		09	6.1
40	27	22,266	-52.8		09	6.7
30	23	24,143	-49.5		09	8.1
25	23	25,362	-47.3		09	8.6
20	22	26,829	-44.0		09	8.8
15	20	28,768	-40.9		09	10.3
10	11	31,530	-37.1			
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MCGRATH, ALASKA 1000 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	28	103	9.4	5.7	23	.9
1000	28	107			24	1.3
950	28	534	10.2	2.2	28	1.8
900	28	982	7.2	-.4	28	.6
850	28	1,450	3.9	-2.8	01	.6
800	28	1,939	.2	-4.5	04	1.0
750	28	2,449	-3.3	-7.2	07	1.7
700	28	2,996	-6.8	-10.9	09	1.1
650	28	3,566	-10.4	-15.1	09	1.[illegible]
600	28	4,183	-14.4	-20.9	09	2.9
550	27	4,828	-19.1	-25.8	09	3.1
500	27	5,535	-24.1	-30.6	09	3.8
450	27	6,292	-29.9	-36.8	09	4.2
400	27	7,123	-36.1	-43.5	11	4.7
350	27	8,038	-42.7	-47.8	12	4.3
300	27	9,062	-49.7		12	5.3
250	27	10,239	-54.2		09	4.5
200	27	11,679	-50.4		09	3.4
175	27	12,554	-48.6		10	2.7
150	27	13,570	-47.6		10	2.6
125	27	14,775	-47.1		11	2.4
100	26	16,248	-46.5		10	2.8
80	26	17,729	-46.4		11	3.2
70	26	18,614	-46.5		10	4.1
60	25	19,637	-46.3		10	4.5
50	25	20,849	-45.8		09	5.4
40	24	22,337	-45.0		09	[illegible]
30	22	24,263	-43.4		09	8.6
25	22	25,492	-42.1		09	10.3
20	21	27,004	-40.3		09	11.5
15	14	28,998	-38.1		09	14.7
10	[illegible]	31,831	-33.4			
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+ MAJURO, MARSHALL IS. 1012 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	3	28.7	25.0	09	2.7
1000	30	105	27.1	22.0	10	3.1
950	30	555	23.3	18.5	10	4.3
900	30	1,029	20.5	15.2	10	5.5
850	30	1,523	18.0	11.9	10	5.5
800	30	2,040	15.4	8.9	10	5.6
750	30	2,586	12.9	4.6	10	5.8
700	30	3,165	9.9	1.2	09	5.1
650	30	3,777	6.6	-3.1	09	5.0
600	30	4,432	2.7	-7.9	10	5.1
550	30	5,125	-1.0	-12.1	10	5.2
500	30	5,888	-5.3	-17.5	11	4.1
450	29	6,703	-10.2	-22.4	11	3.8
400	29	7,610	-15.4	-27.7	10	3.3
350	29	8,606	-22.1	-35.3	10	3.0
300	29	9,721	-30.5	-44.2	09	3.[illegible]
250	29	10,991	-40.8	-51.9	07	3.7
200	29	12,471	-53.2		03	3.2
175	28	13,318	-60.1		02	2.7
150	28	14,264	-67.4		32	3.2
125	28	15,344	-74.3		28	3.[illegible]
100	28	16,633	-76.7		07	.4
80	28	17,921	-74.1		08	3.9
70	28	18,704	-71.4		09	4.[illegible]
60	27	19,624	-66.5		09	7.2
50	27	20,739	-62.1		09	14.0
40	27	22,132	-58.2		09	25.1
30	24	23,962	-53.6		09	30.7
25	23	25,138	-50.3		09	33.[illegible]
20	19	26,607	-45.3		09	37.6
15	15	28,558	-39.7		09	29.0
10	[illegible]	31,322	-34.2			
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+ MARCUS IS., N. PACIFIC 1013 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	9	28.7	23.1	11	1.4
1000	30	123	25.8	19.2	12	1.7
950	30	570	21.8	15.2	15	1.5
900	30	1,041	18.9	11.5	18	2.0
850	30	1,531	17.0	6.1	19	2.4
800	30	2,047	15.7	-.8	19	1.5
750	30	2,590	13.4	-4.6	19	1.5
700	30	3,170	10.4	-7.2	22	1.4
650	30	3,780	7.0	-11.0	24	1.8
600	30	4,437	3.2	-14.6	27	2.1
550	30	5,132	-.8	-19.6	29	2.3
500	30	5,892	-5.2	-24.1	28	1.8
450	30	6,703	-10.2	-28.2	29	2.8
400	30	7,611	-16.0	-33.6	30	2.8
350	30	8,603	-22.9	-39.9	32	3.6
300	30	9,714	-31.3	-47.2	33	4.2
250	30	10,979	-41.4		35	5.3
200	30	12,454	-53.3		36	7.0
175	30	13,301	-60.2		36	7.2
150	30	14,245	-67.3		36	7.1
125	30	15,327	-73.2		35	6.6
100	30	16,622	-75.9		01	4.2
80	30	17,920	-72.5		06	5.8
70	30	18,712	-68.0		08	7.5
60	30	19,649	-63.1		09	10.4
50	30	20,781	-59.6		09	12.1
40	28	22,196	-54.9		09	14.8
30	27	24,052	-50.8		10	17.8
25	27	25,246	-48.2		09	18.0
20	27	26,725	-45.7		09	18.7
15	26	28,656	-42.8		09	20.0
10	22	31,411	-38.6		09	23.1
7	13	33,875	-36.2			
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* MEDFORD, OREG. 970 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	401	12.7	6.8	27	.5
1000	30	167				
950	30	582	14.0	6.6	29	1.1
900	30	1,035	12.2	5.5	31	1.6
850	30	1,513	9.7	2.7	29	.9
800	30	2,015	7.6	-4.1	28	1.9
750	30	2,565	5.9	-10.4	27	4.2
700	30	3,107	3.0	-13.6	27	5.9
650	30	3,701	-.4	-17.6	27	8.0
600	30	4,340	-4.1	-21.6	27	9.4
550	30	5,016	-8.2	-23.8	27	11.6
500	30	5,756	-13.1	-27.3	27	13.6
450	30	6,565	-18.8	-31.1	27	15.0
400	30	7,419	-25.0	-36.8	27	17.6
350	30	8,376	-32.4	-41.9	28	19.1
300	30	9,445	-40.5	-49.8	28	20.4
250	30	10,663	-49.7		28	22.2
200	30	12,097	-57.3		27	22.1
175	30	12,936	-59.2		27	21.8
150	28	13,899	-59.6		27	19.1
125	28	15,040	-59.3		27	15.5
100	28	16,436	-59.3		27	9.9
80	28	17,836	-58.2		26	3.4
70	28	18,677	-57.4		28	1.2
60	28	19,653	-56.1		08	1.2
50	28	20,815	-54.7		09	3.0
40	27	22,250	-52.8		09	3.5
30	25	24,115	-50.0		09	5.2
25	25	25,312	-48.1		09	4.8
20	25	26,791	-45.4		08	6.0
15	24	28,724	-41.6		08	7.8
10	15	31,524	-35.7		09	8.0
7	10	34,005	-31.4			
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MERIDA, MEXICO 1013 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	11	23.3	22.9	09	3.1
1000	30	125	24.1	23.2	10	5.6
950	30	576	22.8	19.8	13	[illegible].2
900	30	1,067	20.8	14.8	13	8.5
850	30	1,541	18.5	10.4	13	6.6
800	30	2,059	15.8	6.1	12	[illegible].8
750	30	2,601	12.6	3.0	13	[illegible].1
700	30	3,181	9.1	-1.7	13	4.7
650	30	3,784	5.7	-6.5	13	[illegible].1
600	30	4,443	2.1	-12.8	12	3.0
550	30	5,131	-1.8	-17.3	11	2.8
500	30	5,894	-6.2	-22.4	08	[illegible].3
450	30	6,705	-11.1	-28.5	08	2.0
400	30	7,607	-16.7	-34.9	02	1.8
350	30	8,598	-23.2	-40.6	33	1.4
300	30	9,709	-31.4	-47.5	32	3.2
250	30	10,973	-41.4		31	3.0
200	30	12,449	-53.0		31	5.8
175	29	13,296	-59.8		33	5.7
150	29	14,242	-66.7		35	4.7
125	29	15,325	-72.7		03	5.4
100	28	16,624	-74.1		06	7.5
80	27	17,938	-69.4		08	10.3
70	27	18,740	-66.4		09	10.2
60	27	19,683	-62.5		09	11.8
50	27	20,816	-58.9		08	16.3
40	27	22,232	-54.1		09	19.6
30	27	24,094	-50.0		09	19.7
25	23	25,295	-48.0		09	20.8
20	20	26,774	-45.5		08	21.2
15	15	28,708	-42.5		09	23.4
10						
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MIAMI, FLA. 1014 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	4	24.1	22.4	19	.9
1000	30	128	24.4	22.5	19	1.6
950	30	578	22.1	19.7	20	4.4
900	30	1,048	19.4	15.8	21	4.1
850	30	1,539	16.6	12.2	21	3.8
800	30	2,054	13.8	8.8	22	3.8
750	30	2,589	10.8	5.4	23	4.2
700	30	3,170	7.6	1.8	23	4.5
650	30	3,775	4.3	-2.4	23	4.5
600	30	4,426	.6	-7.0	24	5.3
550	30	5,111	-3.0	-12.9	25	4.2
500	30	5,871	-7.3	-18.5	26	3.6
450	30	6,682	-12.0	-24.6	26	4.4
400	30	7,579	-17.6	-29.9	27	4.7
350	30	8,566	-24.3	-36.9	27	4.7
300	30	9,672	-32.8	-44.9	27	5.4
250	30	10,930	-42.9		28	5.3
200	30	12,397	-54.9		29	5.3
175	30	13,238	-61.1		30	6.9
150	30	14,182	-66.8		32	7.4
125	29	15,273	-70.3		35	5.8
100	29	16,591	-71.8		03	4.8
80	29	17,916	-68.5		07	7.3
70	29	18,720	-65.8		08	10.4
60	29	19,666	-61.8		08	12.5
50	28	20,806	-57.6		09	15.0
40	28	22,227	-54.0		10	15.0
30	28	24,090	-50.0		09	14.4
25	26	25,291	-48.3		09	14.0
20	23	26,780	-45.7		09	17.3
15	20	28,702	-42.4		09	19.3
10	14	31,464	-38.9		09	22.3
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MIDLAND, TEXAS 914 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	874	19.0	15.7	15	2.6
1000	30	91				
950	30	539				
900	30	1,007	20.4	15.3	16	4.9
850	30	1,501	19.4	11.6	18	8.3
800	30	2,022	17.4	6.4	20	3.3
750	30	2,568	15.0	-.6	33	.6
700	30	3,152	11.3	-5.2	36	2.5
650	30	3,761	6.7	-8.7	01	3.8
600	30	4,417	1.6	-12.9	36	4.0
550	30	5,100	-3.6	-18.2	35	5.3
500	30	5,857	-8.8	-24.2	35	4.8
450	30	6,662	-14.1	-30.3	32	3.3
400	30	7,549	-20.3	-35.8	30	5.0
350	30	8,525	-27.5	-41.6	29	5.7
300	30	9,615	-36.3	-48.8	28	6.8
250	30	10,856	-45.5		26	7.5
200	30	12,310	-55.7		26	11.4
175	30	13,152	-60.2		26	12.8
150	30	14,105	-63.7		26	13.0
125	30	15,215	-66.5		26	10.3
100	30	16,558	-68.6		24	4.8
80	30	17,896	-66.6		11	.9
70	30	18,709	-63.6		09	5.3
60	30	19,661	-60.2		10	7.1
50	30	20,808	-56.8		09	7.7
40	30	22,231	-53.8		09	9.8
30	29	24,093	-50.2		09	10.6
25	26	25,292	-47.8		09	10.2
20	23	26,772	-45.1		08	11.5
15	20	28,696	-42.4		08	12.0
10	14	31,464	-35.9		09	14.5
7	7	33,943	-33.4			
5	5	36,369	-30.5			

MONTERREY, MEXICO 966 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	20	423	22.0	20.7	13	.5
1000	20	117				
950	20	564	21.9	19.6	11	.9
900	20	1,035	20.1	16.9	13	2.5
850	20	1,529	18.5	13.1	13	3.6
800	20	2,048	16.5	8.2	15	1.7
750	20	2,590	13.4	1.9	03	.8
700	20	3,174	9.6	-1.9	35	2.5
650	20	3,782	5.6	-6.4	33	3.6
600	20	4,436	1.1	-11.3	33	3.7
550	20	5,125	-3.4	-16.5	36	4.4
500	20	5,879	-7.9	-21.0	33	3.3
450	20	6,686	-12.8	-27.9	30	1.9
400	20	7,582	-18.5	-35.0	28	3.0
350	20	8,565	-25.6	-40.6	27	5.7
300	20	9,666	-33.9	-47.8	25	7.6
250	20	10,919	-43.3		25	11.9
200	20	12,387	-54.2		24	14.8
175	20	13,233	-60.0		24	14.1
150	20	14,181	-66.2		24	12.6
125	20	15,271	-71.5		23	5.6
100	20	16,580	-73.4		17	1.9
80	20	17,896	-68.6		08	5.4
70	20	18,704	-64.5		09	8.9
60	20	19,651	-61.7		09	10.9
50	20	20,790	-58.0		08	12.8
40	20	22,207	-54.4		08	13.6
30	20	24,070	-50.0		08	15.0
25	19	25,267	-47.2		08	14.9
20	17	26,757	-44.7		07	15.7
15	16	28,686	-41.8		08	17.6
10	6	31,481	-36.3			
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See reference note at end of table

RAWINSONDE DATA

Average monthly values

MONTGOMERY, ALA. 1008 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	61	20.6	18.8	27	.5
1000	30	132	21.5	19.0	27	.9
950	30	583	22.5	16.1	28	2.3
900	30	1,050	19.7	13.0	25	2.0
850	30	1,541	16.5	9.9	24	2.8
800	30	2,055	13.4	5.4	26	2.5
750	30	2,595	10.8	-.9	27	2.5
700	30	3,169	7.6	-5.4	29	2.6
650	30	3,776	4.2	-9.6	28	1.7
600	30	4,424	.4	-14.2	26	2.4
550	30	5,117	-3.4	-19.1	28	1.9
500	30	5,865	-8.0	-24.2	29	2.8
450	30	6,677	-13.5	-28.9	29	2.7
400	30	7,563	-19.3	-34.9	29	3.6
350	30	8,543	-26.4	-40.2	28	4.8
300	30	9,639	-34.7	-48.0	28	5.3
250	30	10,888	-44.0		28	8.5
200	30	12,350	-54.7		29	11.6
175	30	13,194	-60.0		28	13.7
150	30	14,145	-64.6		28	12.7
125	30	15,248	-68.4		28	8.3
100	30	16,581	-69.1		28	4.2
80	30	17,922	-66.6		06	2.0
70	30	18,733	-64.3		08	4.4
60	30	19,684	-60.6		08	7.0
50	30	20,830	-56.9		09	7.7
40	30	22,254	-53.5		09	8.1
30	29	24,118	-50.0		09	10.1
25	29	25,315	-47.6		09	10.5
20	28	26,800	-44.9		09	11.3
15	26	28,745	-41.1		08	12.5
10	26	31,526	-36.8		09	15.1
7	14	34,020	-33.2		09	16.0
5	10	36,388	-29.8			

* NANTUCKET, MASS. 1014 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	14	14.6	14.1	23	1.2
1000	29	132	14.9	13.0	24	2.2
950	29	569	15.9	11.3	27	3.8
900	29	1,027	14.3	7.8	27	5.7
850	29	1,509	12.1	4.1	28	7.4
800	29	2,015	9.5	1.3	27	9.6
750	29	2,551	6.6	-2.6	27	10.8
700	29	3,113	4.1	-8.0	27	12.2
650	29	3,711	.8	-12.2	27	13.3
600	29	4,351	-3.0	-15.4	27	13.9
550	29	5,029	-6.9	-20.8	27	14.0
500	29	5,773	-11.2	-26.8	27	15.0
450	29	6,572	-16.5	-32.5	27	15.8
400	29	7,450	-22.7	-38.5	27	16.0
350	29	8,416	-29.7	-44.1	27	17.0
300	29	9,498	-37.5	-50.6	27	18.9
250	29	10,733	-46.5		27	19.1
200	29	12,181	-56.2		28	20.8
175	29	13,023	-58.2		28	20.7
150	29	13,981	-62.1		28	17.7
125	29	15,114	-60.5		28	13.5
100	29	16,502	-60.1		29	9.1
80	28	17,893	-59.1		30	5.5
70	28	18,732	-57.7		32	2.8
60	28	19,709	-56.2		34	1.3
50	27	20,874	-54.5		06	2.4
40	27	22,311	-52.1		09	3.6
30	27	24,187	-49.0		09	4.4
25	27	25,389	-47.0		08	4.9
20	23	26,881	-44.3		08	5.3
15	21	28,828	-40.3		09	7.1
10	19	31,636	-34.6		11	6.8
7	12	34,147	-30.3			
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NASHVILLE, TENN. 995 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	180	18.7	17.1	15	.9
1000	30	135				
950	30	579	21.1	13.4	24	3.4
900	30	1,044	18.4	10.4	25	4.9
850	30	1,533	15.2	7.0	26	5.0
800	30	2,044	12.2	1.9	26	5.3
750	30	2,581	9.8	-5.0	27	5.5
700	30	3,153	7.1	-9.2	27	6.2
650	30	3,756	3.7	-13.0	27	6.3
600	30	4,405	-.2	-16.2	27	6.7
550	30	5,087	-4.3	-20.7	27	6.9
500	30	5,841	-9.1	-24.6	27	7.6
450	30	6,644	-14.5	-29.7	28	7.6
400	30	7,531	-20.6	-35.6	27	8.7
350	30	8,505	-27.4	-41.3	27	9.1
300	30	9,596	-35.9	-49.0	27	10.6
250	30	10,837	-45.5		27	12.6
200	30	12,288	-56.2		28	15.1
175	30	13,127	-60.8		28	15.5
150	30	14,079	-63.2		28	14.8
125	30	15,195	-65.1		28	11.4
100	30	16,549	-66.0		27	6.3
80	30	17,908	-63.9		30	2.3
70	30	18,728	-62.1		07	2.5
60	30	19,685	-59.4		08	4.1
50	30	20,835	-56.1		08	5.1
40	30	22,264	-53.0		09	5.8
30	30	24,130	-49.8		08	6.4
25	30	25,328	-47.1		08	7.3
20	29	26,817	-44.0		08	7.7
15	24	28,758	-41.0		09	9.0
10	9	31,569	-35.9			
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* NOME, ALASKA 1015 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	5	3.8	-.9	33	1.9
1000	30	124	6.1	-.2	31	2.0
950	30	546	6.0	-2.5	27	1.6
900	30	986	3.6	-5.6	24	2.4
850	30	1,448	1.5	-9.4	24	2.5
800	30	1,935	-.8	-12.8	24	2.7
750	30	2,447	-3.4	-16.1	24	2.9
700	30	2,991	-6.4	-18.7	24	3.1
650	30	3,564	-9.7	-22.6	25	3.4
600	30	4,182	-13.7	-25.6	25	3.6
550	29	4,835	-18.2	-28.6	26	3.9
500	29	5,545	-23.1	-32.9	28	3.3
450	29	6,304	-28.6	-37.4	29	4.1
400	29	7,144	-34.8	-42.1	30	4.5
350	29	8,063	-41.8	-43.9	30	6.1
300	29	9,091	-49.4		30	7.1
250	29	10,266	-56.2		30	7.1
200	29	11,697	-50.7		31	2.5
175	29	12,571	-48.8		30	1.0
150	29	13,585	-48.2		36	.7
125	29	14,789	-47.3		09	1.0
100	29	16,268	-46.4		10	1.5
80	29	17,749	-46.5		09	2.7
70	29	18,635	-46.3		09	3.4
60	29	19,660	-45.9		10	4.2
50	28	20,880	-45.5		09	5.1
40	28	22,370	-44.6		09	6.4
30	28	24,300	-43.3		09	8.5
25	27	25,531	-42.0		09	8.6
20	27	27,046	-40.5		09	11.1
15	24	29,026	-37.4		09	12.2
10	21	31,861	-32.5		08	14.3
7	13	34,393	-27.7		09	17.5
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NORTH PLATTE, NEBR. 915 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	848	13.8	10.0	06	.7
1000	30	87				
950	30	525				
900	30	987	15.9	10.2	13	.8
850	30	1,474	16.3	7.2	23	3.8
800	30	1,988	14.5	3.8	24	5.1
750	30	2,527	11.5	-.1	26	4.6
700	30	3,105	8.1	-3.6	27	5.8
650	30	3,707	4.0	-6.6	27	7.4
600	30	4,359	-.7	-12.0	28	9.1
550	30	5,041	-5.5	-18.2	27	9.6
500	30	5,790	-10.6	-23.6	27	10.8
450	30	6,587	-16.1	-29.0	27	12.0
400	30	7,471	-22.4	-36.5	27	13.7
350	30	8,437	-29.9	-43.4	26	13.6
300	30	9,516	-38.3	-50.2	26	14.2
250	30	10,746	-47.4		25	15.1
200	30	12,189	-57.0		25	15.3
175	30	13,027	-60.4		26	15.0
150	30	13,984	-61.7		26	15.9
125	30	15,114	-61.4		27	12.7
100	30	16,497	-61.3		26	8.2
80	30	17,885	-60.2		25	3.4
70	29	18,719	-59.3		27	1.1
60	29	19,688	-57.5		01	1.1
50	29	20,844	-55.5		08	2.5
40	29	22,274	-53.1		08	3.9
30	29	24,140	-50.2		07	4.5
25	28	25,331	-48.7		08	5.2
20	26	26,800	-46.6		08	5.5
15	26	28,724	-43.1		08	5.9
10	19	31,473	-39.1		08	6.1
7	10	33,973	-36.4		08	4.4
5	5	36,355	-32.3			

OAKLAND, CALIF. 1014 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	8	13.2	10.7	27	.8
1000	30	120	12.7	10.4	26	1.5
950	30	561	15.0	5.8	29	3.6
900	30	1,014	19.0	-1.9	31	6.2
850	30	1,503	17.4	-5.1	31	4.7
800	30	2,017	14.2	-7.1	31	3.9
750	30	2,557	10.8	-10.0	30	4.0
700	30	3,128	7.1	-13.4	29	5.0
650	30	3,729	3.6	-16.3	29	5.5
600	30	4,379	-.3	-19.6	28	7.3
550	30	5,061	-4.9	-22.8	28	7.7
500	30	5,811	-10.2	-27.8	27	9.8
450	30	6,610	-15.9	-32.4	27	11.4
400	30	7,492	-22.2	-37.9	27	12.2
350	30	8,459	-29.7	-44.2	28	13.6
300	30	9,539	-38.4	-51.7	28	15.0
250	30	10,767	-47.9		28	16.2
200	30	12,206	-57.7		28	16.8
175	30	13,041	-61.1		27	17.4
150	30	13,994	-62.7		27	15.2
125	30	15,115	-63.5		26	13.4
100	30	16,485	-63.4		27	8.3
80	30	17,860	-61.8		26	2.1
70	30	18,689	-60.0		14	.7
60	30	19,654	-58.2		10	2.2
50	30	20,806	-56.3		09	4.0
40	30	22,231	-54.0		09	5.1
30	30	24,089	-51.0		08	6.1
25	28	25,274	-48.6		08	6.4
20	28	26,751	-45.6		08	5.9
15	26	28,689	-41.7		09	7.5
10	17	31,467	-36.2		09	8.0
7	6	33,941	-31.4			
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OMAHA, NEBR. 965 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	403	17.7	14.4	18	2.3
1000	30	91				
950	30	529	18.6	12.9	20	3.7
900	30	997	18.6	9.3	23	7.5
850	30	1,486	16.2	6.6	24	8.7
800	30	2,000	13.8	1.8	26	7.8
750	30	2,537	10.5	-2.7	27	7.5
700	30	3,113	6.8	-6.5	27	8.1
650	30	3,711	2.6	-8.6	27	10.2
600	30	4,360	-1.7	-12.3	27	11.7
550	30	5,039	-6.1	-16.9	28	11.9
500	30	5,787	-11.0	-22.0	28	13.4
450	30	6,582	-16.3	-28.1	28	14.5
400	30	7,466	-22.3	-35.8	28	14.6
350	30	8,432	-29.7	-42.1	28	15.9
300	30	9,512	-38.3	-50.5	28	16.3
250	30	10,740	-47.5		27	17.1
200	30	12,182	-57.4		27	17.0
175	30	13,018	-61.0		27	16.7
150	30	13,973	-61.7		27	17.3
125	30	15,101	-62.2		27	13.5
100	30	16,482	-60.8		27	8.2
80	30	17,868	-60.9		27	3.7
70	30	18,700	-59.4		17	.5
60	29	19,668	-57.4		09	1.7
50	29	20,826	-55.0		08	3.4
40	29	22,258	-52.8		08	4.4
30	29	24,125	-50.1		09	5.1
25	27	25,319	-48.1		09	5.7
20	25	26,797	-45.7		09	5.9
15	21	28,733	-41.8		09	5.9
10	17	31,526	-35.4		08	7.2
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* PAGO PAGO, AMERICAN SAMOA 1014 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	5	28.1	23.6	10	6.4
1000	30	125	26.5	20.8	10	7.5
950	30	577	22.8	17.5	09	9.2
900	30	1,046	19.3	14.3	09	8.9
850	30	1,536	16.6	9.5	09	8.1
800	30	2,052	16.0	1.1	09	7.0
750	30	2,593	13.9	-3.9	09	5.5
700	30	3,177	11.2	-7.1	09	5.4
650	30	3,785	7.9	-11.5	09	5.3
600	30	4,448	4.1	-16.6	09	5.6
550	29	5,142	-.3	-20.2	09	5.4
500	29	5,905	-5.1	-24.3	08	4.5
450	29	6,717	-10.2	-29.2	09	3.9
400	29	7,622	-16.5	-33.7	08	2.5
350	29	8,613	-23.2	-39.7	03	2.1
300	29	9,724	-31.5	-46.7	28	1.4
250	29	10,988	-41.7		25	6.0
200	28	12,464	-53.5		24	8.6
175	28	13,311	-60.2		24	8.0
150	28	14,258	-66.8		24	7.4
125	28	15,342	-73.1		25	5.8
100	28	16,635	-76.9		24	3.7
80	28	17,924	-74.5		17	.6
70	28	18,708	-70.2		11	1.1
60	28	19,642	-63.5		11	2.3
50	26	20,776	-58.9		09	4.0
40	26	22,185	-56.4		08	9.4
30	25	24,023	-52.4		09	14.5
25	25	25,210	-48.8		09	15.0
20	21	26,692	-45.1		09	15.1
15	18	28,625	-42.5		09	12.1
10	6	31,346	-39.3			
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* PEORIA, ILL. 990 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	200	17.4	14.5	18	1.3
1000	30	108				
950	30	550	19.3	11.8	24	5.0
900	30	1,013	16.9	9.8	26	6.5
850	30	1,499	14.4	6.1	26	7.5
800	30	2,009	11.4	1.9	27	7.6
750	30	2,546	8.3	-2.2	27	7.4
700	30	3,114	5.5	-6.6	27	7.7
650	30	3,712	2.0	-11.2	28	8.9
600	30	4,358	-1.9	-14.5	27	10.3
550	30	5,041	-6.0	-19.8	27	11.0
500	30	5,786	-10.5	-24.7	27	12.2
450	30	6,585	-15.8	-30.1	27	13.4
400	30	7,467	-21.9	-36.8	27	15.7
350	30	8,437	-29.1	-43.1	27	16.4
300	30	9,520	-37.7	-49.2	27	16.2
250	30	10,753	-47.3		27	17.1
200	30	12,196	-56.9		28	19.3
175	30	13,034	-61.0		28	19.7
150	30	13,989	-61.4		28	17.6
125	30	15,118	-61.7		27	13.4
100	30	16,497	-62.6		27	8.3
80	30	17,874	-61.5		29	4.3
70	30	18,703	-60.0		31	2.0
60	30	19,671	-57.8		05	1.4
50	30	20,826	-55.2		09	3.8
40	30	22,258	-53.0		09	4.1
30	30	24,123	-50.2		09	5.5
25	30	25,319	-48.0		09	5.6
20	29	26,797	-45.7		08	5.4
15	28	28,727	-41.7		08	6.0
10	28	31,509	-36.2		09	8.4
7	19	34,027	-31.4		10	10.3
5	5	36,435	-26.3			

* PITTSBURGH, PA. 973 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	359	15.7	13.1	24	1.7
1000	30	125				
950	30	566	16.9	10.9	26	3.7
900	30	1,022	15.2	7.9	28	7.6
850	30	1,505	12.7	3.8	28	8.3
800	30	2,012	10.4	-.9	28	7.9
750	30	2,548	7.4	-4.4	28	9.0
700	30	3,112	4.7	-8.4	27	9.3
650	30	3,711	1.5	-12.0	28	11.0
600	30	4,355	-1.9	-16.1	28	11.7
550	30	5,038	-5.9	-21.0	28	12.6
500	30	5,782	-10.5	-25.4	28	12.7
450	30	6,582	-15.9	-30.1	28	13.2
400	30	7,464	-21.9	-36.0	28	14.8
350	30	8,433	-29.1	-42.2	28	15.8
300	30	9,516	-37.3	-48.9	28	17.0
250	30	10,752	-46.3		28	18.4
200	30	12,202	-56.1		28	19.6
175	30	13,042	-59.6		28	18.8
150	30	14,002	-61.0		28	17.0
125	30	15,133	-62.0		28	13.3
100	30	16,512	-62.1		28	8.7
80	30	17,895	-60.7		32	3.1
70	30	18,727	-59.3		03	1.6
60	30	19,696	-57.1		07	2.3
50	30	20,855	-54.6		07	2.6
40	30	22,291	-52.1		07	2.9
30	29	24,171	-49.1		08	3.2
25	29	25,373	-46.9		08	3.7
20	28	26,857	-44.4		08	4.2
15	28	28,798	-40.7		08	5.3
10	27	31,586	-36.0		09	7.1
7	13	34,100	-30.7		10	8.1
5						

* PONAPE, CAROLINE IS. 1006 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	39	28.8	24.3	06	2.1
1000	30	91	28.1	23.2	06	2.1
950	30	543	24.1	18.3	09	2.5
900	30	1,017	21.1	15.2	11	3.3
850	30	1,511	18.3	11.4	10	3.8
800	30	2,029	15.7	7.1	09	4.5
750	30	2,576	13.2	2.7	09	4.6
700	30	3,153	10.2	-.8	09	5.1
650	30	3,765	6.7	-4.4	09	5.1
600	30	4,420	3.0	-8.3	09	5.0
550	30	5,117	-.9	-11.7	08	4.4
500	30	5,877	-4.7	-17.7	08	4.3
450	30	6,697	-9.6	-23.8	08	4.3
400	30	7,601	-15.2	-30.2	09	4.3
350	30	8,597	-22.0	-37.3	09	4.6
300	30	9,713	-30.4	-45.2	09	4.7
250	30	10,982	-40.8	-51.6	08	4.0
200	30	12,461	-53.1		09	2.5
175	30	13,308	-60.0		08	1.5
150	30	14,254	-67.3		30	.6
125	30	15,334	-74.1		31	1.9
100	30	16,620	-77.1		04	2.2
80	30	17,907	-74.4		09	5.0
70	30	18,692	-70.2		09	5.4
60	30	19,614	-67.0		09	7.8
50	30	20,726	-62.7		09	13.6
40	29	22,114	-58.7		09	24.9
30	29	23,941	-53.9		09	31.5
25	29	25,121	-50.2		09	34.0
20	29	26,594	-45.5		09	37.1
15	27	28,537	-40.2		09	30.6
10	25	31,328	-35.5		09	15.1
7	13	33,796	-32.5			
5						

PORTLAND, MAINE 1013 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	20	13.8	11.4	25	.4
1000	30	124	13.4	10.2	26	.5
950	30	556	13.2	7.9	33	1.3
900	30	1,011	11.5	6.3	30	2.0
850	30	1,487	9.2	3.7	28	3.6
800	30	1,989	6.9	.9	29	6.6
750	30	2,515	4.9	-3.6	28	9.1
700	30	3,079	2.2	-6.4	28	11.5
650	30	3,669	-1.1	-10.9	28	13.2
600	30	4,309	-4.6	-13.9	28	14.3
550	30	4,984	-8.3	-20.0	27	15.9
500	30	5,725	-13.0	-25.9	28	16.6
450	30	6,513	-18.0	-31.3	28	18.8
400	30	7,392	-24.0	-37.6	28	19.8
350	30	8,353	-30.9	-43.1	28	22.0
300	30	9,428	-38.8	-49.1	27	23.5
250	30	10,657	-47.2		27	26.2
200	30	12,104	-55.8		28	25.4
175	30	12,948	-58.8		28	22.9
150	30	13,912	-59.7		28	21.8
125	30	15,052	-59.3		28	15.9
100	30	16,450	-58.9		28	10.2
80	30	17,851	-58.3		29	5.4
70	30	18,693	-57.1		32	2.7
60	29	19,671	-55.6		03	1.5
50	29	20,838	-53.8		08	2.1
40	28	22,271	-52.4		08	3.2
30	28	24,141	-49.7		09	5.4
25	27	25,332	-47.6		09	5.7
20	25	26,815	-44.4		09	6.4
15	19	28,755	-41.1		09	7.9
10	13	31,550	-34.2		09	6.2
7	8	34,066	-30.2			
5	7	36,468	-26.1			

* QUILLAYUTE, WASH. 1011 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	58	9.3	8.9	06	.7
1000	30	147	9.7	8.1	06	.7
950	30	574	8.7	5.4	25	1.7
900	30	1,019	6.6	1.1	25	3.0
850	30	1,487	5.0	-4.0	25	3.4
800	30	1,980	2.5	-7.3	25	4.1
750	30	2,499	.3	-11.4	25	5.8
700	30	3,050	-2.6	-16.2	25	7.0
650	30	3,630	-6.2	-19.9	26	8.3
600	30	4,256	-9.5	-22.8	25	10.4
550	30	4,919	-13.7	-26.0	25	12.4
500	30	5,642	-18.3	-29.7	25	14.2
450	30	6,415	-23.8	-34.4	26	15.8
400	30	7,271	-30.0	-40.6	26	17.8
350	30	8,209	-36.6	-44.4	26	20.5
300	30	9,259	-44.1		26	22.3
250	30	10,460	-51.5		27	22.9
200	30	11,894	-54.6		27	22.0
175	30	12,747	-54.9		26	20.0
150	30	13,735	-53.9		26	17.6
125	30	14,904	-54.2		26	13.2
100	30	16,337	-53.7		25	7.9
80	30	17,770	-53.6		25	4.2
70	30	18,628	-53.8		23	1.7
60	29	19,616	-53.5		19	1.0
50	29	20,790	-52.8		11	1.1
40	29	22,234	-51.4		09	2.3
30	29	24,112	-49.2		09	5.1
25	29	25,311	-47.6		09	6.3
20	29	26,792	-45.3		09	7.4
15	27	28,729	-41.3		08	9.2
10	23	31,516	-35.8		09	[illegible]
7	17	34,038	-30.2		09	10.4
5						

RAPID CITY, S. DAK. 903 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	966	11.9	8.4	33	2.2
1000	30	98				
950	30	537				
900	30	992			31	2.2
850	30	1,473	13.4	5.0	32	3.7
800	30	1,982	11.0	2.4	31	4.3
750	30	2,512	8.5	-2.1	30	5.5
700	30	3,085	5.2	-4.3	28	6.1
650	30	3,678	1.3	-7.4	28	8.4
600	30	4,326	-3.0	-11.9	27	10.3
550	30	5,000	-7.3	-17.4	27	12.5
500	30	5,747	-12.2	-23.9	26	14.1
450	30	6,539	-17.6	-30.1	26	16.0
400	30	7,416	-23.7	-36.7	26	16.4
350	30	8,377	-31.3	-43.3	26	16.9
300	30	9,449	-39.7	-49.9	26	16.7
250	30	10,672	-48.6		25	17.3
200	30	12,109	-57.0		25	19.1
175	3	12,949	-59.5		25	17.9
150	30	13,912	-59.3		26	17.4
125	30	15,055	-58.7		27	12.3
100	3	16,456	-58.7		26	7.3
80	30	17,860	-57.6		26	3.8
70	30	18,704	-57.2		27	1.4
60	30	19,681	-56.3		08	1.1
50	30	20,843	-54.6		09	2.8
40	30	22,279	-52.2		08	3.8
30	28	24,151	-49.6		08	4.6
25	25	25,345	-47.9		08	5.3
20	24	26,627	-45.1		09	5.7
15	[illegible]	28,775	-41.2		[illegible]	4.7
10						
7						
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ST CLOUD, MINN. 974 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	316	13.5	11.4	14	.8
1000	30	88				
950	30	524	15.5	9.2	16	1.0
900	30	982	15.1	5.7	26	2.0
850	30	1,465	12.6	3.1	26	2.9
800	30	1,972	9.6	.5	27	4.9
750	30	2,501	6.4	-3.2	28	6.1
700	30	3,069	3.0	-5.9	28	7.4
650	30	3,665	-.7	-9.8	28	8.8
600	30	4,302	-4.7	-14.3	27	10.9
550	30	4,977	-8.7	-17.8	28	12.7
500	30	5,716	-12.9	-23.2	28	14.8
450	30	6,506	-18.1	-30.2	28	16.6
400	30	7,384	-23.8	-36.6	28	19.5
350	30	8,346	-30.9	-41.7	28	21.2
300	30	9,422	-39.1	-48.5	28	21.5
250	30	10,648	-48.3		28	22.5
200	30	12,089	-56.6		27	22.4
175	30	12,932	-58.8		27	22.3
150	30	13,900	-58.6		27	18.7
125	30	15,050	-57.6		27	13.1
100	30	16,458	-59.0		27	8.9
80	30	17,863	-57.8		28	4.6
70	29	18,704	-57.2		30	2.4
60	29	19,683	-55.8		02	1.1
50	29	20,847	-54.2		07	2.3
40	29	22,284	-52.2		08	3.9
30	29	24,155	-49.8		08	4.9
25	28	25,351	-48.1		08	5.3
20	24	26,835	-45.3		09	6.4
15	16	28,789	-41.6		09	8.4
10	12	31,580	-36.0		09	8.9
7	5	34,058	-32.5			
5						

See reference note at end of table

RAWINSONDE DATA

Average monthly values

JUNE 1968

* ST PAUL IS., ALASKA 1017 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s
SURFACE	30	10	2.6	1.9	36	2.4
1000	30	147	2.6	1.5	36	2.6
950	30	561	1.7	-.4	01	2.1
900	30	998	1.8	-6.0	03	2.0
850	30	1,459	1.1	-8.5	04	2.5
800	30	1,945	-1.1	-11.1	05	2.4
750	30	2,456	-3.6	-14.4	04	3.2
700	30	3,000	-6.4	-19.2	05	3.8
650	30	3,573	-9.7	-22.7	05	3.9
600	30	4,191	-13.5	-25.8	04	4.8
550	30	4,843	-17.7	-29.5	05	5.1
500	30	5,554	-22.6	-33.4	05	6.1
450	30	6,310	-28.4	-38.7	05	6.9
400	30	7,153	-34.9	-44.0	05	7.1
350	30	8,071	-42.0	-48.1	05	8.4
300	30	9,098	-49.4		04	9.3
250	30	10,275	-55.2		03	8.5
200	30	11,708	-51.6		03	5.5
175	29	12,577	-50.2		04	3.6
150	29	13,586	-49.1		04	3.2
125	29	14,783	-48.8		07	2.2
100	29	16,252	-47.8		09	3.0
80	29	17,725	-47.6		10	4.0
70	29	18,606	-47.6		10	4.2
60	29	19,623	-47.6		10	5.3
50	28	20,831	-47.5		10	5.3
40	28	22,306	-47.3		09	6.3
30	28	24,211	-46.5		09	8.0
25	28	25,424	-45.3		09	9.2
20	28	26,919	-43.2		09	10.4
15	28	28,869	-40.1		09	11.7
10	23	31,671	-34.4		09	12.7
7	19	34,171	-30.0		08	15.7
5	13	36,565	-25.5		08	21.1
4	7	38,158	-23.8			

SALEM, OREG. 1011 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s
SURFACE	30	61	10.3	8.7	18	1.1
1000	30	150	11.4	8.6	19	.4
950	30	579	11.0	6.8	32	1.1
900	30	1,030	9.2	3.8	28	1.9
850	30	1,503	7.3	-1.3	26	3.8
800	30	2,000	4.9	-5.1	26	5.5
750	30	2,520	2.6	-10.9	27	6.8
700	30	3,081	.5	-14.8	27	8.0
650	30	3,669	-2.7	-18.5	26	9.9
600	30	4,304	-6.5	-22.2	26	10.6
550	30	4,972	-10.6	-26.4	26	12.2
500	30	5,706	-15.5	-28.6	27	13.7
450	30	6,488	-20.5	-30.8	27	17.5
400	30	7,356	-26.7	-37.3	27	19.4
350	30	8,305	-34.0	-42.3	27	20.5
300	30	9,367	-42.0	-46.5	27	22.9
250	30	10,578	-50.1		27	24.6
200	30	12,012	-56.2		27	24.6
175	30	12,858	-57.7		27	22.7
150	30	13,831	-57.2		26	20.6
125	30	14,985	-56.9		26	15.6
100	30	16,397	-57.0		25	10.2
80	29	17,810	-55.9		26	4.9
70	29	18,658	-55.9		24	2.0
60	29	19,639	-55.1		13	.6
50	29	20,805	-54.3		08	2.3
40	28	22,243	-52.2		09	4.8
30	28	24,114	-49.9		09	5.2
25	27	25,311	-48.2		09	5.9
20	27	26,788	-45.8		08	5.7
15	23	28,708	-42.1		08	8.0
10	10	31,486	-35.7			
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SALT LAKE CITY, UTAH 870 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s
SURFACE	30	1,288	13.4	5.2	16	2.0
1000	30	98				
950	30	540				
900	30	1,003				
850	30	1,487	16.7	2.6	16	2.8
800	30	2,002	14.6	-.8	20	2.1
750	30	2,540	11.0	-3.4	25	2.6
700	30	3,115	7.0	-6.3	27	4.6
650	30	3,718	2.4	-9.6	27	6.7
600	30	4,361	-2.0	-14.0	26	9.3
550	30	5,039	-6.8	-17.9	26	11.1
500	30	5,784	-12.1	-24.1	26	11.4
450	30	6,579	-17.5	-31.2	26	12.9
400	30	7,454	-24.0	-37.2	26	13.7
350	30	8,414	-31.6	-44.0	26	12.9
300	30	9,484	-40.5	-50.0	26	13.7
250	30	10,701	-49.8		26	15.0
200	30	12,134	-57.5		26	16.7
175	30	12,972	-59.8		27	18.5
150	30	13,934	-60.4		26	15.6
125	30	15,068	-61.1		26	12.8
100	30	16,452	-61.1		26	7.2
80	30	17,840	-60.0		25	2.2
70	29	18,678	-58.5		17	.8
60	29	19,649	-57.0		10	1.9
50	29	20,810	-54.9		09	3.8
40	29	22,243	-52.7		08	4.7
30	29	24,113	-49.5		08	5.4
25	28	25,310	-47.3		08	5.7
20	25	26,801	-44.5		08	6.3
15	24	28,743	-40.5		09	5.9
10	19	31,555	-34.2		10	5.0
7	6	34,073	-29.6			
5						
4						

SAN DIEGO, CALIF. 998 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s
SURFACE	30	124	15.0	13.6	21	.1
1000	30	107			34	.5
950	30	544	15.2	7.8	24	.8
900	30	1,003	18.2	.5	29	2.2
850	30	1,492	18.2	-2.1	30	4.3
800	30	2,010	16.5	-5.5	29	5.1
750	30	2,552	13.5	-8.1	28	3.2
700	30	3,133	10.0	-12.1	27	2.5
650	30	3,742	6.5	-16.0	25	3.6
600	30	4,398	2.4	-19.7	25	4.5
550	30	5,086	-2.3	-23.3	26	4.8
500	30	5,845	-7.7	-27.5	27	5.7
450	30	6,654	-14.0	-32.7	27	7.6
400	30	7,540	-21.0	-37.7	27	8.1
350	30	8,512	-28.6	-43.4	27	8.9
300	30	9,598	-37.0	-49.9	27	10.7
250	30	10,834	-46.6		27	14.0
200	30	12,280	-56.8		27	15.0
175	29	13,112	-61.0		27	14.6
150	29	14,062	-64.2		26	13.4
125	29	15,173	-65.9		26	10.9
100	29	16,522	-66.7		26	5.5
80	29	17,875	-64.9		21	1.2
70	29	18,693	-62.4		10	2.8
60	29	19,649	-59.8		09	5.4
50	29	20,796	-56.9		09	6.7
40	29	22,219	-53.9		08	8.8
30	29	24,085	-49.8		09	9.7
25	29	25,284	-47.6		09	10.8
20	28	26,769	-45.2		09	10.9
15	23	28,713	-41.9		08	12.1
10	14	31,470	-36.1			
7						
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SAN JUAN, P. R. 1017 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s
SURFACE	30	6	25.4	23.5	12	2.5
1000	30	156	24.9	21.6	11	6.4
950	30	602	22.0	17.9	11	9.3
900	30	1,074	19.1	13.8	11	9.4
850	30	1,564	16.5	9.4	10	8.8
800	30	2,076	13.8	5.0	10	7.8
750	30	2,613	11.1	.1	10	6.9
700	30	3,192	8.1	-5.2	10	5.7
650	30	3,793	4.3	-9.8	10	5.4
600	30	4,447	.5	-14.8	10	4.8
550	30	5,130	-3.1	-19.9	09	3.8
500	30	5,890	-7.3	-25.6	08	2.9
450	30	6,697	-12.6	-29.9	03	1.9
400	30	7,592	-18.8	-34.0	36	2.9
350	30	8,573	-25.9	-40.6	35	4.5
300	30	9,670	-34.3	-48.4	34	6.3
250	30	10,919	-44.1		34	9.4
200	30	12,378	-55.8		34	12.3
175	29	13,216	-62.3		34	12.6
150	29	14,154	-68.1		33	11.8
125	29	15,237	-71.6		32	7.7
100	29	16,551	-72.3		01	2.5
80	29	17,872	-69.4		08	6.5
70	29	18,673	-66.5		08	10.7
60	29	19,614	-62.7		09	13.7
50	29	20,746	-59.6		09	16.8
40	28	22,156	-55.8		09	19.7
30	28	24,001	-52.2		09	21.9
25	27	25,184	-49.1		09	25.7
20	26	26,666	-44.5		09	26.7
15	25	28,606	-41.0		09	27.3
10	16	31,351	-37.5		09	25.8
7						
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* SAULT STE MARIE, MICH. 987 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s
SURFACE	30	221	11.0	9.6	08	.9
1000	30	106				
950	30	534	12.4	8.4	11	.7
900	30	990	12.0	6.0	24	2.2
850	30	1,468	10.1	2.9	26	4.4
800	30	1,970	7.3	.2	27	6.4
750	30	2,499	4.5	-3.7	26	7.5
700	30	3,058	1.3	-7.4	26	8.6
650	30	3,647	-1.9	-11.5	27	9.9
600	30	4,283	-5.6	-15.9	27	10.8
550	30	4,955	-9.2	-19.3	27	12.0
500	30	5,693	-13.5	-24.7	28	14.3
450	30	6,481	-18.6	-31.3	28	15.2
400	30	7,354	-24.9	-37.5	28	16.3
350	30	8,310	-32.2	-42.4	28	18.6
300	30	9,380	-39.9	-48.3	28	21.4
250	30	10,606	-47.2		28	24.6
200	30	12,059	-53.9		28	24.6
175	30	12,912	-56.2		28	22.4
150	29	13,895	-56.3		28	17.2
125	29	15,053	-56.4		28	12.8
100	28	16,469	-56.1		28	10.3
80	28	17,887	-55.9		28	5.5
70	27	18,736	-55.5		29	3.9
60	27	19,723	-54.1		32	2.3
50	27	20,897	-52.5		03	1.7
40	27	22,344	-50.7		07	3.7
30	27	24,230	-48.0		08	5.2
25	26	25,434	-46.3		08	5.7
20	25	26,919	-44.3		09	6.9
15	25	28,861	-40.6		08	8.6
10	23	31,656	-34.8		09	9.5
7	18	34,169	-28.3		09	10.7
5	5	36,599	-23.2			
4						

* SHEMYA, ALASKA 1014 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s
SURFACE	30	38	4.9	3.4	03	.6
1000	30	148	4.1	2.9	05	1.4
950	30	570	1.6	1.1	08	1.2
900	30	999	.7	-2.5	10	.7
850	30	1,459	.6	-7.2	08	.6
800	30	1,945	-.9	-10.2	08	.9
750	30	2,459	-2.8	-13.3	09	1.3
700	30	3,003	-5.7	-16.6	09	1.5
650	30	3,580	-8.8	-18.9	09	1.1
600	30	4,197	-12.7	-23.8	10	.6
550	30	4,853	-17.0	-28.3	07	.3
500	30	5,564	-22.0	-33.8	22	.3
450	30	6,330	-27.5	-39.9	04	1.0
400	30	7,168	-33.8	-45.2	01	1.9
350	30	8,091	-40.8	-47.2	02	2.5
300	30	9,124	-48.1		36	4.0
250	30	10,307	-54.3		33	5.3
200	29	11,728	-53.9		32	5.8
175	29	12,590	-51.9		33	5.5
150	29	13,590	-51.3		33	4.8
125	29	14,775	-51.1		33	3.9
100	29	16,228	-50.5		35	2.0
80	29	17,684	-50.0		05	1.8
70	29	18,557	-49.6		07	2.8
60	29	19,568	-49.2		08	3.3
50	29	20,765	-48.8		09	4.9
40	29	22,232	-48.3		09	5.9
30	29	24,129	-47.6		09	6.4
25	29	25,336	-46.6		09	7.9
20	28	26,826	-44.7		09	9.3
15	28	28,763	-41.7		09	9.4
10	26	31,549	-36.3		09	12.4
7	25	34,044	-31.4		08	14.0
5	20	36,442	-27.8		08	16.0
4	12	38,021	-26.2			

* SHREVEPORT, LA. 1005 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s
SURFACE	30	79	21.7	19.5	18	.8
1000	30	122	21.9	19.4	19	1.5
950	30	571	21.4	16.5	19	5.5
900	30	1,037	19.0	12.8	19	6.1
850	30	1,527	16.1	9.2	19	5.9
800	30	2,041	13.4	4.4	20	5.3
750	30	2,581	10.2	.0	20	4.6
700	30	3,153	6.6	-2.7	20	3.7
650	30	3,760	3.2	-7.5	21	3.2
600	30	4,404	-.4	-12.3	22	3.1
550	30	5,091	-4.5	-17.6	23	2.7
500	30	5,840	-9.3	-20.6	23	3.4
450	30	6,644	-14.3	-26.6	23	4.2
400	30	7,532	-20.3	-33.3	25	4.6
350	30	8,508	-27.5	-39.8	25	5.4
300	30	9,599	-35.8	-47.7	24	6.2
250	30	10,842	-45.5		25	9.8
200	30	12,295	-55.9		26	13.9
175	30	13,135	-60.6		26	15.3
150	30	14,086	-64.2		26	14.1
125	30	15,191	-67.5		26	10.5
100	30	16,530	-69.0		27	4.2
80	30	17,870	-66.4		08	1.5
70	30	18,683	-63.6		08	5.0
60	30	19,635	-60.0		09	6.8
50	30	20,782	-56.8		09	7.9
40	30	22,206	-53.8		09	8.2
30	30	24,067	-50.6		09	9.6
25	30	25,261	-48.2		09	9.9
20	29	26,738	-45.5		09	9.6
15	26	28,660	-43.0		08	12.4
10	23	31,413	-37.5		09	14.9
7	19	33,895	-33.5		09	14.9
5	7	36,281	-30.6			
4						

SPOKANE, WASH. 931 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s
SURFACE	30	717	10.6	5.3	17	2.6
1000	30	115				
950	30	548				
900	30	1,002	13.1	2.4	22	4.6
850	30	1,481	10.7	-.4	23	4.9
800	30	1,983	6.8	-2.4	24	5.5
750	30	2,506	2.9	-4.5	25	6.1
700	30	3,065	-.9	-9.1	25	6.8
650	30	3,649	-4.6	-13.4	26	8.1
600	30	4,279	-8.2	-18.6	26	10.2
550	30	4,942	-12.0	-22.0	26	11.9
500	30	5,673	-16.9	-26.3	26	13.4
450	30	6,448	-22.3	-32.3	26	15.0
400	30	7,311	-28.5	-39.3	26	16.3
350	30	8,255	-35.4	-44.2	26	17.2
300	30	9,311	-43.2	-46.1	25	21.2
250	30	10,517	-50.9		25	22.3
200	29	11,958	-54.8		26	21.2
175	29	12,812	-54.8		26	19.8
150	29	13,801	-54.0		26	17.5
125	29	14,970	-54.4		26	11.9
100	29	16,400	-54.1		26	8.4
80	29	17,832	-54.2		25	4.4
70	29	18,687	-54.1		26	2.1
60	29	19,676	-53.7		14	.6
50	29	20,850	-52.5		08	2.4
40	29	22,296	-51.1		08	4.4
30	29	24,176	-48.9		08	6.2
25	29	25,378	-47.1		09	7.1
20	28	26,866	-44.2		09	7.8
15	25	28,809	-40.9		08	9.1
10	19	31,612	-34.7		09	9.0
7						
5						
4						

* SWAN ISLAND, W. I. 1011 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s
SURFACE	30	10	26.6	24.1	11	4.2
1000	30	109	25.8	23.3	11	5.3
950	30	566	22.8	20.3	12	8.1
900	30	1,032	20.1	16.4	12	8.3
850	30	1,524	17.3	12.9	13	7.7
800	30	2,041	14.5	8.8	13	7.1
750	30	2,586	12.0	3.1	13	6.7
700	30	3,161	8.9	-1.0	13	5.7
650	30	3,772	5.6	-4.8	13	5.6
600	30	4,423	1.8	-9.2	14	4.8
550	30	5,114	-2.1	-13.5	14	4.5
500	30	5,872	-6.4	-17.7	13	4.0
450	30	6,687	-11.3	-23.4	12	2.9
400	30	7,583	-16.9	-29.4	11	1.9
350	30	8,572	-24.1	-36.5	11	1.6
300	30	9,678	-32.3	-44.6	01	1.0
250	30	10,936	-42.7		34	2.8
200	30	12,402	-55.1		34	4.4
175	30	13,241	-62.0		35	4.9
150	30	14,178	-69.0		36	5.3
125	30	15,250	-74.6		03	7.0
100	29	16,542	-75.4		07	8.3
80	29	17,841	-72.7		09	9.8
70	29	18,633	-68.1		09	11.6
60	29	19,569	-64.0		09	13.4
50	29	20,696	-60.6		09	17.2
40	29	22,095	-57.3		09	20.3
30	28	23,934	-52.9		09	23.5
25	27	25,116	-49.6		09	25.2
20	27	26,586	-46.3		09	26.2
15	23	28,526	-41.9		09	25.7
10	20	31,288	-40.2		09	24.3
7	14	33,732	-34.8		09	24.9
5						
4						

TAMPA, FLA. 1014 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s
SURFACE	30	8	24.2	22.4	05	.5
1000	30	127	23.8	21.8	18	.2
950	30	579	21.4	18.9	31	1.3
900	30	1,044	18.9	15.2	31	1.5
850	30	1,535	16.5	11.3	31	.9
800	30	2,050	13.8	7.3	30	.5
750	30	2,594	10.8	3.4	34	.8
700	30	3,165	7.7	-1.3	35	.9
650	29	3,773	4.2	-5.0	36	1.3
600	29	4,420	.6	-10.1	35	1.8
550	29	5,111	-3.0	-15.4	34	2.0
500	29	5,864	-7.5	-20.3	34	2.7
450	29	6,678	-12.2	-25.3	31	3.1
400	29	7,569	-17.8	-31.3	29	4.1
350	29	8,555	-24.5	-38.3	29	5.1
300	29	9,660	-32.9	-45.8	28	6.5
250	29	10,919	-42.6		28	6.9
200	29	12,389	-54.0		30	6.7
175	29	13,235	-60.2		31	7.5
150	29	14,184	-66.1		32	8.3
125	29	15,277	-70.2		34	6.7
100	29	16,599	-71.1		02	2.8
80	29	17,925	-68.8		06	5.3
70	29	18,729	-65.8		08	8.2
60	29	19,674	-62.2		08	11.6
50	29	20,812	-57.7		09	13.5
40	28	22,236	-53.8		10	12.7
30	27	24,099	-50.4		09	12.6
25	27	25,294	-48.4		08	13.2
20	22	26,778	-45.3		08	15.8
15	19	28,711	-41.7		09	18.8
10	12	31,461	-38.0			
7						
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4						

TOPEKA, KANS. 981 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s
SURFACE	30	269	18.6	16.1	18	.8
1000	30	104				
950	30	550	19.9	14.5	21	3.6
900	30	1,014	19.0	10.7	23	5.7
850	30	1,504	17.1	7.5	25	6.3
800	30	2,019	14.1	4.5	25	7.2
750	30	2,560	10.9	.4	26	7.1
700	30	3,134	7.2	-3.5	27	7.3
650	30	3,739	3.4	-9.3	27	7.8
600	30	4,385	-.6	-13.9	27	7.0
550	30	5,069	-5.2	-18.9	28	7.2
500	30	5,817	-10.1	-25.0	27	9.6
450	30	6,615	-15.6	-31.0	28	9.9
400	30	7,501	-21.9	-38.5	27	10.1
350	30	8,471	-28.9	-44.6	27	11.6
300	30	9,555	-37.3	-51.6	26	11.8
250	30	10,791	-46.3		27	13.0
200	30	12,238	-56.8		27	13.5
175	30	13,076	-61.0		26	14.7
150	29	14,026	-62.1		27	14.8
125	29	15,154	-62.2		27	12.3
100	29	16,528	-63.3		26	7.9
80	29	17,901	-62.1		27	2.7
70	29	18,728	-60.5		35	.8
60	29	19,694	-58.5		07	1.9
50	29	20,848	-55.4		07	3.0
40	29	22,279	-52.7		08	4.1
30	28	24,146	-50.0		08	5.2
25	26	25,340	-48.2		09	5.6
20	21	26,826	-45.3		09	5.1
15	9	28,739	-42.1			
10						
7						
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4						

TRUK, CAROLINE IS. 1011 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s
SURFACE	30	2	28.6	24.3	06	1.4
1000	30	98	27.5	22.6	07	1.5
950	30	548	23.4	18.3	10	2.1
900	30	1,023	20.6	14.4	10	3.3
850	30	1,516	17.8	10.9	10	4.2
800	30	2,034	15.3	7.5	10	4.7
750	30	2,578	12.7	3.8	10	4.8
700	30	3,157	9.8	-1.1	10	4.9
650	30	3,767	6.3	-5.2	10	5.3
600	30	4,423	2.5	-9.1	09	5.4
550	30	5,115	-1.3	-13.4	09	5.1
500	30	5,877	-5.5	-18.6	09	4.4
450	30	6,694	-10.2	-24.4	08	4.7
400	30	7,598	-15.7	-31.4	09	4.3
350	30	8,592	-22.5	-37.4	09	4.1
300	30	9,706	-30.8	-45.6	09	3.5
250	30	10,975	-40.9	-52.6	08	2.6
200	30	12,454	-53.2		07	1.3
175	30	13,300	-60.2		28	.3
150	30	14,245	-67.7		32	.7
125	30	15,322	-75.0		36	1.8
100	30	16,602	-77.9		05	3.7
80	30	17,887	-74.5		09	6.3
70	30	18,671	-70.5		09	6.5
60	30	19,595	-66.9		09	8.7
50	30	20,708	-62.7		09	14.9
40	29	22,097	-58.4		09	24.4
30	29	23,930	-53.5		09	31.3
25	29	25,111	-49.9		09	33.8
20	26	26,584	-45.4		09	36.0
15	23	28,522	-40.7		09	30.2
10	15	31,301	-36.6		09	20.1
7	5	33,737	-33.0			
5						
4						

* TUCSON, ARIZ. 922 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s
SURFACE	30	789	20.9	3.1	15	2.6
1000	30	73				
950	30	522				
900	30	998	25.0	4.3	21	1.8
850	30	1,498	22.7	2.1	27	1.7
800	30	2,021	19.1	-1.0	25	2.1
750	30	2,570	15.1	-4.2	23	4.1
700	30	3,151	10.7	-7.9	23	5.6
650	30	3,760	6.3	-11.2	23	5.2
600	30	4,415	1.3	-14.7	22	6.8
550	30	5,101	-3.9	-18.8	23	6.5
500	30	5,855	-8.9	-25.4	25	6.3
450	30	6,659	-14.5	-30.8	26	6.8
400	30	7,545	-21.2	-36.0	27	7.0
350	30	8,517	-28.7	-42.5	27	7.8
300	30	9,601	-37.2	-49.6	27	9.1
250	30	10,835	-46.4		27	11.0
200	30	12,285	-55.8		27	14.0
175	30	13,125	-60.6		26	13.7
150	30	14,076	-63.8		26	12.6
125	30	15,187	-66.2		26	11.2
100	30	16,535	-67.2		25	5.5
80	30	17,881	-66.2		15	.6
70	30	18,695	-63.1		10	3.7
60	30	19,649	-60.0		09	6.1
50	28	20,790	-56.9		09	7.3
40	28	22,214	-53.7		09	8.7
30	28	24,076	-50.5		09	9.8
25	28	25,270	-48.5		09	10.1
20	28	26,745	-45.9		09	10.7
15	27	28,671	-42.7		09	11.8
10	26	31,437	-37.1		09	13.3
7	20	33,929	-32.8		10	13.5
5	15	36,317	-28.2			
4	6	37,958	-24.3			

* VANDENBERG AFB, CALIF. 1002 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s
SURFACE	29	100	10.7	10.0	32	.5
1000	29	118	10.8	10.0	33	.4
950	29	558	15.7	3.2	36	4.9
900	29	1,012	18.6	-3.7	36	5.9
850	29	1,501	17.9	-7.0	35	5.5
800	29	2,016	15.3	-10.0	34	5.5
750	29	2,556	12.5	-13.1	34	5.3
700	29	3,134	9.1	-15.6	32	4.6
650	29	3,738	5.5	-18.8	31	3.2
600	28	4,392	1.5	-22.9	30	4.0
550	28	5,081	-3.2	-26.7	28	4.3
500	28	5,835	-8.3	-30.8	28	5.2
450	28	6,635	-14.4	-35.1	29	6.6
400	28	7,525	-21.4	-40.8	28	7.5
350	28	8,494	-29.3	-46.2	28	8.3
300	28	9,576	-38.1	-53.6	28	9.3
250	28	10,805	-48.0		28	11.8
200	28	12,242	-58.0		27	12.7
175	28	13,075	-62.0		27	13.8
150	27	14,022	-64.0		26	13.0
125	27	15,134	-65.4		26	10.9
100	27	16,489	-66.2		27	5.7
80	27	17,847	-64.1		25	1.7
70	27	18,668	-62.2		12	1.3
60	27	19,624	-59.9		10	2.9
50	27	20,769	-57.7		08	4.8
40	27	22,186	-54.9		08	6.9
30	27	24,034	-52.2		09	7.8
25	27	25,220	-49.7		09	8.1
20	26	26,687	-46.9		09	8.8
15	26	28,608	-43.5		09	9.3
10	23	31,368	-38.1		09	11.0
7	18	33,811	-34.2		09	14.4
5						
4						

See reference note at end of table

NOTE: San Nicolas, Calif. with delayed data.

RAWINSONDE DATA

Average monthly values

Standard pressure surface (mb.)	VICTORIA, TEXAS 1009 MB: No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind: Direction	Resultant Wind: Speed M.p.s.	* WAKE IS., PACIFIC AREA 1015 MB: No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind: Direction	Resultant Wind: Speed M.p.s.
SURFACE	30	33	23.5	22.4	12	1.4	30	5	27.2	23.8	10	4.6
1000	30	109	23.4	22.3	14	2.2	30	134	26.1	23.0	10	5.4
950	30	556	21.7	20.2	17	6.3	30	581	22.4	20.4	10	6.4
900	30	1,027	19.3	16.5	18	6.4	30	1,056	19.6	15.8	10	6.4
850	30	1,518	17.1	11.1	18	6.2	30	1,548	17.1	11.2	10	6.6
800	30	2,034	14.6	6.1	18	5.3	30	2,064	14.8	4.8	10	6.2
750	30	2,576	11.6	2.5	19	4.4	30	2,608	12.7	-1.5	09	6.3
700	30	3,152	8.3	-1.7	20	3.0	30	3,185	9.5	-3.8	09	6.0
650	30	3,757	4.5	-6.3	20	2.7	30	3,794	6.0	-7.6	10	5.9
600	30	4,408	.7	-10.5	20	1.8	30	4,449	2.4	-12.3	09	5.9
550	30	5,098	-3.2	-16.4	24	1.6	30	5,144	-1.5	-16.2	09	5.1
500	30	5,850	-7.8	-21.8	25	1.7	30	5,901	-6.1	-21.6	09	4.0
450	30	6,659	-13.0	-27.8	25	3.0	30	6,714	-11.5	-27.1	09	3.0
400	30	7,551	-18.9	-34.2	26	3.7	30	7,612	-17.2	-34.1	08	2.3
350	30	8,531	-26.0	-40.1	25	5.9	30	8,600	-24.3	-40.8	07	1.7
300	30	9,630	-34.2	-48.0	25	8.2	30	9,705	-32.9	-47.7	05	.8
250	30	10,881	-43.7		24	10.6	30	10,961	-43.1		13	.1
200	30	12,347	-54.1		25	14.5	30	12,425	-55.3		30	1.1
175	30	13,193	-59.6		25	13.9	30	13,264	-61.9		28	2.2
150	30	14,146	-64.8		25	12.9	30	14,202	-68.7		29	2.9
125	30	15,245	-69.5		25	8.0	28	15,280	-73.9		36	3.2
100	30	16,567	-71.8		25	3.1	28	16,574	-75.4		05	4.6
80	30	17,893	-68.3		09	3.5	28	17,876	-72.0		07	6.0
70	30	18,698	-65.4		09	6.6	28	18,668	-68.3		08	8.6
60	30	19,644	-62.0		09	8.8	27	19,602	-64.0		09	11.7
50	30	20,780	-58.5		10	10.2	27	20,731	-59.9		09	15.1
40	30	22,196	-54.8		09	12.1	28	22,138	-55.9		09	18.1
30	30	24,053	-50.5		09	13.6	28	23,984	-52.1		09	21.6
25	29	25,250	-48.2		09	13.3	28	25,172	-49.3		09	23.4
20	27	26,729	-46.1		09	13.8	24	26,646	-46.6		09	24.6
15	26	28,653	-43.2		09	15.6	23	28,562	-41.9		09	24.1
10	15	31,415	-38.7		09	18.0	22	31,298	-41.3		09	23.8
7	5	33,896	-34.1				20	33,744	-37.0		09	24.5
5							8	36,096	-32.9			

Standard pressure surface (mb.)	* WALLOPS IS., VA. NASA 1014 MB: No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind: Direction	Resultant Wind: Speed M.p.s.	WASHINGTON DULLES INT. AP 1005 MB: No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind: Direction	Resultant Wind: Speed M.p.s.
SURFACE	30	3	19.6	18.0	24	1.1	30	85	17.3	15.7	22	.6
1000	30	125	20.4	15.9	25	2.7	30	131	17.6	14.8	23	.7
950	30	570	19.5	12.1	26	5.3	30	573	18.9	11.3	28	3.7
900	30	1,033	17.2	8.6	26	5.9	30	1,035	16.5	7.5	29	5.1
850	30	1,519	14.5	4.3	26	6.6	30	1,520	13.9	4.1	28	5.9
800	30	2,030	11.9	1.1	26	6.7	30	2,029	11.3	.6	27	7.0
750	30	2,565	9.0	-2.6	26	7.2	30	2,566	8.8	-4.1	27	7.4
700	30	3,137	6.0	-7.2	26	7.5	30	3,134	6.0	-8.6	26	9.0
650	30	3,737	2.9	-11.0	26	8.5	30	3,736	2.8	-13.4	27	9.7
600	30	4,385	-.7	-16.2	26	9.4	30	4,381	-.9	-17.1	27	10.6
550	30	5,067	-5.0	-20.7	26	10.2	30	5,064	-4.9	-20.5	27	10.5
500	30	5,819	-9.6	-25.7	26	9.5	30	5,814	-9.4	-25.2	27	11.3
450	30	6,620	-14.8	-30.9	27	10.1	30	6,616	-14.8	-31.1	27	12.4
400	30	7,508	-20.9	-36.2	27	10.7	30	7,502	-20.9	-36.8	27	11.9
350	30	8,483	-27.8	-42.1	27	11.2	30	8,475	-28.2	-43.3	27	12.4
300	30	9,574	-36.0	-49.1	27	11.2	30	9,562	-36.7	-49.8	27	13.4
250	30	10,816	-45.5		27	13.0	30	10,800	-46.1		27	14.3
200	30	12,270	-56.1		27	14.2	30	12,251	-56.0		28	16.3
175	30	13,109	-61.1		28	13.9	30	13,091	-60.7		28	14.2
150	30	14,058	-63.8		28	13.9	30	14,045	-62.6		28	15.0
125	30	15,175	-63.9		28	11.7	30	15,168	-62.7		28	13.3
100	30	16,541	-64.1		28	8.2	30	16,541	-63.3		28	8.7
80	30	17,911	-62.8		32	3.5	30	17,918	-61.5		31	3.8
70	30	18,737	-60.9		03	1.5	30	18,748	-59.9		02	1.3
60	27	19,694	-58.6		07	3.3	29	19,713	-57.5		06	2.0
50	27	20,847	-55.8		08	4.3	29	20,871	-55.0		07	3.2
40	27	22,276	-52.8		08	4.8	29	22,306	-51.9		08	3.8
30	27	24,147	-49.5		08	5.3	28	24,182	-49.1		08	3.8
25	26	25,345	-47.4		08	5.6	26	25,380	-47.1		08	4.7
20	26	26,829	-44.6		08	5.9	23	26,862	-44.4		08	6.3
15	25	28,762	-41.2		09	6.9	19	28,815	-40.4		09	7.0
10	19	31,552	-36.2		09	9.8	17	31,642	-35.3			
7	8	34,006	-32.7									
5												

Standard pressure surface (mb.)	WINNEMUCCA, NEV. 869 MB: No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind: Direction	Resultant Wind: Speed M.p.s.
SURFACE	30	1,312	11.8	.4	29	.2
1000	30	109				
950	30	551				
900	30	1,015				
850	30	1,495	14.9	-.3	33	1.6
800	30	2,006	12.6	-2.7	33	2.5
750	30	2,542	8.9	-5.2	30	3.5
700	30	3,111	5.2	-8.4	26	5.4
650	30	3,708	1.0	-11.5	25	8.4
600	30	4,351	-3.1	-15.5	25	10.7
550	30	5,028	-7.5	-20.2	25	12.0
500	30	5,770	-12.3	-26.0	25	12.3
450	30	6,562	-17.7	-31.2	25	13.7
400	30	7,438	-24.2	-36.3	26	15.7
350	30	8,396	-31.7	-42.2	26	17.7
300	30	9,467	-40.2	-49.8	27	19.1
250	30	10,686	-49.4		27	20.6
200	29	12,116	-57.3		27	20.5
175	29	12,956	-59.5		27	20.4
150	29	13,919	-60.2		26	19.0
125	29	15,054	-61.0		27	15.0
100	29	16,438	-61.3		27	8.2
80	29	17,828	-59.7		28	2.3
70	28	18,663	-58.1		05	.8
60	28	19,636	-57.1		07	2.6
50	25	20,798	-55.7		08	4.2
40	25	22,227	-53.2		08	5.0
30	24	24,091	-50.5		08	6.7
25	22	25,283	-48.4		08	6.1
20	22	26,760	-45.5		08	6.8
15	19	28,699	-41.7		09	8.5
10	13	31,499	-35.6			
7	7	33,994	-31.3			
5						

Standard pressure surface (mb.)	WINSLOW, ARIZ. 850 MB: No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind: Direction	Resultant Wind: Speed M.p.s.	YAKUTAT, ALASKA 1014 MB: No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind: Direction	Resultant Wind: Speed M.p.s.
SURFACE	30	1,492	13.6	-4.4	21	1.1	30	12	6.5	6.1	10	1.0
1000	30	89					30	122	8.1	6.4	11	1.4
950	30	529					30	544	7.2	3.6	14	1.3
900	30	999					30	989	4.5	.8	16	1.8
850	30	1,492			22	.7	30	1,453	2.0	-3.3	15	2.4
800	30	2,011	18.6	-1.5	26	4.0	30	1,940	-.9	-6.3	13	2.5
750	30	2,556	15.0	-4.3	25	4.9	30	2,451	-3.9	-10.2	13	4.1
700	30	3,139	10.6	-7.1	24	4.8	30	2,994	-7.0	-13.6	13	4.9
650	30	3,743	5.7	-10.6	23	5.5	30	3,568	-10.4	-17.8	12	5.4
600	30	4,398	.6	-14.4	23	6.3	30	4,182	-14.2	-22.0	12	6.1
550	30	5,082	-4.6	-18.8	23	6.3	29	4,826	-18.6	-27.5	13	7.1
500	30	5,833	-9.8	-25.2	25	7.1	29	5,536	-23.4	-31.8	13	7.4
450	30	6,631	-15.4	-31.0	26	7.8	28	6,286	-29.2	-37.3	13	8.4
400	30	7,516	-22.3	-36.7	26	8.0	28	7,123	-35.3	-43.2	13	9.6
350	30	8,484	-29.8	-42.7	26	9.2	28	8,039	-42.2	-43.2	13	11.6
300	30	9,563	-38.3	-49.3	26	10.7	28	9,065	-49.3		13	12.8
250	30	10,792	-47.5		27	11.5	28	10,246	-53.3		14	10.3
200	30	12,236	-56.7		27	13.4	28	11,693	-49.0		15	6.2
175	30	13,075	-60.5		27	13.6	28	12,572	-48.0		15	4.9
150	30	14,029	-63.0		26	13.1	28	13,588	-47.8		15	4.1
125	30	15,144	-65.0		26	10.6	28	14,792	-47.3		16	3.6
100	30	16,498	-66.3		26	6.5	27	16,271	-47.0		15	3.1
80	29	17,856	-64.7		26	1.5	27	17,748	-47.2		14	2.9
70	29	18,675	-62.4		08	1.8	27	18,631	-47.3		14	2.5
60	29	19,631	-60.1		09	4.7	27	19,650	-47.3		12	2.7
50	28	20,774	-57.4		09	5.4	27	20,855	-47.2		10	3.6
40	27	22,197	-53.9		08	6.4	27	22,333	-46.6		10	5.4
30	27	24,097	-50.7		09	8.1	27	24,247	-45.1		09	8.0
25	26	25,246	-48.5		09	8.6	26	25,468	-43.9		09	9.2
20	21	26,719	-45.8		09	8.7	25	26,972	-41.8		09	11.7
15	14	28,636	-42.8		08	8.8	24	28,945	-38.1		09	12.6
10	5	31,384	-37.6				14	31,750	-33.2		08	15.7
7												

Standard pressure surface (mb.)	+ YAP, CAROLINE IS. 1009 MB: No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind: Direction	Resultant Wind: Speed M.p.s.	YUCCA FLAT, NEV. 879 MB: No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind: Direction	Resultant Wind: Speed M.p.s.
SURFACE	30	17	28.8	24.3	11	2.2	30	1,196	14.2	-4.0	36	.8
1000	30	94	27.9	23.0	11	2.5	30	77				
950	30	542	23.7	18.4	10	3.1	30	520				
900	30	1,019	20.7	14.5	10	3.4	30	990				
850	30	1,513	18.1	10.9	10	3.7	30	1,480	21.2	1.2	28	1.6
800	30	2,030	15.3	7.4	10	4.1	30	2,002	18.1	-1.5	23	3.0
750	30	2,571	12.6	3.9	09	4.4	30	2,546	14.2	-4.5	24	3.1
700	30	3,153	9.7	-.4	09	4.7	30	3,127	9.9	-7.4	22	2.6
650	30	3,760	6.4	-4.9	09	5.4	30	3,733	5.0	-10.8	19	2.1
600	30	4,419	2.8	-9.9	09	5.6	30	4,385	.0	-14.2	21	3.3
550	30	5,115	-1.0	-15.3	09	5.6	30	5,068	-5.0	-18.4	24	4.2
500	30	5,874	-5.3	-19.9	09	5.3	30	5,819	-10.2	-24.2	25	6.9
450	30	6,690	-10.1	-25.5	09	5.5	30	6,616	-16.0	-30.0	26	8.6
400	30	7,594	-15.8	-31.1	09	4.8	30	7,499	-23.0	-36.2	27	9.9
350	30	8,588	-22.6	-38.2	09	4.7	30	8,463	-30.5	-42.6	27	10.8
300	30	9,701	-30.9	-45.7	09	3.9	30	9,540	-39.1	-49.3	27	11.7
250	30	10,968	-41.2		08	2.5	30	10,766	-47.9		27	14.2
200	30	12,445	-53.5		06	3.8	30	12,208	-57.0		27	16.2
175	30	13,290	-60.6		06	4.0	30	13,046	-60.6		27	16.9
150	30	14,233	-67.9		06	4.8	30	13,999	-62.9		26	15.4
125	30	15,309	-75.0		07	5.8	30	15,120	-63.9		27	13.5
100	30	16,590	-78.1		08	7.4	30	16,485	-64.6		26	8.2
80	30	17,874	-74.3		08	8.9	30	17,855	-62.4		24	2.2
70	30	18,657	-71.0		09	9.8	30	18,682	-60.6		13	.9
60	30	19,576	-67.2		09	12.3	29	19,643	-58.9		10	3.3
50	30	20,687	-63.1		09	16.3	29	20,793	-56.7		09	4.0
40	30	22,075	-58.5		09	24.5	29	22,217	-54.2		09	5.6
30	26	23,903	-53.5		09	30.9	28	24,075	-50.9		08	6.2
25	26	25,083	-49.9		09	34.0	28	25,267	-48.9		08	6.6
20	25	26,554	-45.9		09	34.9	26	26,745	-46.0		08	6.5
15	22	28,480	-40.9		09	31.8	20	28,657	-43.2		09	6.5
10	20	31,263	-35.6		09	21.8	9	31,400	-39.2			
7	9	33,728	-33.3									

Standard pressure surface (mb.)	YUMA, ARIZ. 992 MB: No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind: Direction	Resultant Wind: Speed M.p.s.
SURFACE	20	131	22.5	4.3	03	1.0
1000	20	62				
950	20	509	27.0	3.7	27	2.8
900	20	989	25.3	1.2	27	3.7
850	20	1,488	22.7	-1.1	24	3.2
800	20	2,011	19.0	-4.4	21	4.1
750	20	2,553	14.8	-7.6	20	5.0
700	20	3,138	10.6	-10.8	20	6.0
650	20	3,743	6.2	-13.8	20	6.7
600	20	4,401	1.9	-19.5	21	7.0
550	20	5,088	-2.6	-24.0	23	6.2
500	20	5,846	-7.6	-28.8	25	5.7
450	20	6,647	-13.7	-32.1	26	6.2
400	20	7,542	-21.0	-37.8	26	7.6
350	20	8,512	-29.0	-43.5	26	9.6
300	20	9,595	-37.6	-50.0	27	10.5
250	20	10,826	-47.3		26	13.4
200	19	12,277	-57.4		27	14.3
175	17	13,126	-61.4		27	12.9
150	14	14,072	-64.7		27	12.8
125	6	15,136	-65.2			
100						
80						
70						
60						
50						
40						
30						
25						
20						
15						
10						
7						

Note: All observations scheduled at 1200, G.C.T. Pressures shown under station names are the average monthly station pressures for the month of record, corrected to the height of the floors of the instrument shelters used for rawinsonde purposes. "Number of observations" refers to those of dynamic height only. Although the number of temperature observations at any given pressure surface is usually the same as for height, it is possible for temperature to be missing for one or more pressure surfaces of some observations. Dew Point averages are limited to those observations with temperatures warmer than -40°C. Observations of wind speed and direction are sometimes lost due to limiting angles, i.e., elevation angles less than 6° above the horizon, or any obstruction above the horizon.

The temperature and wind values are based on 15 or more observations at the surface or 5 observations at a standard pressure level for temperature and 10 for wind. Dew Point data are not published for standard pressure surfaces for which less than 5 observations are available. Dew Point data are computed and expressed on the basis of vapor pressure over water. Unless otherwise indicated, they are obtained from carbon hygristors.

These average values for standard pressure surfaces were obtained by rawinsondes; dynamic height (geopotential) in units of .98 dynamic meter, temperature and dew point in degrees Celsius, and resultant winds in tens of degrees and meters per second.

* Rawinsondes at this station were equipped with hypsometers to permit more accurate evaluations of pressure, and consequently height, at pressures lower than 50 mb. These rawinsondes were carried aloft by special high altitude balloons, in an effort to consistently reach higher altitudes.

\+ Observations for these stations are scheduled at 0000 G.C.T.

† Dew Point temperatures are based on a minimum of 5 observations. Therefore, due to the lesser number of Dew Point observations at the higher levels comparison with dry-bulb temperatures should be made with care. Dew Point temperatures replaced Relative Humidity January 1967.

SOLAR RADIATION DATA

Solar radiation intensities, tabulated in langleys per minute on a surface normal to the direction of the sun. JUNE 1968

Date	Sun's zenith distance								
	A. M.				*	P. M.			
	78.7°	75.7°	70.7°	60.0°		60.0°	70.7°	75.7°	78.7°
ALBUQUERQUE, N. MEX.									
	Air mass								
	4.19	3.35	2.51	1.67	*	1.67	2.51	3.35	4.19
June									
1-----	----	----	----	----	1.41	1.16	0.99	0.83	0.76
2-----	0.90	0.97	----	1.22	1.41	----	----	----	----
4-----	----	----	----	----	1.31	----	----	----	.53
7-----	----	----	0.96	----	1.32	----	----	----	----
8-----	----	----	----	----	1.34	----	----	----	----
10----	.72	.81	.97	1.14	----	1.15	.98	.83	.75
11----	.90	.96	1.10	1.24	1.42	1.22	1.05	.89	.82
12----	.87	.95	1.08	1.20	1.45	1.18	.99	.89	.81
13----	.83	.92	1.06	1.16	1.31	----	----	----	----
14----	.73	.83	1.01	1.20	1.31	.95	.74	----	----
15----	.76	.83	.99	1.18	1.35	1.04	.87	.74	.65
16----	.81	.94	1.10	1.24	1.41	1.08	----	----	----
17----	.68	.76	.92	1.06	1.32	1.02	.74	.53	.50
18----	.75	.82	.96	1.12	1.36	1.17	----	----	----
19----	.76	.84	.96	1.15	1.36	1.17	----	----	----
20----	----	----	----	1.25	1.30	.91	.79	.67	.64
21----	.77	.86	1.01	1.18	1.33	----	----	----	----
22----	.66	.74	.90	1.07	1.36	----	----	----	----
23----	.64	.77	.93	1.12	1.39	1.18	.94	.78	.71
24----	.66	.74	.90	1.06	1.42	1.26	1.03	.80	.67
25----	.85	.92	1.04	1.20	1.37	1.22	1.05	.93	----
26----	----	----	.95	1.18	1.37	----	----	----	----
27----	.73	.82	.98	1.04	1.41	1.22	1.07	.94	.86
28----	.80	.87	1.01	1.15	1.37	----	.92	.79	----
29----	----	----	----	1.21	1.39	1.11	.97	.81	.74
30----	.53	.64	.86	1.11	1.33	1.04	.87	.73	.63
Averages	0.76	0.84	0.98	1.16	1.36	1.12	0.93	0.80	0.70
GUAM, M. I.									
	Air mass								
	4.92	3.93	2.95	1.97	*	1.97	2.95	3.93	4.92
June									
9-----	M 0.80	M 0.88	M 0.99	M 1.12	-----	----	----	----	----
13----	----	----	----	----	----	----	M 0.94	S 0.79	S 0.56
15----	----	----	----	----	----	----	.92	----	----
17----	----	----	----	----	----	1.10	.96	.86	.78
19----	----	----	----	----	----	1.10	----	----	----
Averages	0.80	0.88	0.99	1.12	----	1.10	0.94	0.83	0.67

Date	Sun's zenith distance								
	A. M.				*	P. M.			
	78.7°	75.7°	70.7°	60.0°		60.0°	70.7°	75.7°	78.7°
MADISON, WIS.									
	Air mass								
	4.69	3.75	2.81	1.88	*	1.88	2.81	3.75	4.69
June									
3-----	S 0.76	S 0.86	S 0.98	1.14	----	----	----	----	----
4-----	----	----	----	S 1.01	----	----	----	----	----
8-----	----	----	----	----	M 1.05	----	----	----	----
Averages	0.76	0.86	0.98	1.08	1.05	----	----	---	----
BLUE HILL OBS., MASS.									
	Air mass								
	4.89	3.92	2.94	1.96	*	1.96	2.94	3.92	4.89
June									
5-----	0.60	0.72	0.84	1.04	1.25	0.94	0.70	0.57	0.45
6-----	.38	.50	.62	.82	----	.82	.60	.48	.40
7-----	.60	.70	.83	1.01	----	----	----	----	----
15----	.36	.48	.60	.91	1.23	.89	.66	.45	----
Averages	0.49	0.60	0.72	0.95	1.24	0.88	0.65	0.50	0.43
OMAHA, NEBR.									
	Air mass								
	4.78	3.82	2.87	1.91	*	1.91	2.87	3.82	4.78
June									
1-----	HS0.68	HS0.83	HS0.95	----	HS1.33	HS1.17	HS1.06	HS0.76	HS0.57
2-----	----	----	----	----	HS1.28	----	----	----	----
4-----	----	----	HS .94	HS1.09	----	----	----	----	----
10----	----	----	----	1.05	----	----	----	----	----
12----	HS .77	HS .87	HS .99	----	----	----	----	----	----
13----	----	----	----	----	HM1.20	----	----	----	----
17----	----	----	----	----	HS1.24	----	----	----	----
18----	HS .61	HS .66	HM .72	HM .94	HS1.26	----	----	----	----
21----	----	----	----	----	HS1.25	HS1.06	HS .88	HS .77	----
27----	HS .78	HS .86	HS1.01	HS1.14	----	----	----	----	----
Averages	0.71	0.81	1.15	1.06	1.26	1.12	0.97	0.77	0.57

S Slight haze - indeterminable
M Moderate haze - indeterminable
* Values corresponding to true solar noon

HS Slight haze
HM Moderate haze

Langley is the unit used to denote one gram calorie per square centimeter. An explanation of the formula used in computing the air mass values for each station listed above appears in the February 1957 issue, Vol. 8, No 2, page 63, of this publication.

SOLAR RADIATION DATA

Daily totals and monthly averages of solar radiation (direct and diffuse) received on a horizontal surface, tabulated in langleys.

JUNE 1968

Station	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
ALBUQUERQUE N.M.	789	696	654	722	726	717	724	729	619	765	773	760	702	743	752	761	755	741	730	735	725	727	761	769	759	749	755	746	752	753		736
AMES IOWA	664	583	636	656	585	559	553	621	528	402	615	549	646	578	353	373	603	608	559	615	627	679	405	442	154	164	711	609	278	450		527
ANNETTE ALASKA	99	306	443	729	725	741	720	---	208	---	---	255	709	750	728	466	---	249	153	---	641	754	632	89	243	---	---	---	466	---		481
APALACHICOLA FLORIDA	703	705	688	581	628	352	686	590	611	532	567	638	683	684	607	444	589	664	548	552	665	540	502	648	665	750	681	733	720	695		622
ARGONNE NAT. LAB.	340	660	750	747	743	628	634	618	671	579	626	488	767	484	533	739	690	276	624	640	499	688	536	478	108	191	108	589	239	588		542
ASTORIA OREGON	156	579	758	671	539	321	300	286	483	301	689	508	444	744	773	581	538	648	645	753	309	355	734	739	565	346	473	510	319	789		529
ATLANTA GEORGIA	593	547	654	635	660	619	139	395	557	620	569	647	756	717	625	580	373	503	369	561	531	373	451	554	533	559	753	745	714	699		568
BETHEL ALASKA	710	694	604	669	504	549	113	344	622	571	714	648	213	673	573	443	432	457	142	470	516	426	535	410	395	680	654	552	552	352		507
BISMARCK N.DAK.	792	710	748	553	299	194	220	287	139	266	240	692	433	649	656	740	537	774	741	717	718	293	445	104	391	627	747	798	240	300		502
BLUE HILL MASS.	661	117	414	345	700	653	651	607	594	82	99	186	305	502	696	389	103	632	621	606	649	494	538	479	413	36	149	134	610	662		438
BOISE IDAHO	632	625	564	528	421	166	601	273	593	626	424	509	665	562	717	704	688	670	640	651	691	670	678	722	698	689	705	735	621	729		607
BOSTON MASSACHUSETTS	608	125	416	231	662	631	602	557	540	54	61	173	227	446	668	405	80	---	583	---	---	---	---	---	---	---	---	---	---	---		---
BURLINGTON VERMONT	508	108	460	572	524	575	383	524	149	188	337	404	264	683	384	241	456	611	126	276	586	169	299	103	305	202	101	107	486	457		353
CAPE HATTERAS N.C.	673	672	547	722	704	670	618	681	696	667	607	540	634	726	654	715	650	285	348	434	559	515	531	535	454	548	435	387	576	561		578
CARIBOU MAINE	687	320	379	395	354	---	---	809	385	843	---	339	135	507	614	539	610	456	496	168	400	647	533	332	552	761	838	233	320	542		489
CHARLESTON S.C.	711	696	673	534	489	172	104	256	342	438	276	590	624	754	629	638	612	570	641	587	702	505	459	342	564	709	541	800	659	758		546
CLEVELAND OHIO	161	606	719	720	719	664	645	569	629	511	580	589	423	656	568	441	346	512	643	760	529	635	677	364	142	161	398	199	395	702		522
COLUMBIA MISSOURI	456	751	720	593	686	659	662	679	654	688	741	770	738	549	267	302	706	692	515	718	728	543	693	338	489	189	798*	722	721	431		607*
DAVIS CALIFORNIA	727	713	467	740	346	619	777	740	776	757	781	655	756	760	780	750	741	744	780	760	767	770	775	775	745	756	757	768	806	778		729
DODGE CITY KANSAS	680	776	740	678	763	685	753	483	332	732	785	767	675	748	544	408	664	728	745	747	717	741	744	753	639	805	769	742	740	754		695
E. LANSING MICHIGAN	188	767	664	763	---	659	508	633	618	470	455	317	757	606	458	333	536	148	640	749	277	417	597	399	78	83	209	590	217	624		475
EL CENTRO CALIF. NPF	681	677	689	684	677	725	725	694	699	702	705	666	730	721	724	724	662	720	708	708	722	668	668	668	653	677	680	712	748	723		698
EL PASO TEXAS	801	756	756	713	741	784	639	680	800	832	804	803	434	674	745	708	760	723	786	776	786	769	776	777	774	777	785	789	704	738		746
ELY NEVADA	737	647	473	---	---	---	463	327	834	864	---	813	796	659	754	770	---	---	827	848	867	---	649	892	876	871	837	855	913	907		760
EPPLEY NEWPORT R.I.	628	100	---	538	679	586	633	642	604	---	100	200	344	658	684	511	130	650	429	670	664	581	657	610	372	52	138	98	617	568		469
FAIRBANKS ALASKA	361	603	265	248	---	---	---	578	751	708	694	733	632	534	505	532	663	653	616	422	184	344	721	631	643	671	690	612	506	405		552
FLAMING GORGE UTAH	802	812	473	599	457	705	583	546	475	597	814	819	628	671	834	840	818	505	760	723	821	698	643	747	837	807	688	680	529	846		692
FORT WORTH TEXAS	292	471	509	553	527	543	350	492	731	733	698	628	748	759	602	461	769	344	690	598	577	508	412	404	565	717	789	759	657	687		586
FRESNO CALIFORNIA	712	722	646	732	583	611	690	730	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---		---
GAINESVILLE FLORIDA	644	717	427	116	---	---	443	662	572	542	513	519	574	551	590	516	629	560	325	608	639	647	626	520	504	576	343	622	594	---		540
GLASGOW MONTANA	711	668	439	---	---	135	195	379	144	336	746	522	490	570	575	645	617	727	682	549	713	531	562	124	799	445	756	795	174	317		512
GRAND JUNCTION COLO.	769	774	567	594	567	564	643	354	559	650	764	---	735	708	704	808	757	666	767	768	781	767	662	646	797	757	---	---	727	832		692
GREAT FALLS MONTANA	673	568	389	427	309	217	492	305	188	558	660	768	226	624	723	812	538	796	407	543	465	441	531	98	778	302	779	704	330	145		493
GREENSBORO N.C.	661	318	551	678	694	572	321	183	157	532	380	560	711	733	701	639	375	165	405	639	639	485	600	369	490	609	628	640	672	661		526
INDIANAPOLIS INDIANA	192	666	737	710	751	622	464	629	647	621	615	561	791	577	513	690	628	733	676	739	652	325	608	440	227	426	211	674	523	720		579
ITHACA NEW YORK	564	330	398	510	704	668	670	610	659	495	463	411	408	502	400	127	416	690	347	660	500	575	660	245	153	69	54	289	459	534		452
LAKE CHARLES LA.	594	302	555	464	618	400	643	611	610	650	576	418	655	660	605	294	445	370	120	156	84	36	184	264	633	396	710	663	671	587		466
LAKELAND FLORIDA	713	434	452	269	309	443	662	738	390	707	605	---	351	410	666	469	590	365	279	603	643	687	696	541	409	269	311	404	602	572		503
LANDER WYOMING	756	767	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	759	521	630	775	782	517	400	814	643	773	795	809	816		---
LARAMIE WYOMING	692	715	597*	494*	468*	449	402	366	655	585	500	736	623	594	601	722	702	684	597	690	721	736	517	244	475	591	738*	573	537	739		591*
LAS VEGAS NEVADA	786	762	734	617	730	549	299	388	758	780	782	780	801	797	794	794	777	732	813	823	808	800	704	777	792	772	758	772	789	802		736
LITTLE ROCK ARKANSAS	550	493	533	667	507	542	605	659	679	675	437	750	751	701	655	464	495	677	641	467	---	593	407	346	276	609	781	737	649	725		589
LOS ANGELES CALIF.	663	632	545	---	---	---	---	---	---	---	---	---	715	746	728	711	556	678	734	774	752	524	650	342	304	278	215	245	613	631		573
MADISON WISCONSIN	760	726	748	713	707	594	656	672	630	644	577	606	700	611	485	567	583	392	744	422	600	758	587	215	83	100	81	441	209	372		533
MANHATTAN KANSAS	621	623	623	615	611	575	307	539	491	221	668	668	635	632	168	173	488	620	584	641	584	614	612	440	213	442	672	582	623	571		528
MATANUSKA ALASKA	478	541	286	664	334	446	631	596	595	568	463	550	577	566	221	412	682	560	549	216	391	555	466	484	486	310	554	703	725	694		510
MAUNA LOA OBS.HAWAII	810	828	765	772	814	839	809	797	771	823	346	331	380	537	482	707	653	750	---	---	---	801	810	802	819	788	586	809	806	589		705
MEDFORD OREGON	601	276	624	804	403	525	776	818	794	734	559	824	759	804	822	804	807	771	659	799	801	543	815	802	782	790	825	692	809	815		721
MIAMI FLORIDA	252	139	113	475	630	690	536	469	227	592	445	669	684	482	278	313	---	324	419	702	567	694	730	588	450	141	239	394	724	269		456
MIDLAND TEXAS	426	677	676	682	616	614	588	559	445	663	674	683	621	598	548	654	652	686	687	690	693	687	654	679	---	695	683	678	---	---		637
NASHVILLE TENNESSEE	375	329	567	630	603	660	652	617	649	627	469	676	766	750	670	602	427	703	646	598	681	607	533	490	403	440	591	745	702	682		596
NEW YORK N.Y. U	647	119	411	613	651	687	559	628	564	118	110	52	248	463	671	530	480	668	538	807	672	621	761	351	449	69	63	145	702	686		469
NORTH OMAHA NEBRASKA	801	735	767	768	787	718	588	612	677	587	755	812	764	663	435	524	527	758	773	---	---	---	---	---	---	---	---	---	---	---		---
OAK RIDGE TENNESSEE	589	379	571	715	666	678	357	216	356	569	508	570	738	755	716	560	240	702	475	615	701	557	516	557	454	337	546	715	702	694		558
OKLAHOMA CITY OKLA.	138	596	530	659	354	399	432	584	690	448	736	663	711	688	378	317	644	660	710	701	697	638	503	355	243	780	736	725	727	629		569

Note.--Langley is the unit used to denote one gram calorie per square centimeter.
Values with an asterisk are interpolated.

U Indicates Urban sites.

SOLAR RADIATION DATA

Daily totals and monthly averages of solar radiation (direct and diffuse) received on a horizontal surface, **tabulated in langleys.**

JUNE 1968

Station	Day of month 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
PAGE ARIZONA	786	750	731*	633	779	710	707	402	366	817	815	814	808	805	816	795	768	702*	777	808	831	825	821	664	842	826	806	830	829	856		757*
PALMER AAES ALASKA	461	546	293	569	281	518	588	552	569	483	455	492	533	422	294	426	606	465	407	202	397	593	404	480	427	375	577	653	664	590		477
PHOENIX ARIZONA	751	743	724	621	701	748	627	765	757	767	775	768	767	775	782	774	703	732	723	716	750	771	763	739	727	733	750	776	777	773		743
PORTLAND MAINE	572	210	168	203	646	612	576	545	280	318	129	157	181	422	566	513	79	558	527	514	708	299	287	223	429	116	130	67	661	655		378
PROSSER WASHINGTON	271	391	781	771	664	588	407	659	757	636	367	761	753	778	751	721	631	738	496	727	508	688	759	749	733	640	675	633	629	662		644
RAPID CITY S.DAK.	702	711	732	528	380	109	182	353	714	531	744	713	715	612	231	731	749	534	715	594	761	677	616	259	243	652	706	726	366	553		561
RENO NEVADA	669	657	381	462	278	365	384	610	671	630	724	398	697	702	712	689	652	668	669	705	688	686	631	719	689	670	695	719	738	715		622
RICHLAND 25 NW WASH.	316	429	761	740	701	493	360	506	737	677	335	749	658	725	772	719	673	754	513	757	550	565	766	759	723	622	743	448	677	781		634
RIVERSIDE CALIFORNIA	641	656	612	392	509	386	128	121	515	660	667	693	660	645	680	680	609	652	662	682	643	547	588	479	451	408	546	588	480	570		552
RUSTON LOUISIANA	531	494	536	489	568	554	580	626	638	640	685	544	671	653	568	526	---	548	430	354	351	324	342	227	456	479	697	666	593	658		532
SAINT CLOUD MINN.	695	660	547	598	517	572	457	398	494	468	232	747	335	690	617	384	592	712	754	205	652	536	380	138	187	299	774	523	624	180		499
SALT LAKE CITY	780	772	686	310	257	642	655	266	487	529	803	807	644	675	819	816	781	735	684	761	791	782	678	813	792	793	785	792	456	836		681
SAN ANTONIO TEXAS	427	507	234	496	567	391	380	495	661	603	619	684	642	667	618	570	396	567	185	428	491	473	224	599	577	532	706	656	577	516		516
SANTA MARIA CALIF.	756	766	733	656	609	726	---	579	701	737	673	766	780	772	739	730	606	677	---	719	787	759	746	613	665	494	516	524	765	749		691
SAULT STE MARIE MICH	139	533	736	715	643	581	596	493	256	273	311	280	769	187	787	650	492	398	645	789	117	639	127	638	---	185	80	176	547	118		445
SEATTLE TACOMA WASH.	122	600	658	748	744	352	233	257	493	515	609	645	526	754	770	498	607	693	418	684	332	297	591	751	573	342	352	448	581	672		529
SPOKANE WASHINGTON	401	407	779	751	748	602	198	399	689	647	329	707	713	648	767	667	628	761	566	782	487	496	667	776	733	592	660	421	287	498		593
STATE COLLEGE PENN.	580	452	461	737	745	718	682	706	530	619	311	603	279	753	614	118	281	697	395	835	576	468	812	436	419	167	166	354	628	732		529
STERLING VIRGINA	630	287	467	779	760	749	720	605	359	503	258	373	---	776	704	601	165	733	692	801	768	661	639	467	623	675	207	642	714	716		589
SWAN ISLAND W.I.	443	119	270	648	644	575	670	623	670	665	646	584	387	152	462	622	536	570	579	390	617	619	649	653	578	601	641	653	120	647		534
TAMPA FLORIDA	645	389	351	174	414	370	704	703	707	720	638	628	624	470	660	463	582	348	332	642	381	475	501	442	521	411	201	519	377	562		498
WAKE ISLAND PACIFIC	632	603	641	664	628	680	---	433	698	680	663	557	279	580*	651*	605	574	528	659	691	688	673	636	627	621	703	682	699	661	617		622*

Note.--Langley is the unit used to denote one gram calorie per square centimeter.

Values with an asterisk are interpolated.

NET RADIATION

Net radiation in langleys per day (8 a.m. to 8 a.m.) at Palmer, Alaska

JUNE 1968

Date.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
Langleys. . .	244	293	115	249	134	283	279	277	266	220	221	263	269	230	154	186	306	212	226	84	205	287	215	240	230	205	304	312	324	306		239

The measurement is made with a CSIRO FUNK net exchange radiometer over a plot of sod. The value represents the total incoming minus the total outgoing radiation of all wave lengths.

These data are of an experimental nature and are published as received from the Palmer Exp. Station. The instrument with which they were measured has not been checked by the ESSA, Weather Bureau.

SOLAR ULTRA-VIOLET RADIATION DATA

Daily totals and monthly average (<3900 A)

Date.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
Langleys. . .	28.60	26.00	31 77	29.46	25.71	23.83	23.97	27.73	24.26	20.22	28.60	25.42	30.04	27.58	18.05	18.20	28.16	27.44	25.27	26.14	28.45	31.20	14.01	21.95	8.81	8.81	31.77	24.55	-----	-----		24.50

These data are from an U - V Eppley total ultra violet sensor and Speedomax H (Leeds Northrup) Recorder. It is at the same location (Agronomy Building, Iowa State University, Ames) as the published total solar radiation instrumentation. This instrument has not been checked by the ESSA, Weather Bureau.

TOTAL OZONE DATA

These provisional ozone data are obtained from measurements made with a Dobson ozone spectrophotometer, and are applicable approximately to local apparent noon. The data are presented in the code ΛSΩΩΩ defined in the August 1962 WMO circular entitled "PUBLICATION OF DATA FOR METEOROLOGICAL RESEARCH, WORLD OZONE DATA."

Units: Milli-atmo-cms.

Station	Day of month																															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean O_3
															Data will be delayed																	

The spectrophotometer measures the total amount of ozone in the atmosphere, i e , the amount contained in a vertical column of air extending from ground level to the top of the atmosphere in the vicinity of the station The amount of ozone in this column (coded ΩΩΩ) is expressed in terms of a thickness of a layer it would occupy at standard temperature and pressure, e g , 350 milli-atmo-cm ozone implies an ozone layer 0 350 centimeter thick The code ΛS designates the type of measurement made

CONDENSED CLIMATOLOGICAL SUMMARY

DELAYED DATA

Section	Temperature						Precipitation			
	Monthly extremes						Monthly extremes			
	Station	Highest	Date	Station	Lowest	Date	Station	Greatest	Station	Least
		°F			°F			In.		In
December 1967										
Alaska	Eklutna Project	55	30	Kobuk	-55	2	Little Port Walter	20.52	Port Heiden	0.21
Hawaii	Mauna Kea Beach	91	3	Mauna Loa Slope Obs	25	13	Kanalo Hulu Hulu	40.18	Middle Holualoa 68.1	2.21
January 1968										
Alaska	Creekside Park School	54	31	Hughes	-68	19	Ketchikan	17.07	Summit Nike Site	.00
Hawaii	Kilauea Point 1133	88	21+	Mauna Loa Slope Obs	25	29	Naula Forest 38.6	21.21	Mauna Loa Slope Obs	1.61
February 1968										
Alaska	Sitka Magnetic	63	28	Chalkyitsik	-69	5	Thompson Pass	25.89	Clear Airport	T
Hawaii	Hilo WBAP	92	20	Mauna Loa Slope Obs	27	1	Kalapana No. 1 67.8	17.34	Kulani Mauka 76	1.17
April 1968										
Alaska	Kasilof	61	28	Kobuk	-34	8	Little Port Walter	24.65	2 Stations	T
Hawaii	Mauna Kea Beach	92	3	Mauna Loa Slope Obs	28	10	Kipa 89.2	48.25	Twin Gates 261.3	.00

C O R R E C T I O N S

Month: September 1967

Page 445: Texas

A correction for this report on tornadoes was published in the December 1967 issue, page 611. The 124 tornadoes occurred on 11 days instead of 7.

Month: November 1967

Page 542: Rhode Island

Under "heavy sonwstorms and blizzards" the property damage should be category 4.

Month: 1967 Annual

Page 3: General Summary of Weather Conditions

The by-line should read L. H. Seamon, Environmental Data Service, ESSA, Washington, D. C.

RAWINSONDE DATA

Average monthly values

DELAYED DATA

CHIHUAHUA, MEXICO 1/ — 857 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1,428	15.1	-2.6	21	.9
1000	31	96				
950	31	535				
900	31	1,004				
850	31	1,496	15.9	-1.4	23	1.0
800	31	2,013	16.1	-2.0	26	2.6
750	31	2,552	12.7	-4.5	26	3.8
700	31	3,133	9.1	-7.7	24	5.3
650	31	3,734	4.9	-10.8	24	5.8
600	31	4,391	.2	-14.0	24	7.0
550	31	5,075	-4.8	-18.4	23	10.0
500	31	5,825	-10.1	-22.5	25	11.3
450	31	6,622	-15.6	-28.9	25	13.8
400	31	7,509	-22.2	-34.7	25	15.6
350	31	8,476	-29.4	-40.8	25	19.0
300	31	9,558	-37.7	-47.5	25	21.1
250	31	10,790	-46.4		25	26.6
200	30	12,240	-56.5		26	33.0
175	29	13,074	-61.3		26	33.3
150	29	14,021	-64.8		26	29.2
125	29	15,130	-66.1		26	22.5
100	29	16,473	-69.0		26	15.3
80	27	17,808	-69.2		26	10.2
70	26	18,607	-67.5		26	3.9
60	26	19,542	-64.4		27	2.4
50	26	20,671	-59.5		06	1.0
40	26	22,082	-55.3		27	.4
30	26	23,932	-51.8		32	.3
25	26	25,118	-50.1		25	.6
20	20	26,583	-48.2		33	.3
15	14	28,492	-44.3		27	2.3
10	8	31,229	-40.6			
7						
5						
4						
3						

CHIHUAHUA, MEXICO 6/ — 856 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1,428	3.6	-3.0	20	1.6
1000	31	146				
950	31	566				
900	31	1,013				
850	31	1,488	4.6	-2.1	20	1.6
800	31	1,987	6.7	-2.7	23	5.5
750	31	2,509	4.9	-5.8	24	8.2
700	31	3,076	2.5	-9.1	25	11.8
650	31	3,661	-1.0	-13.0	25	13.1
600	31	4,305	-4.7	-17.9	25	13.0
550	31	4,977	-9.1	-22.5	25	13.7
500	31	5,716	-13.9	-26.7	25	15.2
450	31	6,500	-19.7	-31.4	25	16.3
400	31	7,371	-26.4	-36.7	25	17.2
350	31	8,322	-33.5	-42.8	25	18.8
300	31	9,385	-41.5	-45.5	26	21.3
250	31	10,598	-49.7		26	24.7
200	31	12,028	-58.1		26	26.2
175	29	12,863	-60.9		26	25.1
150	28	13,822	-63.9		26	25.8
125	26	14,925	-66.7		26	25.9
100	26	16,266	-69.3		27	22.8
80	25	17,602	-68.2		27	18.4
70	23	18,401	-67.4		27	16.8
60	22	19,334	-65.7		26	13.6
50	21	20,442	-63.7		26	11.3
40	20	21,821	-60.8		26	10.2
30	18	23,621	-57.4		26	9.2
25	16	24,780	-55.6		26	9.7
20	13	26,220	-52.2			
15	7	28,100	-47.4			

CHIHUAHUA, MEXICO 7/ — 860 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1,428	3.5	-1.7	26	.3
1000	31	177				
950	31	598				
900	31	1,047				
850	31	1,519	4.9	-.9	26	1.0
800	31	2,016	5.6	-2.2	25	3.0
750	31	2,536	3.0	-5.5	25	4.8
700	31	3,097	.3	-10.5	26	7.5
650	31	3,682	-3.0	-15.1	26	8.8
600	31	4,317	-6.8	-20.7	26	9.4
550	31	4,984	-10.9	-24.0	26	10.7
500	31	5,716	-15.7	-27.3	26	13.2
450	31	6,495	-21.2	-32.2	26	14.2
400	31	7,360	-27.5	-37.6	26	16.3
350	31	8,307	-34.5	-43.2	26	17.9
300	31	9,364	-42.5	-46.4	27	19.6
250	31	10,571	-50.8		27	21.4
200	31	11,992	-59.2		28	24.3
175	30	12,822	-61.3		28	23.9
150	30	13,777	-62.1		28	23.0
125	30	14,896	-64.8		27	19.1
100	30	16,244	-68.5		28	17.2
80	30	17,579	-68.8		28	13.6
70	29	18,375	-68.5		28	10.0
60	27	19,305	-65.6		28	5.3
50	25	20,417	-63.1		26	1.3
40	25	21,798	-60.7		07	1.2
30	21	23,596	-58.7		07	.7
25	18	24,744	-57.2		07	1.1
20	11	26,180	-54.3			

CHIHUAHUA, MEXICO 8/ — 858 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	1,428	6.0	.0	05	.1
1000	29	152				
950	29	576				
900	29	1,027				
850	29	1,505	7.4	.1	03	.4
800	29	2,007	8.2	-2.2	28	1.7
750	29	2,530	4.9	-5.2	28	3.6
700	29	3,097	1.7	-9.3	28	5.7
650	29	3,681	-1.7	-13.1	28	7.3
600	29	4,323	-5.4	-17.4	28	9.2
550	29	4,990	-9.5	-22.9	29	10.7
500	29	5,731	-14.6	-26.3	29	12.8
450	29	6,508	-20.5	-31.0	28	14.1
400	29	7,381	-27.2	-36.7	27	16.8
350	29	8,330	-34.4	-42.8	27	19.7
300	29	9,390	-42.4		27	21.8
250	29	10,599	-50.5		27	26.8
200	29	12,030	-56.8		27	31.7
175	29	12,871	-59.4		27	30.9
150	29	13,828	-62.7		27	30.2
125	28	14,938	-66.6		28	29.3
100	28	16,274	-70.2		28	26.8
80	28	17,595	-71.2		28	25.5
70	25	18,382	-70.0		28	21.7
60	23	19,309	-67.0		28	18.8
50	19	20,420	-64.5		28	13.6
40	16	21,799	-60.4		28	10.6
30	13	23,603	-55.7		27	10.9
25	10	24,772	-51.9		27	13.2
20	10	26,222	-50.7			
15	7	28,121	-46.0			

* COLD BAY, ALASKA 11/ — 1010 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	[illegible]	3.8	1.9	28	.9
1000	31	110			30	1.8
950	31	523	2.0	-1.5	03	1.2
900	31	962	.3	-4.2	06	2.1
850	31	1,419	-1.3	-6.7	10	2.5
800	31	1,901	-3.6	-9.9	10	2.6
750	31	2,406	-6.0	-13.3	09	2.8
700	31	2,948	-9.0	-16.7	09	2.5
650	31	3,515	-12.3	-20.8	09	2.8
600	31	4,127	-15.8	-25.1	07	2.8
550	31	4,774	-19.6	-28.7	07	2.9
500	31	5,480	-24.4	-33.7	06	3.3
450	31	6,232	-30.0	-37.5	05	4.6
400	31	7,069	-36.1	-41.8	04	4.8
350	31	7,984	-42.4	-44.1	03	5.4
300	31	9,011	-49.2		03	7.8
250	31	10,191	-54.5		05	4.7
200	31	11,620	-53.4		04	3.1
175	31	12,482	-52.3		05	2.0
150	31	13,480	-52.0		05	1.4
125	31	14,661	-52.1		06	1.3
100	31	16,106	-52.1		10	.7
80	31	17,552	-51.8		13	.6
70	31	18,416	-51.8		14	1.3
60	31	19,415	-51.4		12	1.7
50	31	20,600	-50.9		12	2.1
40	31	22,053	-50.5		12	2.4
30	30	23,934	-49.7		09	5.1
25	30	25,129	-49.0		09	7.0
20	30	26,597	-47.9		09	7.0
15	28	28,506	-46.2		09	8.5
10	25	31,249	-41.9		08	11.9
7	21	33,698	-37.4		08	12.6
5	17	36,054	-34.2		08	14.6
4	10	37,646	-32.7			
3	6	39,700	-30.5			

* COLD BAY, ALASKA 12/ — 1012 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	30	5.8	3.1	33	2.4
1000	30	122	5.2	2.7	33	2.0
950	30	534	3.0	.2	01	2.3
900	30	978	1.8	-2.7	03	3.7
850	30	1,438	-.2	-5.5	04	4.3
800	30	1,921	-2.9	-9.2	05	4.4
750	30	2,431	-5.8	-13.5	05	5.4
700	30	2,968	-8.6	-17.7	05	5.1
650	30	3,536	-12.0	-21.5	04	5.6
600	30	4,149	-15.9	-25.1	04	6.4
550	30	4,795	-20.2	-29.8	04	7.1
500	30	5,499	-25.2	-35.2	04	8.0
450	30	6,250	-30.6	-40.6	03	8.2
400	30	7,084	-34.0	-46.6	02	9.3
350	30	7,996	-43.6		02	9.3
300	30	9,017	-50.0		01	9.2
250	30	10,199	-52.3		01	8.5
200	30	11,656	-49.2		36	4.3
175	30	12,533	-48.2		36	3.7
150	30	13,549	-48.1		01	2.1
125	30	14,751	-48.2		09	.9
100	30	16,221	-47.9		10	1.6
80	30	17,693	-48.0		11	2.3
70	30	18,573	-48.1		10	2.8
60	30	19,587	-48.3		10	3.4
50	30	20,787	-48.4		10	4.0
40	30	22,257	-48.0		10	4.9
30	30	24,156	-47.2		09	7.7
25	29	25,363	-46.3		09	8.9
20	29	26,850	-44.5		09	10.8
15	28	28,774	-41.8		09	12.7
10	26	31,540	-36.7		08	14.0
7	23	34,007	-32.9		08	16.4
5	16	36,375	-29.7		08	20.5
4	9	38,003	-26.4			
3	7	40,120	-23.1			

EMPALME, MEXICO 6/ — 1015 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	12	12.7	9.1	29	1.2
1000	30	138	14.8	7.7	32	1.6
950	30	569	15.0	3.8	30	1.0
900	30	1,029	13.0	.5	25	1.5
850	30	1,507	10.3	-1.6	23	2.9
800	30	2,009	8.0	-5.0	23	4.8
750	30	2,536	5.5	-9.8	24	5.2
700	30	3,100	2.4	-13.7	24	6.8
650	30	3,692	-.9	-18.2	24	8.1
600	30	4,329	-4.7	-22.0	26	10.7
550	30	5,001	-9.1	-25.6	26	12.5
500	29	5,737	-14.1	-30.3	26	13.9
450	29	6,523	-19.5	-34.5	26	14.9
400	29	7,392	-26.0	-39.7	26	17.8
350	29	8,344	-33.3	-45.4	25	20.0
300	29	9,407	-41.5	-48.6	25	22.9
250	29	10,619	-50.4		25	28.8
200	28	12,047	-57.1		25	30.9
175	28	12,888	-59.0		25	28.5
150	28	13,848	-61.9		25	26.1
125	28	14,968	-64.7		26	22.8
100	28	16,318	-67.9		26	17.4
80	28	17,655	-68.2		26	11.8
70	28	18,460	-66.1		26	9.2
60	27	19,396	-64.6		26	5.2
50	26	20,515	-62.3		28	3.7
40	24	21,897	-60.5		27	2.4
30	23	23,702	-56.6		27	3.7
25	20	24,865	-53.7		26	8.1
20	17	26,320	-49.8		27	12.4
15	15	28,208	-47.9		28	13.3
10	6	30,867	-48.6			

EMPALME, MEXICO 7/ — 1016 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	12	12.5	7.0	33	1.8
1000	31	149	15.7	7.1	34	2.2
950	31	584	16.3	2.6	01	2.4
900	31	1,044	14.1	.2	27	.9
850	31	1,524	11.5	-3.6	24	2.8
800	31	2,028	8.9	-6.8	23	3.7
750	31	2,558	5.9	-10.8	24	4.5
700	31	3,120	2.8	-14.2	24	6.3
650	31	3,713	-1.0	-18.1	25	7.6
600	31	4,349	-5.2	-22.4	26	9.0
550	30	5,025	-9.6	-26.2	26	10.9
500	30	5,757	-14.7	-30.3	26	12.2
450	30	6,541	-20.3	-34.6	26	13.6
400	30	7,408	-26.6	-40.1	26	17.4
350	30	8,359	-33.6	-45.1	26	20.4
300	30	9,420	-42.0	-45.9	26	22.3
250	29	10,629	-51.0		27	24.6
200	29	12,050	-59.3		27	26.6
175	27	12,875	-61.2		26	25.0
150	27	13,829	-62.2		27	23.3
125	26	14,947	-65.1		26	21.5
100	26	16,297	-68.1		26	18.8
80	26	17,633	-68.3		26	13.2
70	26	18,435	-67.2		25	8.2
60	24	19,369	-65.1		25	4.3
50	23	20,486	-62.6		24	2.4
40	21	21,868	-60.1		27	1.1
30	20	23,670	-58.4		24	.5
25	19	24,817	-56.9		34	1.9
20	17	26,237	-54.5		28	1.5
15	12	28,097	-50.8		28	8.2

EMPALME, MEXICO 8/ — 1015 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	28	12	14.2	9.9	34	1.3
1000	28	134	17.4	9.5	33	2.3
950	28	573	18.6	5.2	35	1.8
900	28	1,036	16.6	1.7	36	1.3
850	28	1,520	13.5	-1.1	33	.4
800	28	2,027	10.5	-5.5	25	1.8
750	28	2,561	7.3	-9.5	26	3.3
700	28	3,125	3.9	-13.7	27	4.0
650	28	3,720	.6	-17.3	28	4.9
600	28	4,361	-3.5	-20.[illegible]	28	6.3
550	28	5,039	-8.0	-25.1	28	7.8
500	27	5,773	-13.4	-28.2	28	10.3
450	27	6,560	-19.5	-31.6	28	11.4
400	27	7,430	-25.8	-36.7	27	13.7
350	27	8,382	-33.3	-42.7	27	17.1
300	27	9,444	-41.5	-48.[illegible]	27	21.8
250	27	10,657	-49.4		27	26.3
200	27	12,093	-56.3		27	30.8
175	26	12,939	-59.5		27	28.9
150	24	13,891	-62.6		28	25.6
125	24	15,003	-66.9		28	22.4
100	23	16,341	-71.4		28	21.4
80	23	17,653	-72.7		28	15.0
70	21	18,440	-70.6		29	12.4
60	20	19,358	-67.1		29	8.8
50	18	20,459	-64.9		29	8.3
40	16	21,845	-60.6		28	8.5
30	14	23,658	-55.5		27	11.1
25	14	24,830	-51.3		27	15.2
20	13	26,291	-48.5		27	16.7
15	11	28,179	-45.3		26	22.5

* GUAM, MARIANA IS. 10/ — 999 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	111	24.0	22.0	06	2.8
1000	30	97				
950	30	549	22.0	19.4	07	6.3
900	30	1,015	19.2	15.8	07	6.0
850	30	1,506	16.5	11.9	07	5.3
800	30	2,021	14.5	5.4	07	3.6
750	30	2,563	12.3	-1.5	07	2.2
700	30	3,140	9.6	-7.4	06	2.0
650	30	3,754	6.5	-13.8	04	1.5
600	30	4,404	3.1	-16.7	06	1.9
550	30	5,102	-.6	-20.6	04	2.5
500	30	5,859	-5.1	-25.5	04	3.6
450	30	6,677	-10.1	-29.8	03	3.9
400	30	7,576	-16.3	-34.6	02	3.3
350	30	8,567	-23.2	-40.2	34	2.9
300	30	9,676	-31.6	-45.8	29	4.0
250	30	10,938	-41.8		26	5.8
200	30	12,408	-54.1		23	6.4
175	30	13,251	-60.9		23	6.3
150	30	14,191	-68.2		24	4.8
125	30	15,264	-75.7		21	2.2
100	30	16,530	-81.9		12	2.9
80	30	17,781	-80.2		10	6.7
70	30	18,544	-74.7		10	7.3
60	29	19,463	-68.4		10	7.0
50	29	20,574	-62.9		10	8.9
40	29	21,960	-59.1		09	13.2
30	29	23,786	-54.2		09	20.4
25	29	24,961	-52.0		09	22.2
20	29	26,415	-48.9		09	24.2
15	29	28,326	-44.4		09	26.5
10	28	31,072	-39.2		09	26.2
7	26	33,527	-36.0		09	20.9
5	25	35,880	-32.6		10	10.0
4	21	37,448	-30.8		12	7.3
3	6	39,482	-29.8			

KEY WEST, FLA. 6/ — 1018 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	26	3	22.4	17.9	08	2.7
1000	26	160	21.5	17.5	08	4.2
950	26	602	18.6	14.7	11	4.9
900	26	1,067	15.7	12.0	13	3.8
850	26	1,551	13.3	7.3	16	4.0
800	26	2,061	11.6	-1.1	15	2.3
750	26	2,597	9.9	-7.6	16	.8
700	26	3,170	7.5	-12.0	27	1.4
650	26	3,773	4.2	-15.4	25	3.1
600	26	4,423	.4	-19.9	26	4.7
550	26	5,110	-4.0	-23.6	26	5.9
500	26	5,860	-8.8	-27.3	26	7.1
450	26	6,660	-14.5	-31.6	26	9.6
400	26	7,550	-20.8	-36.5	26	11.0
350	26	8,523	-28.1	-43.4	26	12.6
300	26	9,611	-36.7	-49.9	26	13.5
250	26	10,848	-46.6		26	17.3
200	26	12,295	-57.0		26	22.2
175	26	13,132	-62.0		26	24.8
150	26	14,074	-66.8		26	23.4
125	26	15,165	-71.2		26	19.9
100	26	16,473	-74.2		26	15.8
80	26	17,769	-75.7		27	9.0
70	26	18,541	-75.2		27	5.3
60	26	19,443	-70.9		28	2.8
50	26	20,541	-64.6		27	2.5
40	26	21,928	-58.5		28	4.9
30	26	23,760	-53.6		27	7.0
25	26	24,943	-50.3		28	7.7
20	26	26,409	-48.2		27	8.4
15	26	28,320	-45.2		27	8.0
10	22	31,059	-42.5		25	8.0
7	21	33,470	-40.9		24	7.9
5	10	35,747	-39.3			
4						
3						

KEY WEST, FLA. 7/ — 1020 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	10	3	19.0	13.9	02	2.2
1000	10	172	18.9	13.8	05	3.9
950	10	606	15.6	11.6	07	4.2
900	10	1,068	11.9	8.8	11	3.1
850	10	1,545	10.5	-.8	12	2.8
800	10	2,049	8.7	-5.4	12	1.5
750	10	2,582	8.4	-14.4	34	1.3
700	10	3,149	5.5	-17.3	34	2.6
650	10	3,748	2.1	-19.6	31	3.9
600	10	4,393	-1.6	-23.9	29	5.5
550	10	5,073	-6.4	-26.8	28	6.7
500	10	5,817	-11.8	-32.4	28	7.9
450	10	6,605	-17.5	-36.2	28	8.9
400	10	7,487	-23.4	-41.8	29	12.7
350	10	8,450	-30.8	-45.9	28	14.5
300	10	9,525	-39.2	-54.3	28	15.8
250	10	10,749	-49.0		28	18.8
200	10	12,181	-57.8		28	23.4
175	10	13,018	-60.3		27	25.6
150	10	13,973	-63.2		26	24.4
125	10	15,083	-67.6		27	22.2
100	10	16,414	-71.7		26	19.1
80	10	17,724	-73.7		26	11.6
70	10	18,505	-72.6		27	7.5
60	10	19,416	-69.8		31	2.5
50	10	20,514	-66.0		01	1.9
40	10	21,884	-61.6		03	2.5
30	10	23,693	-56.8		36	3.0
25	10	24,858	-53.7		36	4.5
20	9	26,304	-51.9			
15	9	28,177	-50.0			
10	8	30,865	-43.5			
7	5	33,274	-41.9			

KEY WEST, FLA. 8/ — 1016 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	24	3	18.1	11.7	01	1.7
1000	24	141	17.5	11.8	02	2.0
950	24	575	14.6	9.4	33	.9
900	24	1,034	11.7	5.9	29	2.8
850	24	1,511	9.8	-.6	28	4.2
800	24	2,013	8.2	-6.7	27	6.1
750	24	2,543	6.5	-10.9	27	8.2
700	24	3,108	3.9	-13.7	27	10.7
650	24	3,702	.5	-17.0	27	12.6
600	24	4,345	-3.0	-20.6	27	14.7
550	24	5,023	-7.1	-24.0	27	16.5
500	24	5,765	-11.9	-28.8	27	20.2
450	24	6,559	-16.9	-32.6	27	23.9
400	24	7,437	-23.2	-37.3	26	28.3
350	24	8,402	-29.8	-44.0	26	32.5
300	24	9,485	-37.2	-51.5	27	33.7
250	24	10,723	-46.0		26	39.0
200	24	12,178	-55.4		26	39.6
175	24	13,020	-60.3		26	35.3
150	24	13,971	-65.1		26	33.8
125	24	15,070	-69.7		27	30.1
100	24	16,387	-73.6		26	26.7
80	24	17,688	-73.6		27	17.9
70	24	18,471	-71.0		26	14.6
60	24	19,391	-67.0		26	11.8
50	24	20,503	-62.6		27	8.8
40	24	21,899	-57.4		28	6.2
30	22	23,732	-53.1		27	8.3
25	21	24,919	-50.4		28	7.5
20	21	26,387	-47.0		27	7.3
15	21	28,315	-42.5		25	6.2
10	20	31,072	-40.7		26	10.9
7	17	33,523	-35.9		26	13.2
5	11	35,845	-34.2			
4	8	37,410	-32.0			

* LIHUE KAUAI, HAWAII 10/ — 1012 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	36	20.8	19.3	03	2.7
1000	30	136	21.1	18.8	04	3.6
950	30	582	18.2	16.2	06	5.1
900	30	1,042	15.2	13.1	06	4.9
850	30	1,525	12.3	9.1	07	4.5
800	30	2,033	10.5	1.4	08	3.7
750	30	2,570	8.3	-5.4	07	1.9
700	30	3,136	5.3	-9.1	04	.9
650	29	3,732	2.1	-13.1	36	.5
600	29	4,380	-1.3	-18.8	33	1.4
550	29	5,063	-5.1	-22.8	30	2.9
500	29	5,812	-9.9	-27.6	29	6.0
450	29	6,612	-15.3	-31.7	29	7.9
400	29	7,497	-21.8	-37.8	28	10.0
350	29	8,467	-29.0	-42.7	28	14.5
300	29	9,552	-36.9	-49.0	28	19.1
250	29	10,789	-46.1		28	23.8
200	29	12,237	-56.8		28	29.2
175	29	13,073	-61.8		28	30.0
150	29	14,016	-66.7		28	27.5
125	29	15,110	-69.5		28	20.8
100	29	16,426	-73.6		28	15.7
80	28	17,733	-71.8		29	7.2
70	28	18,525	-68.4		36	1.0
60	26	19,454	-64.6		08	3.7
50	26	20,579	-60.3		09	6.1
40	26	21,981	-56.8		09	7.8
30	26	23,818	-53.4		09	10.8
25	26	24,996	-51.6		09	11.9
20	26	26,453	-48.6		09	14.0
15	26	28,359	-45.6		09	14.4
10	24	31,093	-41.4		10	11.3
7	24	33,536	-37.2		10	10.2
5	21	35,886	-33.0		11	7.2
4	17	37,455	-30.3		14	5.7
3	6	39,486	-28.5			

* LIHUE KAUAI, HAWAII 11/ — 1013 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	36	21.5	19.1	03	2.6
1000	31	150	21.6	18.6	04	3.9
950	31	591	18.5	16.5	06	6.0
900	31	1,056	15.3	13.2	07	5.3
850	31	1,540	12.6	8.2	08	4.3
800	31	2,048	11.2	-2.3	08	3.7
750	31	2,585	10.5	-7.7	08	2.1
700	31	3,159	7.9	-11.1	24	.5
650	31	3,762	4.5	-15.3	26	1.2
600	31	4,414	.8	-18.6	27	1.7
550	31	5,100	-3.5	-22.3	27	2.8
500	31	5,856	-7.8	-27.3	28	3.7
450	31	6,663	-13.2	-32.1	28	4.7
400	31	7,554	-19.8	-36.6	28	6.4
350	31	8,530	-27.5	-42.2	28	8.0
300	31	9,620	-36.2	-48.5	28	9.3
250	31	10,860	-46.1		28	13.4
200	31	12,306	-57.4		27	16.5
175	30	13,138	-63.3		27	18.0
150	30	14,073	-68.6		27	19.4
125	30	15,155	-72.3		28	15.5
100	29	16,459	-74.1		28	10.6
80	29	17,768	-71.2		27	6.1
70	29	18,564	-67.4		27	2.3
60	29	19,499	-64.3		10	3.3
50	29	20,624	-60.8		09	8.3
40	29	22,025	-56.9		09	13.6
30	28	23,860	-53.2		09	15.0
25	28	25,041	-50.9		09	16.5
20	28	26,503	-48.2		09	17.7
15	28	28,413	-44.9		09	17.0
10	27	31,150	-40.3		09	15.5
7	20	33,588	-37.0		09	15.8
5	17	35,932	-33.3		09	16.3
4	10	37,470	-32.7			

See reference note at end of table

RAWINSONDE DATA

Average monthly values

DELAYED DATA

MERIDA, MEXICO 4/ — 1015 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	11	20.8	20.4	08	1.7
1000	31	141	23.3	21.6	08	3.3
950	31	588	21.4	19.0	09	4.2
900	31	1,058	19.0	14.8	09	4.3
850	31	1,548	16.1	12.0	09	3.1
800	31	2,062	13.2	8.7	11	2.2
750	31	2,597	11.0	3.1	13	1.8
700	31	3,178	8.0	-1.2	16	2.1
650	31	3,780	5.0	-6.5	18	1.6
600	31	4,436	1.1	-10.9	21	1.3
550	31	5,116	-3.1	-16.3	22	2.0
500	31	5,881	-7.5	-22.0	24	2.8
450	31	6,687	-12.3	-27.5	26	4.4
400	31	7,587	-18.2	-33.7	26	6.3
350	31	8,571	-25.1	-39.3	27	9.1
300	31	9,673	-33.4	-47.9	26	10.7
250	31	10,927	-43.3		26	13.7
200	31	12,389	-55.2		27	14.5
175	31	13,228	-61.8		28	15.4
150	31	14,167	-68.4		28	14.9
125	30	15,241	-74.7		28	11.4
100	30	16,531	-76.2		28	5.6
80	29	17,835	-70.5		08	1.1
70	29	18,635	-67.2		09	4.0
60	29	19,571	-64.8		09	6.7
50	28	20,694	-60.5		09	7.9
40	28	22,099	-56.5		08	9.0
30	27	23,940	-52.3		08	13.1
25	27	25,126	-49.7		08	15.7
20	27	26,594	-47.0		08	16.5
15	21	28,508	-44.5		08	18.1
10	10	31,260	-40.5			
7						
5						

MONTERREY, MEXICO 3/ — 966 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	19	423	19.9	18.5	33	1.3
1000	19	124				
950	19	571	20.1	17.9	36	.9
900	19	1,035	17.9	14.5	36	.6
850	19	1,518	15.2	11.4	04	.2
800	19	2,036	12.6	7.2	36	1.1
750	19	2,578	10.0	3.0	31	2.4
700	19	3,148	7.7	-1.5	32	3.8
650	19	3,763	4.6	-5.1	32	3.2
600	19	4,406	1.1	-9.2	32	4.2
550	19	5,096	-2.4	-13.2	33	2.9
500	18	5,854	-7.2	-21.0	32	3.5
450	18	6,669	-12.0	-27.7	34	4.4
400	18	7,562	-17.6	-32.8	33	6.1
350	18	8,549	-24.7	-40.6	31	7.0
300	18	9,653	-33.1	-48.0	30	8.2
250	18	10,909	-43.1		29	9.4
200	18	12,374	-54.9		29	10.3
175	18	13,217	-61.1		30	9.4
150	18	14,160	-67.6		29	8.6
125	18	15,241	-73.5		30	6.8
100	17	16,536	-74.5		31	3.2
80	17	17,852	-69.0		06	5.8
70	17	18,656	-65.6		08	7.7
60	17	19,598	-62.9		09	8.1
50	17	20,728	-60.0		08	10.4
40	17	22,134	-56.0		08	11.0
30	16	23,984	-52.4		08	11.4
25	16	25,166	-50.1		08	11.4
20	16	26,632	-47.5		08	12.1
15	14	28,539	-44.7		08	12.7
10	6	31,222	-41.0			
7						
5						

MONTERREY, MEXICO 5/ — 970 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	22	423	13.9	12.3	33	3.0
1000	22	162				
950	22	596	15.1	12.2	31	3.0
900	22	1,055	15.1	9.6	29	1.9
850	22	1,539	14.3	3.1	19	1.0
800	22	2,051	13.2	-2.3	23	1.5
750	22	2,589	10.8	-7.5	26	3.3
700	21	3,167	7.5	-10.9	28	4.6
650	21	3,772	3.4	-15.6	27	5.1
600	21	4,418	-.6	-20.0	27	6.4
550	21	5,098	-5.1	-24.9	26	7.4
500	21	5,852	-10.0	-28.0	26	8.7
450	21	6,655	-15.3	-32.8	26	10.4
400	21	7,538	-21.7	-37.3	25	11.8
350	21	8,507	-29.0	-44.2	25	14.3
300	21	9,592	-37.2	-52.2	25	15.2
250	21	10,826	-46.9		25	17.7
200	21	12,271	-57.4		25	18.6
175	21	13,105	-62.5		25	17.7
150	20	14,048	-66.5		25	16.1
125	20	15,142	-69.9		25	14.3
100	20	16,461	-72.2		25	10.3
80	20	17,766	-73.4		26	5.5
70	20	18,552	-71.0		28	2.2
60	19	19,477	-66.1		32	.1
50	19	20,593	-62.4		31	1.0
40	18	21,987	-58.0		31	1.3
30	18	23,819	-53.8		26	4.6
25	17	25,000	-50.5		27	5.4
20	17	26,463	-48.0		27	7.0
15	17	28,367	-46.5		27	12.3
10	14	31,065	-44.2		26	15.7
7	9	33,428	-46.7			
5	5	35,683	-46.4			

MONTERREY, MEXICO 6/ — 968 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	21	423	9.4	6.6	33	2.8
1000	21	155				
950	21	584	11.5	6.3	33	2.9
900	21	1,037	12.6	3.3	31	2.4
850	21	1,517	12.8	-.2	24	2.6
800	21	2,025	11.9	-3.0	25	4.8
750	21	2,562	9.4	-5.7	26	7.0
700	21	3,131	5.5	-8.6	25	7.7
650	21	3,728	1.4	-11.6	25	10.3
600	21	4,374	-2.7	-14.8	24	11.0
550	21	5,051	-7.2	-19.2	24	12.1
500	21	5,797	-12.1	-24.4	24	12.8
450	21	6,591	-17.5	-30.0	25	15.0
400	21	7,470	-24.0	-35.2	25	16.3
350	21	8,433	-31.2	-41.8	25	20.7
300	21	9,508	-39.4	-49.0	25	24.2
250	21	10,733	-48.5		25	30.2
200	21	12,172	-57.4		25	30.7
175	21	13,008	-61.7		25	27.6
150	21	13,953	-65.4		25	25.9
125	21	15,055	-68.7		25	22.5
100	21	16,379	-71.7		25	19.5
80	19	17,697	-71.6		24	11.7
70	17	18,486	-70.0		24	8.3
60	19	19,409	-67.1		25	6.3
50	18	20,521	-62.9		24	4.4
40	18	21,907	-59.5		25	4.8
30	18	23,727	-54.8		26	6.7
25	18	24,900	-52.3		26	9.3
20	18	26,354	-49.3		26	9.6
15	18	28,251	-47.1		25	11.4
10	7	30,968	-44.6			
7						
5						

MONTERREY, MEXICO 7/ — 972 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	23	423	8.5	7.8	30	1.6
1000	23	185				
950	23	608	9.9	8.1	33	2.2
900	23	1,054	9.6	5.2	33	1.5
850	23	1,535	10.0	1.1	20	1.3
800	23	2,039	9.4	-4.4	20	3.0
750	23	2,576	7.3	-8.8	23	4.7
700	23	3,139	4.0	-13.0	25	8.6
650	23	3,736	-.1	-16.1	25	10.8
600	23	4,375	-4.2	-21.2	24	11.5
550	23	5,052	-8.7	-24.7	24	12.6
500	23	5,789	-13.8	-29.2	24	14.3
450	23	6,573	-19.6	-34.1	25	15.4
400	23	7,447	-26.0	-39.4	25	16.7
350	23	8,401	-33.3	-46.6	26	16.4
300	22	9,462	-41.8	-50.7	25	18.9
250	22	10,673	-51.7		26	22.5
200	22	12,095	-58.9		26	27.6
175	22	12,929	-60.9		26	26.0
150	22	13,883	-63.3		26	25.0
125	22	14,996	-66.6		26	21.1
100	22	16,335	-70.3		25	15.8
80	22	17,658	-70.7		24	11.2
70	22	18,451	-69.7		24	8.8
60	22	19,376	-66.8		22	5.4
50	22	20,488	-63.0		27	.8
40	21	21,870	-60.3		10	2.7
30	21	23,675	-57.4		05	1.6
25	21	24,832	-55.8		36	2.3
20	20	26,264	-52.9		33	3.2
15	19	26,134	-49.9		29	4.2
10	12	30,816	-46.7			
7	5	33,205	-45.9			
5						

MONTERREY, MEXICO 8/ — 972 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	21	423	8.7	6.5	35	1.1
1000	21	181				
950	21	610	10.4	6.0	35	1.9
900	21	1,059	9.8	3.9	34	2.2
850	21	1,535	9.5	.6	29	2.7
800	21	2,037	7.8	-3.0	29	4.2
750	21	2,565	5.6	-7.9	29	5.7
700	21	3,130	2.7	-10.8	28	8.3
650	21	3,721	-.9	-13.2	28	9.7
600	20	4,361	-5.3	-18.0	27	12.6
550	20	5,033	-9.6	-22.9	28	14.7
500	20	5,771	-14.4	-27.5	27	15.4
450	20	6,561	-19.8	-31.5	27	18.3
400	20	7,427	-26.0	-37.3	27	20.7
350	20	8,382	-32.9	-43.8	27	24.0
300	19	9,447	-40.7	-50.0	27	28.7
250	19	10,667	-49.0		27	35.1
200	19	12,107	-56.0		26	39.6
175	19	12,950	-59.7		27	40.3
150	19	13,906	-63.4		27	35.2
125	19	15,016	-67.5		27	30.9
100	19	16,347	-71.4		27	23.5
80	19	17,660	-72.1		27	17.1
70	19	18,450	-70.6		27	12.4
60	18	19,374	-68.6		27	11.0
50	17	20,483	-64.4		27	7.6
40	17	21,870	-57.8		26	5.5
30	17	23,703	-53.7		26	8.9
25	17	24,878	-52.2		26	11.9
20	17	26,334	-47.7		26	10.4
15	16	28,244	-44.4		26	10.7
10	10	30,979	-41.0			
7						
5						
4						

SAN NICOLAS, CALIF. 8/ — 997 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	26	174	12.6	10.3	30	2.1
1000	26	144				
950	26	577	13.3	2.3	30	1.4
900	26	1,030	11.4	-2.2	27	1.1
850	26	1,506	9.5	-6.5	25	1.4
800	26	2,006	6.9	-9.8	25	2.3
750	26	2,533	3.8	-13.5	25	4.2
700	26	3,090	.3	-16.3	25	4.9
650	26	3,680	-3.7	-20.6	26	6.2
600	26	4,307	-7.6	-22.8	26	7.8
550	26	4,979	-12.0	-26.3	26	9.7
500	26	5,701	-17.1	-30.4	26	11.5
450	26	6,483	-22.8	-33.9	26	12.8
400	26	7,336	-29.1	-40.2	26	14.4
350	26	8,276	-36.8	-44.1	26	16.4
300	26	9,324	-45.1	-52.5	27	19.0
250	26	10,517	-54.0	-61.2	27	21.3
200	26	11,938	-56.6	-64.2	27	27.5
175	26	12,781	-58.4	-66.3	28	27.9
150	26	13,746	-60.5		28	24.6
125	25	14,870	-63.3		28	20.0
100	24	16,229	-66.8		28	15.5
80	24	17,572	-68.0		28	10.8
70	24	18,376	-66.9		29	7.5
60	24	19,309	-66.0		30	6.2
50	24	20,421	-64.0		31	5.3
40	24	21,796	-61.5		32	3.8
30	24	23,592	-58.5		30	6.1
25	23	24,741	-56.3		28	9.5
20	21	26,170	-53.9		27	12.6
15	21	28,035	-49.8		27	25.4
10	21	30,712	-45.1		27	36.5
7	18	33,100	-41.7		27	46.4
5	12	35,382	-38.6			
4	8	36,885	-36.4			

SAN NICOLAS, CALIF. 12/ — 992 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	27	174	12.3	10.9	31	4.2
1000	27	105				
950	27	541	17.2	3.9	32	5.0
900	27	1,005	20.7	-.4	32	5.1
850	27	1,497	19.5	-3.1	32	5.4
800	27	2,015	16.7	-8.0	31	5.1
750	27	2,560	13.4	-12.0	31	4.0
700	27	3,136	10.0	-14.8	31	3.3
650	27	3,748	6.6	-17.5	30	2.7
600	27	4,399	2.5	-20.[illegible]	28	3.1
550	27	5,095	-2.4	-24.6	26	3.5
500	27	5,844	-7.6	-29.2	26	4.2
450	27	6,654	-13.8	-34.8	26	4.2
400	27	7,537	-21.0	-39.3	27	4.9
350	27	8,508	-28.7	-44.4	26	6.8
300	27	9,592	-37.5	-51.9	27	8.8
250	27	10,824	-47.2	-60.0	26	11.7
200	27	12,266	-57.3	-68.1	26	14.4
175	27	13,101	-61.9		26	14.9
150	27	14,048	-64.4		26	12.8
125	27	15,157	-66.4		26	10.3
100	25	16,504	-67.6		26	5.2
80	25	17,853	-65.5		18	1.0
70	25	18,670	-63.0		10	3.2
60	25	19,625	-59.9		10	5.1
50	24	20,771	-57.3		09	5.9
40	22	22,189	-55.0		09	9.3
30	21	24,044	-51.0		09	8.9
25	21	25,235	-48.9		09	9.5
20	21	26,709	-46.6		09	10.0
15	21	28,632	-43.5		09	11.5
10	18	31,373	-39.6		09	13.1
7	14	33,814	-35.4		09	15.4
5	8	36,163	-32.7			
4						

* WAKE IS., PACIFIC AREA 9/ — 1017 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	5	24.0	19.8	07	9.4
1000	31	154	22.7	18.8	07	10.3
950	31	594	18.9	16.0	08	9.8
900	31	1,062	15.5	12.3	08	9.5
850	31	1,545	13.1	6.7	09	8.1
800	31	2,055	11.9	-1.2	08	6.8
750	31	2,593	10.9	-7.9	07	5.3
700	31	3,167	8.5	-12.8	06	4.6
650	31	3,771	5.2	-16.3	05	3.9
600	31	4,425	1.1	-18.4	04	3.6
550	31	5,113	-3.4	-22.7	36	2.7
500	31	5,865	-8.6	-26.1	34	4.6
450	31	6,672	-14.2	-30.7	32	6.8
400	31	7,558	-20.3	-36.4	31	9.2
350	31	8,533	-27.7	-42.7	31	12.7
300	31	9,624	-35.2	-49.5	30	16.9
250	31	10,873	-43.9		29	21.6
200	31	12,338	-54.1		29	23.4
175	31	13,184	-59.9		28	22.0
150	31	14,133	-66.1		28	20.1
125	31	15,221	-72.4		28	16.0
100	29	16,516	-77.0		28	9.4
80	29	17,800	-75.4		29	2.9
70	29	18,579	-72.2		07	.7
60	28	19,497	-67.4		10	3.1
50	28	20,611	-61.9		10	4.8
40	27	22,009	-56.9		09	5.4
30	27	23,849	-53.1		09	8.2
25	26	25,031	-51.1		08	10.2
20	25	26,495	-47.6		08	13.6
15	25	28,409	-44.4		08	15.8
10	22	31,138	-41.5		08	14.4
7	16	33,578	-39.3		07	14.8
5	12	35,895	-35.9		03	8.4
4	8	37,441	-31.8			

YUMA, ARIZ. 2/ — 993 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	22	131	22.1	7.3	18	.1
1000	22	67				
950	22	514	24.6	5.0	26	3.4
900	22	987	22.2	2.4	26	4.2
850	22	1,480	19.4	.1	23	3.9
800	22	1,997	15.9	-3.8	21	3.1
750	22	2,534	12.2	-7.2	19	3.2
700	22	3,115	8.2	-11.5	21	4.6
650	22	3,716	4.6	-14.6	22	6.4
600	22	4,369	.5	-19.1	22	8.9
550	22	5,056	-3.4	-25.0	24	9.4
500	22	5,808	-8.3	-28.6	24	11.9
450	22	6,610	-14.1	-32.4	24	14.2
400	22	7,499	-20.9	-37.1	24	16.6
350	22	8,470	-28.6	-43.6	24	19.0
300	22	9,555	-37.0	-50.9	24	23.4
250	22	10,792	-46.1		24	26.0
200	22	12,242	-55.8		24	27.7
175	20	13,085	-60.2		24	27.1
150	18	14,047	-64.0		24	22.9
125	17	15,145	-66.8		24	18.2
100	12	16,484	-67.4		24	10.7
80	8	17,808	-65.3			
70	8	18,623	-63.4			
60	7	19,566	-59.0			
50	7	20,715	-57.3			
40	7	22,131	-55.0			
30	7	23,985	-52.5			
25	7	25,169	-50.3			
20	7	26,638	-47.1			
15	6	28,557	-44.7			
10	6	31,297	-39.6			
7	5	33,745	-35.0			

YUMA, ARIZ. 6/ — 999 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	19	131	6.6	2.4	33	1.2
1000	19	126			35	.7
950	19	551	10.2	.1	33	2.9
900	19	1,002	7.6	-1.5	34	2.7
850	19	1,471	5.9	-4.8	32	2.5
800	19	1,966	3.8	-7.4	28	4.5
750	19	2,488	1.9	-11.0	27	6.1
700	19	3,042	-1.1	-14.[illegible]	27	7.5
650	19	3,627	-3.9	-17.3	27	10.5
600	19	4,258	-8.0	-21.0	27	12.2
550	19	4,922	-12.5	-25.9	27	14.9
500	19	5,650	-17.5	-31.2	26	17.0
450	19	6,422	-23.7	-36.8	26	17.5
400	19	7,280	-30.2	-41.8	26	18.5
350	19	8,217	-37.2	-47.6	27	18.9
300	19	9,267	-44.5		27	21.1
250	19	10,468	-51.9		27	23.4
200	19	11,895	-57.3		27	24.9
175	16	12,741	-58.7		27	24.9
150	15	13,719	-61.0		27	24.4
125	13	14,853	-63.1		27	19.8
100	12	16,222	-66.0			
80	7	17,568	-65.3			
70	6	18,378	-63.7			
60	6	19,330	-62.7			
50	5	20,464	-60.9			

1/ May 1967
2/ June 1967
3/ September 1967
4/ October 1967
5/ November 1967
6/ December 1967
7/ January 1968
8/ February 1968
9/ March 1968
10/ April 1968
11/ May 1968
12/ June 1968

Also see reference notes with current data

SOLAR RADIATION DATA

Daily totals and monthly averages of solar radiation (direct and diffuse) received on a horizontal surface, tabulated in langleys. DELAYED DATA

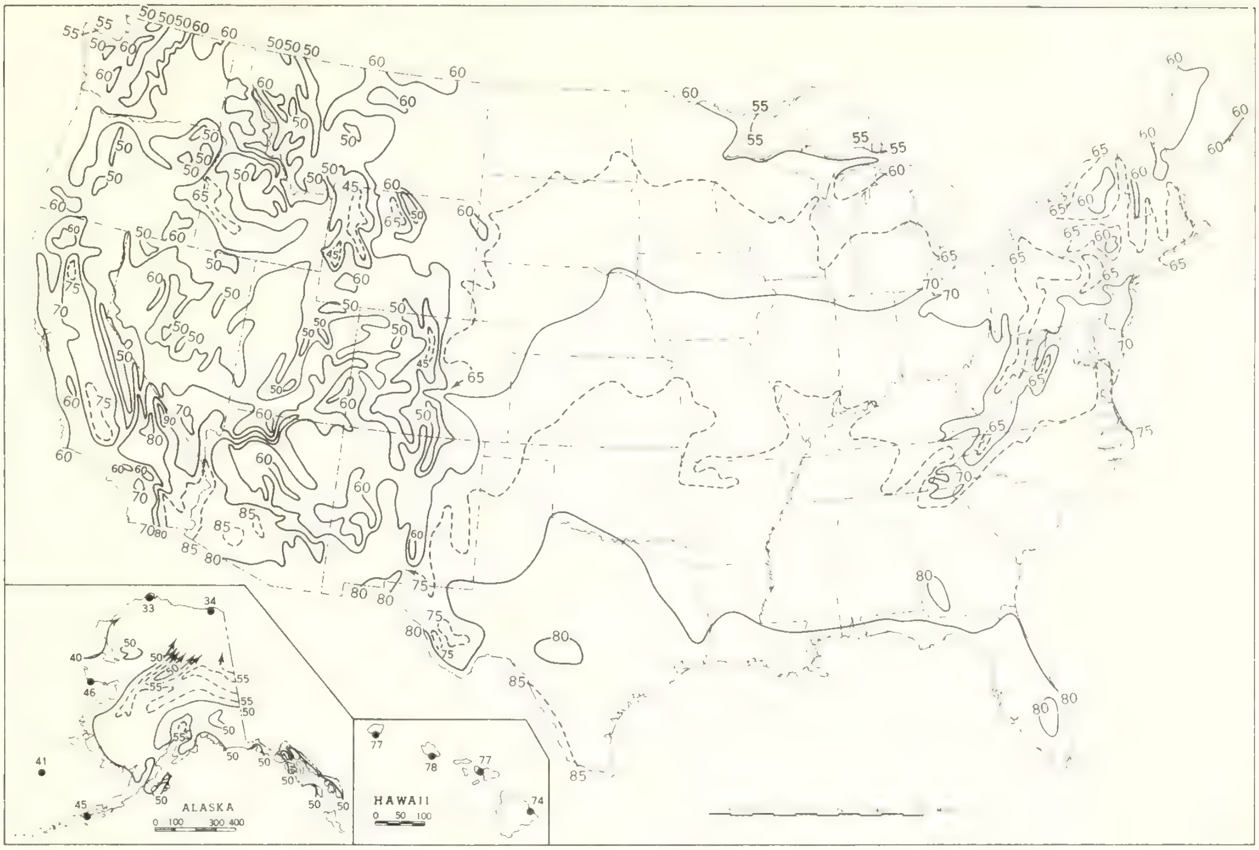
Station	Day of month 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
MAY 1967																																
PULLMAN WASHINGTON	552	607	538	469	384	491	517	685	135	134	186	303	608	551	647	692	558	555	694	616	666	654	543	705	746	695	623	379	286	389	631	524
AUGUST 1967																																
PULLMAN WASHINGTON	655	650	638	621	641	499	649	627	627	608	472	587	606	595	600	591	565	558	588	472	583	560	563	583	558	482	404	523	515	520	515	569
SEPTEMBER 1967																																
PULLMAN WASHINGTON	474	483	511	509	395	494	387	394	435	345	163	482	489	421	429	471	432	407	288	425	345	432	419	411	398	396	383	384	144	251		400
OCTOBER 1967																																
PULLMAN WASHINGTON	137	91	178	397	175	331	218	362	282	251	107	266	95	242	300	261	285	226	315	302	57	63	264	165	147	253	31	184	213	229	118	211
NOVEMBER 1967																																
PULLMAN WASHINGTON	244	264	225	255	253	220	61	88	83	31	49	57	123	30	194	201	199	61	194	141	102	158	87	10*	117	195	74	51	33	185		133*
DECEMBER 1967																																
FLAMING GORGE UTAH	158	300	288	270	204	273*	98	---	267	---	210	---	---	---	---	193	152	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
ITHACA NEW YORK	236	210	7	195	163	56	8	23	11	94	32	37	20	105	53	42	82	15	77	165	75	30	56	47	42	135	199	35	102	136	21	81
LOS ANGELES CALIF.U	305	305	287	263	184	234	89	259	272	281	259	220	295	196	277	217	274	77	189	---	280	262	280	268	268	242	230	146	276	203	261	240
PULLMAN WASHINGTON	128	34	29	50	52	112	45	125	42	66	106	182	194	199	172	77	69	73	97	61	83	33	75	27	18	97	106	133	29	60	61	85
SEATTLE WASH. UNIV.	36	12	61	36	96	30	78	57	45	41	127	135	150	97	130	32	31	90	65	76	24	17	72	12	18	18	19	38	22	17	---	56
WAKE ISLAND PACIFIC	337	67	312	365	410	423	409	416	412	424	349	420	421	431	392	345	383	364	418	404	369	437	432	399	312	297	308	394	423	392	410	377
JANUARY 1968																																
INYOKERN CALIFORNIA	237	256	292	294	298	302	308	203	264	234	285	188	269	266	280	297	286	306	296	317	315	311	312	318	283	262	311	337	351	226	348	286
LOS ANGELES CALIF.U	---	46	260	280	263	291	283	171	191	39	182	311	237	292	238	145	264	296	320	310	296	296	312	304	252	---	208	---	443	368	355	259
MAUNA LOA OBS.HAWAII	392	308	454	387	133	506	553	552	461	561	556	575	574	554	559	396	439	566	572	549	492	458	549	584	468	438	464	286	607	580	449	485
PULLMAN WASHINGTON	87	162	78	65	125	156	84	147	55	119	124	140	115	36	23	65	98	92	50	87	104	158	152	45	124	229	130	151	161	122	78	108
FEBRUARY 1968																																
MAUNA LOA OBS.HAWAII	356	273	222	585	530	523	580	619	632	638	636	645	603	648	656	664	506	636	658	657	565	449	639	690	510	680	673	677	594			577
PULLMAN WASHINGTON	74	43	91	58	245	166	84	60	238	203	64	278	282	267	189	290	113	46	55	259	72	75	257	306	310	319	333	345	354			189
MARCH 1968																																
LEXINGTON KENTUCKY	462	319	511	502	484	117	498	357	386	93	228	58	536	473	361	73	492	473	367	176	72	29	378	600	541	553	537	437	476	507	160	363
MATANUSKA ALASKA	76	81	68	111	65	173	243	198	202	231	269	266	283	265	305	306	316	320	288	82	166	131	306	326	---	385	375	150	407	351	383	238
PULLMAN WASHINGTON	354	337	270	310	75	271	253	233	406	399	209	188	417	205	212	125	392	341	456	465	431	309	343	343	112	343	113	99	170	538	374	293
APRIL 1968																																
LEXINGTON KENTUCKY	575	252*	199	44	106	501	368	161	420	488	623	614	484	216	592	639	116	525*	454	480	640	516	447	545	671	440	513	663	554	637		449*
PULLMAN WASHINGTON	303	109	272	352	342	229	421	490	526	542	467	338	532	198	471	397	608	452	415	351	398	632	263	506	367	530	631	638	610	380		426
MAY 1968																																
LEXINGTON KENTUCKY	640	678	539	638	505	720	679	404	207	178	244	380	549	478	433	650	252	534	399	533	641	613	177	192	409	187	331	452	413	363	666	454
PULLMAN WASHINGTON	511	599	643	390	594	307	474	435	370	432	443	426	296	234	363	442	468	482	463	195	204	506	362	504	166	323	390	232	388	493	439	406

CASTANA IOWA AVERAGES FOR

JANUARY 1967	183	AUGUST 1967	539
FEBRUARY 1967	222	SEPTEMBER 1967	389
MARCH 1967	352	OCTOBER 1967	262
APRIL 1967	406	NOVEMBER 1967	194
MAY 1967	429	DECEMBER 1967	127
JUNE 1967	504		
JULY 1967	596		

Note.--Langley is the unit used to denote one gram calorie per square centimeter.
Values with an asterisk are interpolated.

Chart 1. A. Normal Daily Average Temperature (°F. 1931-60), June.



B. Temperature Departure from 30 - Year Mean (°F 1931-60), June 1968.

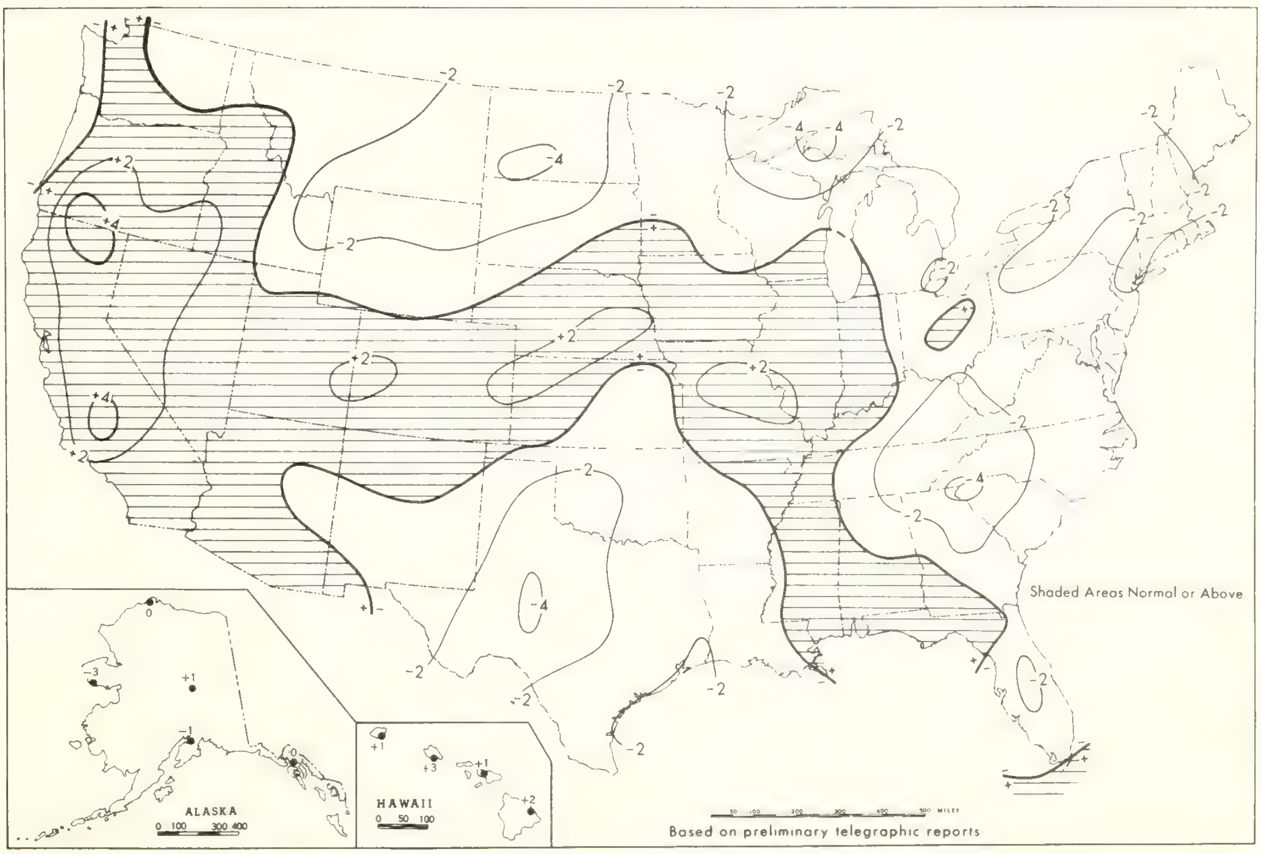


Chart II. Total Precipitation (Inches), June 1968.

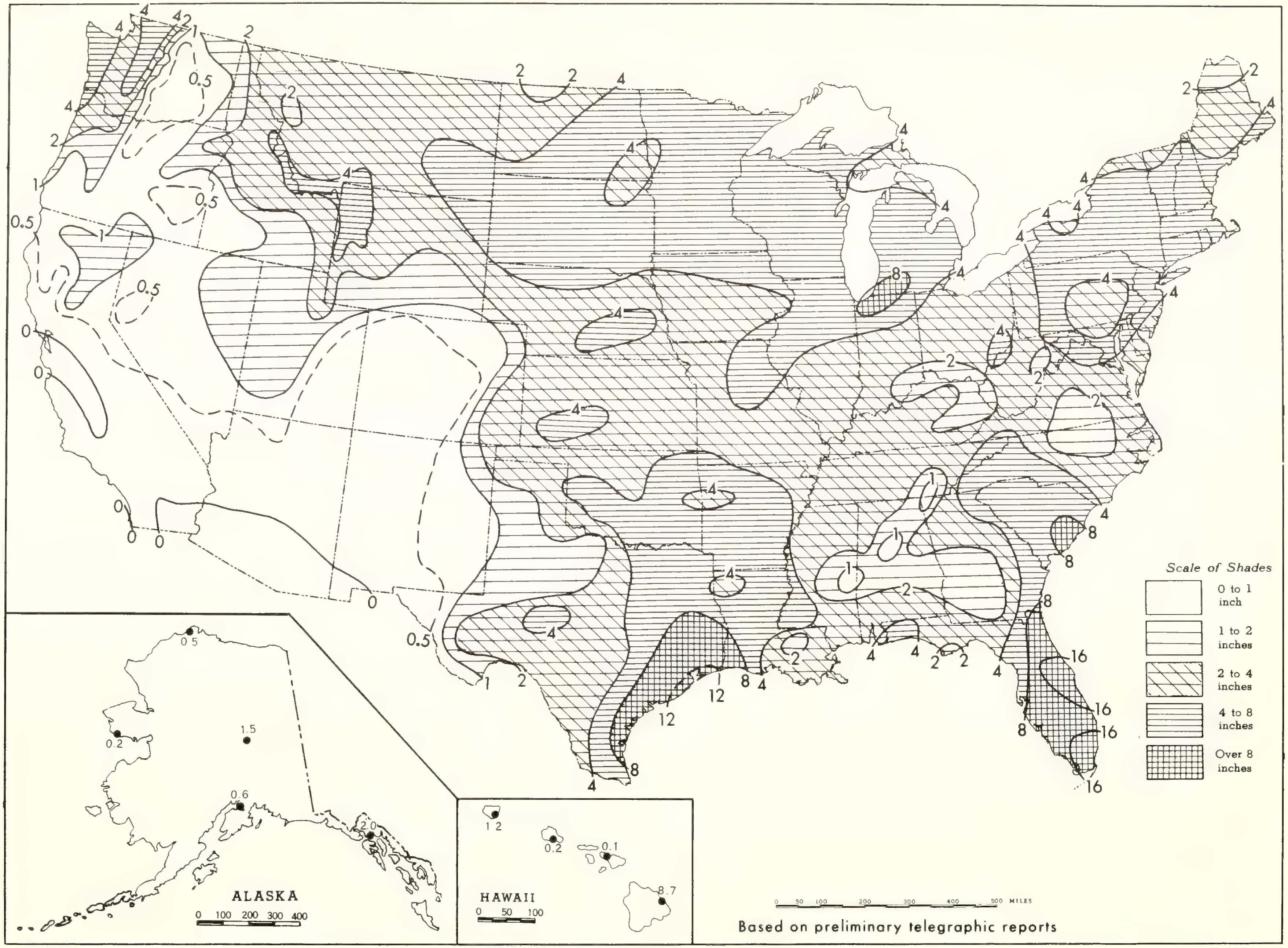


Chart III. Percentage of Normal Precipitation, June 1968.

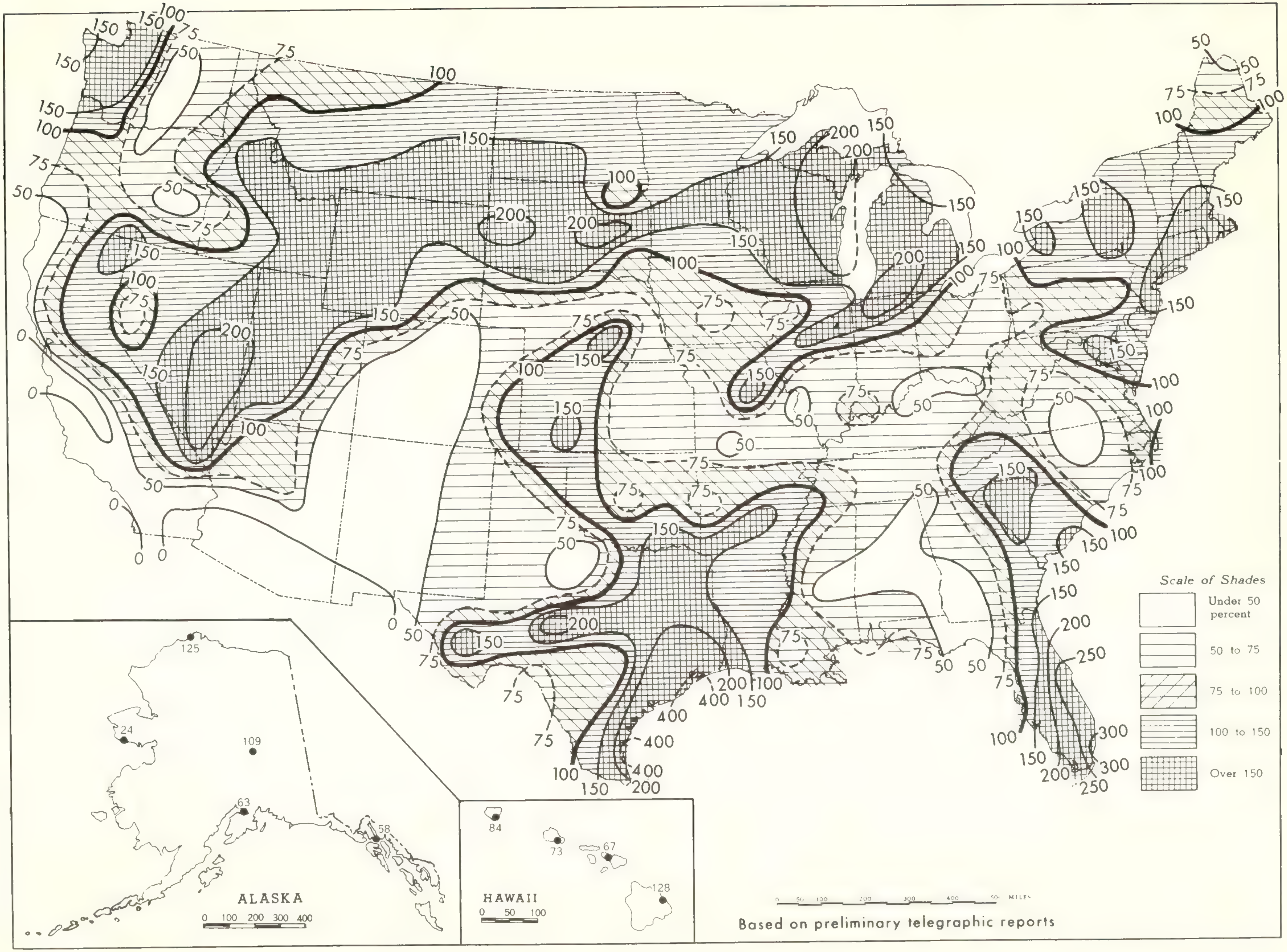
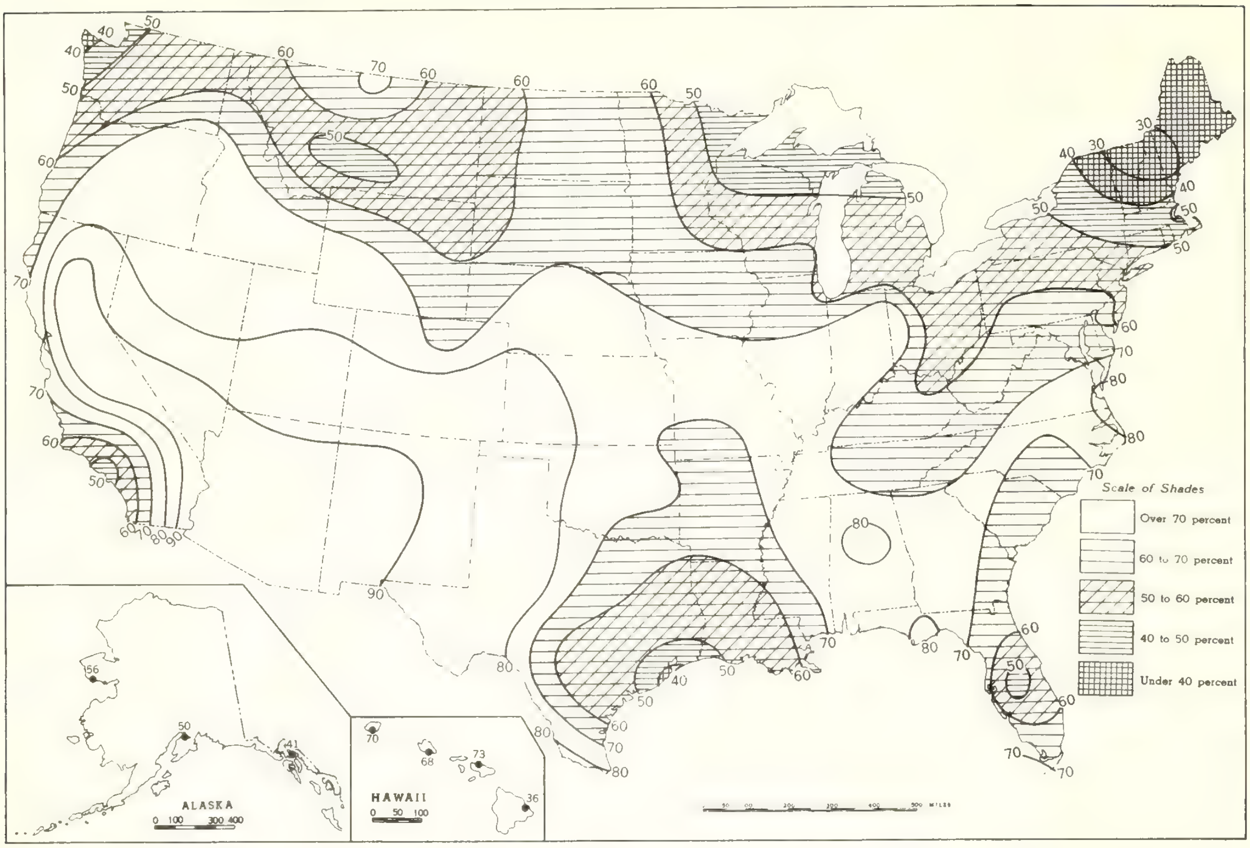
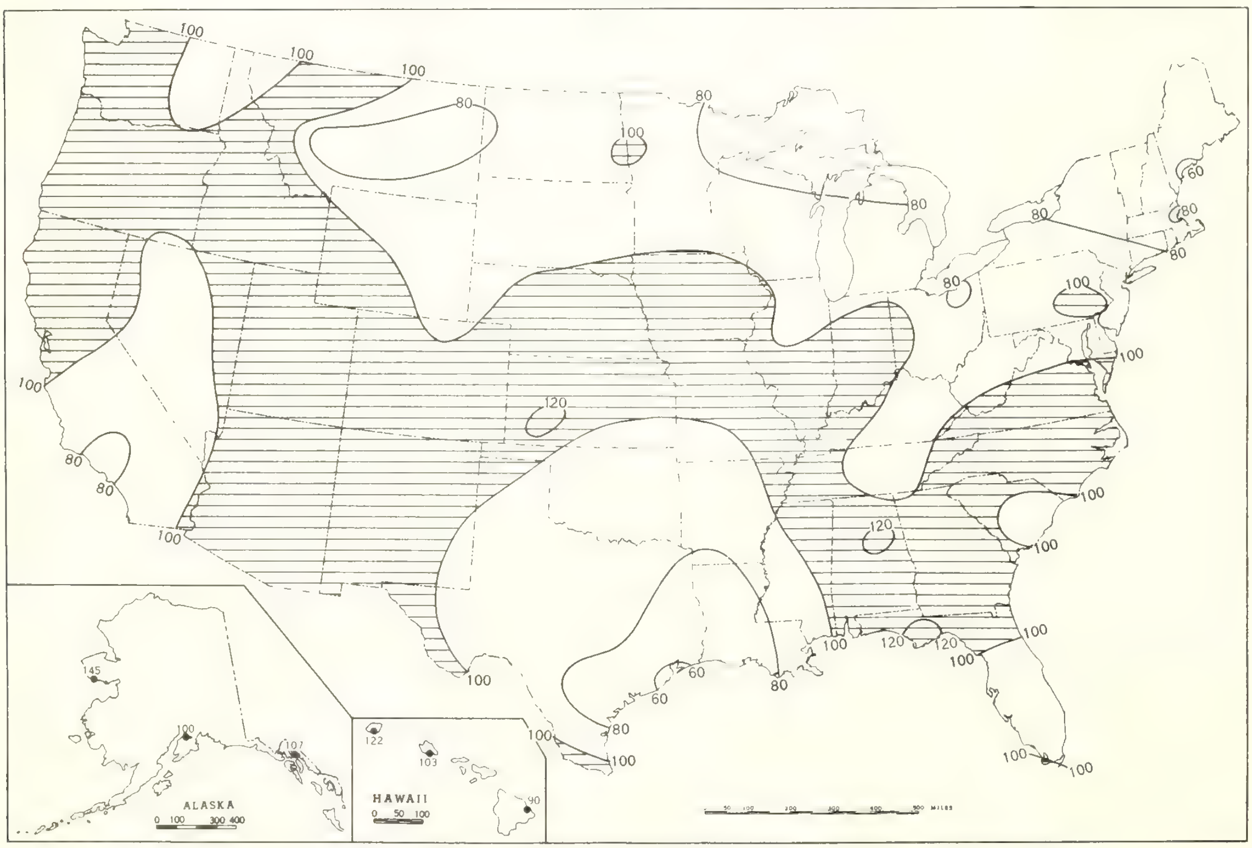


Chart VI. A. Percentage of Possible Sunshine, June 1968.

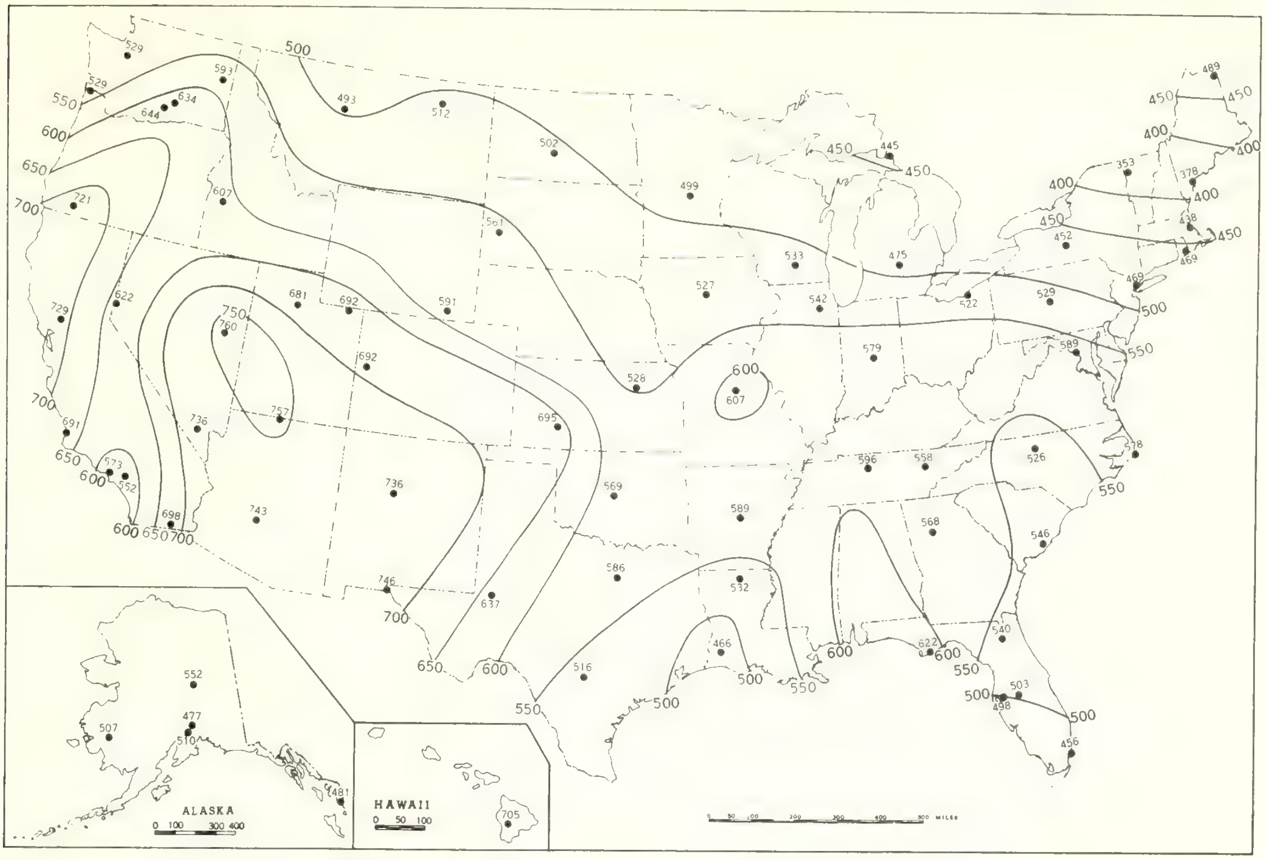


B. Percentage of Mean Monthly Sunshine, June 1968.

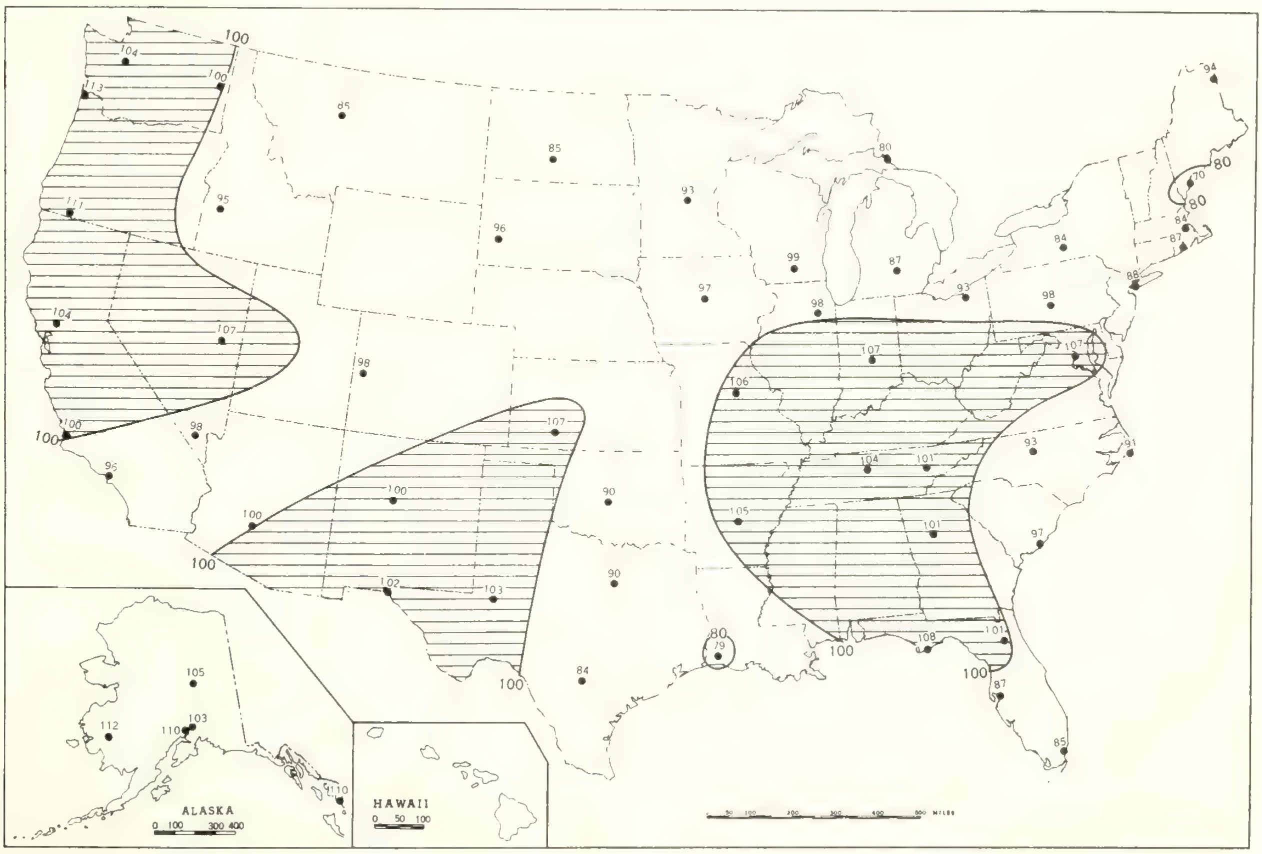


A. Computed from total number of hours of observed sunshine in relation to total number of possible hours of sunshine during month. B. Means are computed for stations having at least 10 years of record.

Chart VII. A. Average Daily Values of Solar Radiation, Langleys, June 1968.

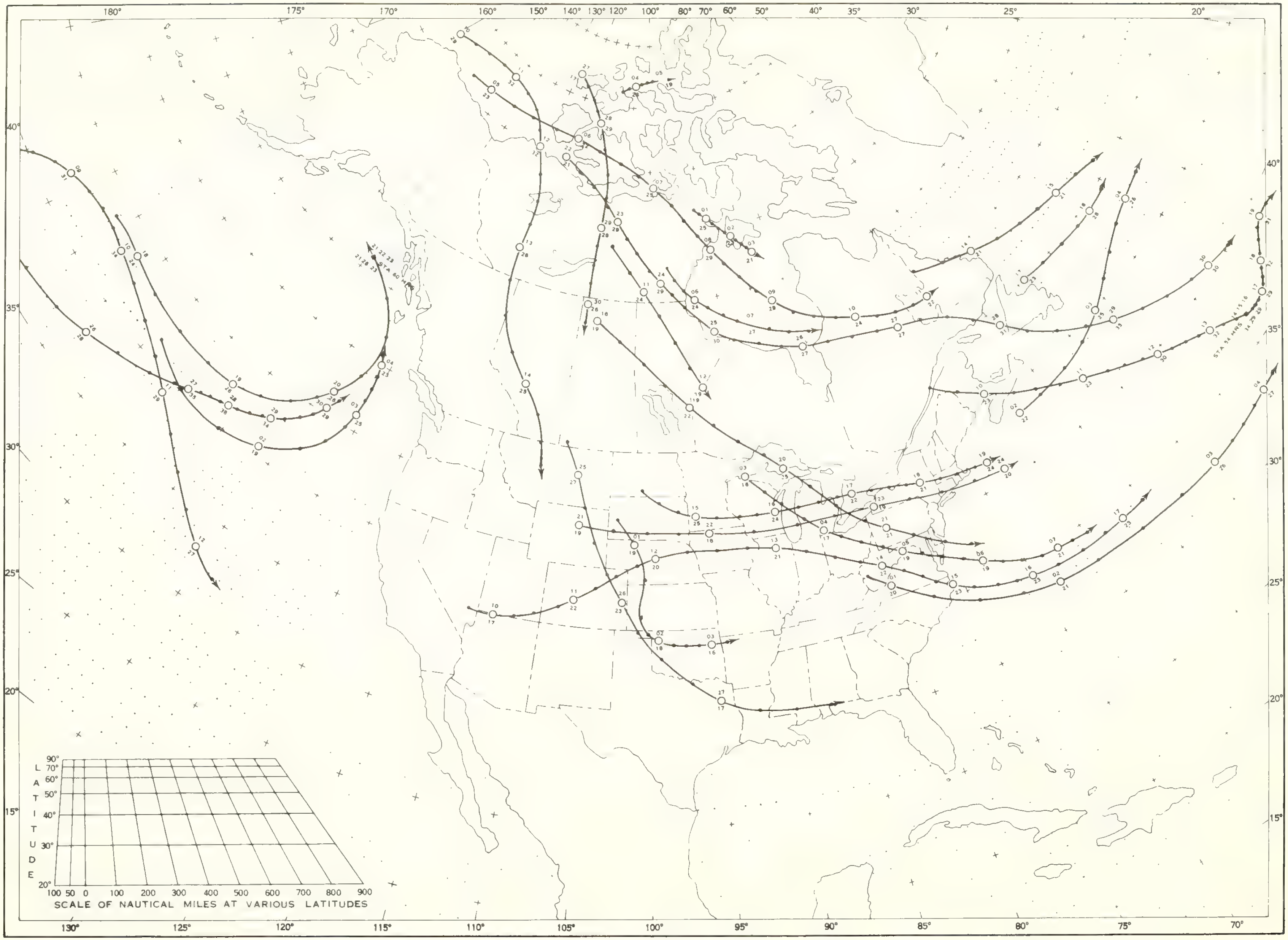


B. Percentage of Mean Daily Solar Radiation, June 1968.



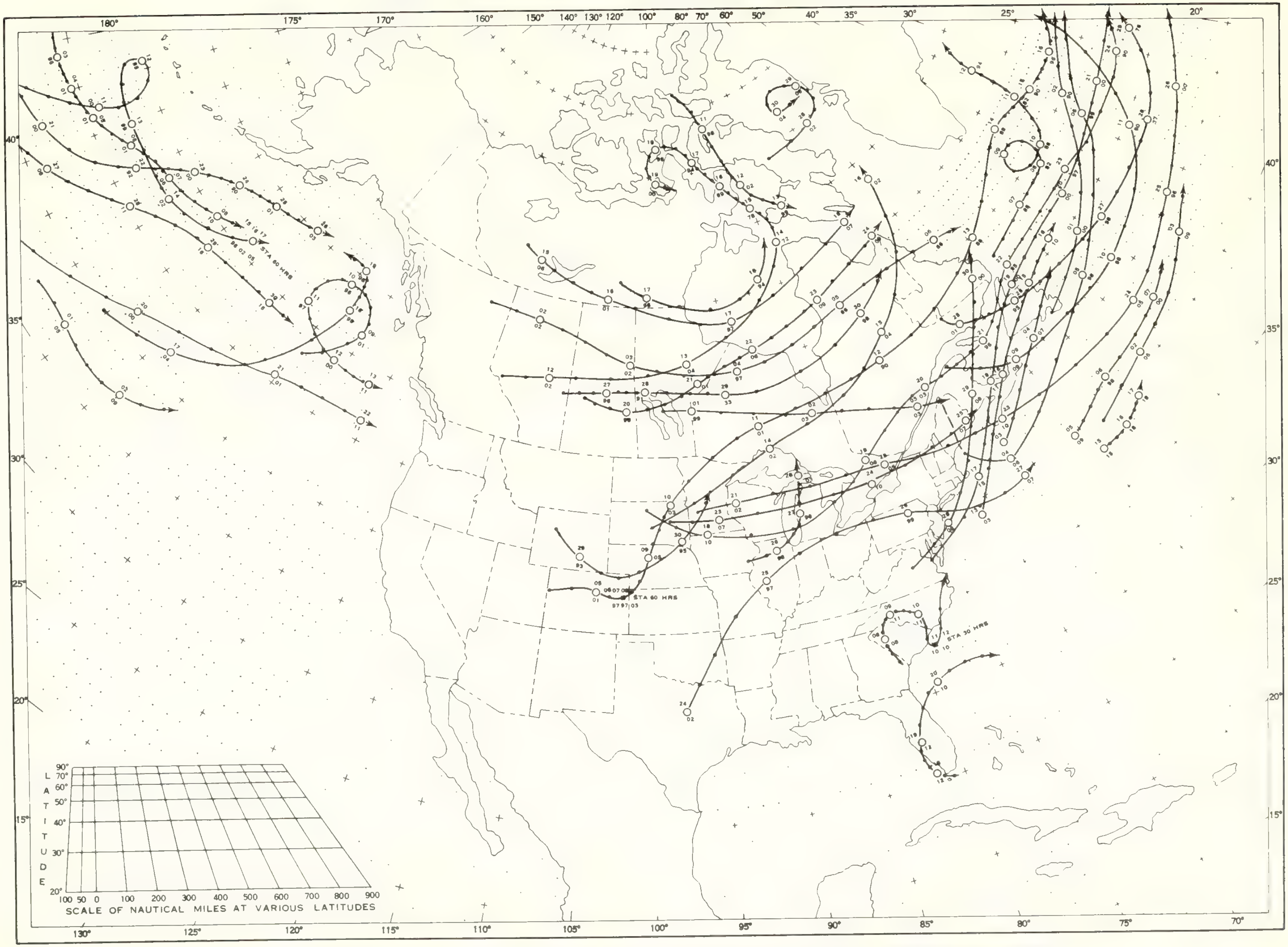
A. Mean daily solar radiation, direct + diffuse, received on a horizontal surface in langleys (1 langley = 1 gm. cal. cm.$^{-2}$) and recorded in International Pyrheliometer Scale of 1956. B. Percentage of the mean based on at least 5 years of record during the period 1950-60, and corrected to the International Pyrheliometer Scale of 1956.

Chart VIII. Tracks of Centers of Anticyclones at Sea Level, June 1968.



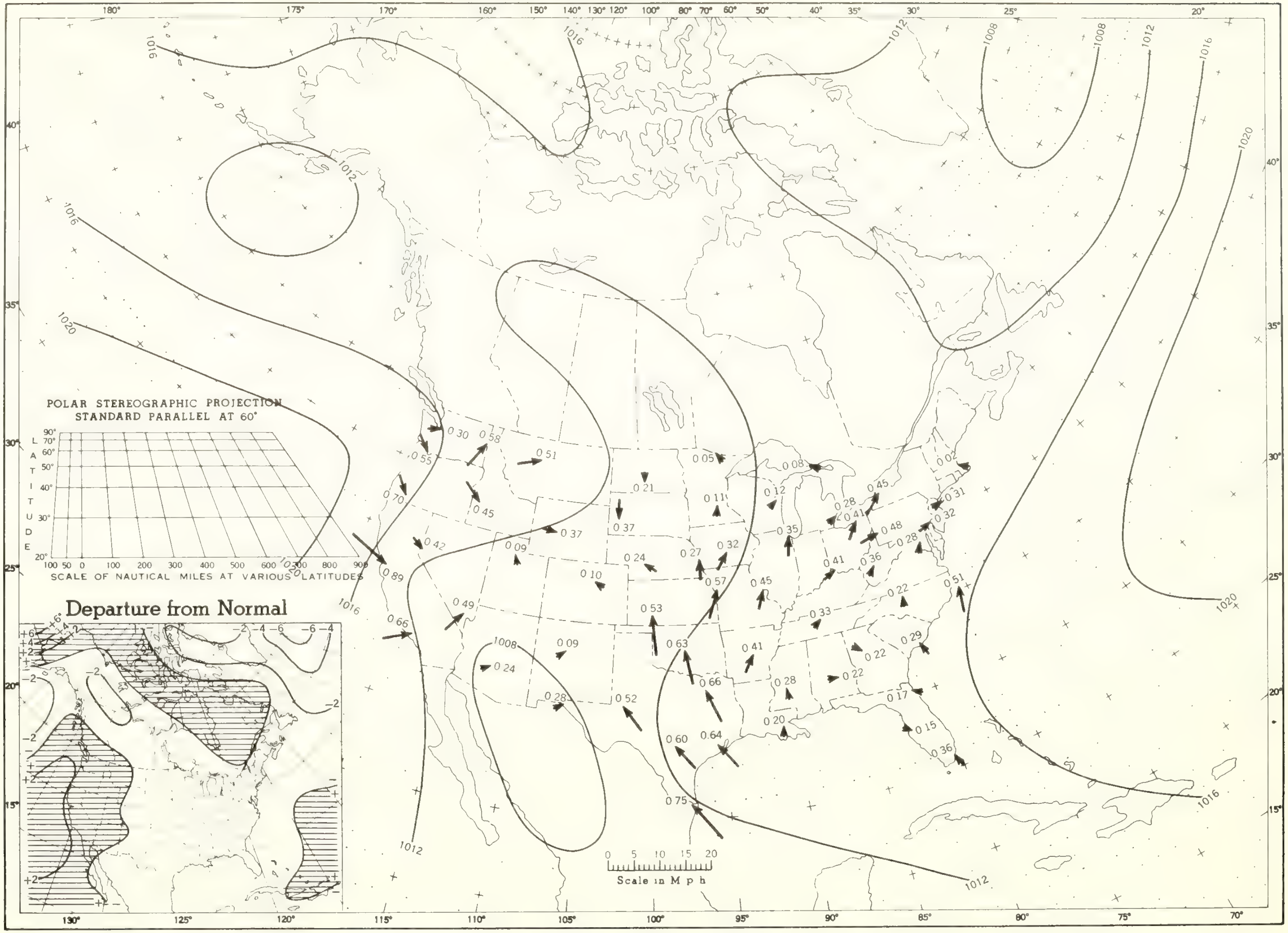
Circle indicates position of center at 7:00 a.m. E.S.T. Figure above circle indicates date, figure below, pressure to nearest millibar. Dots indicate intervening 6-hourly positions. Squares indicate position of stationary center for period shown. Dashed line in track indicates reformation at new position. Only those centers which could be identified for 24 hours or more are included.

Chart IX. Tracks of Centers of Cyclones at Sea Level, June 1968.



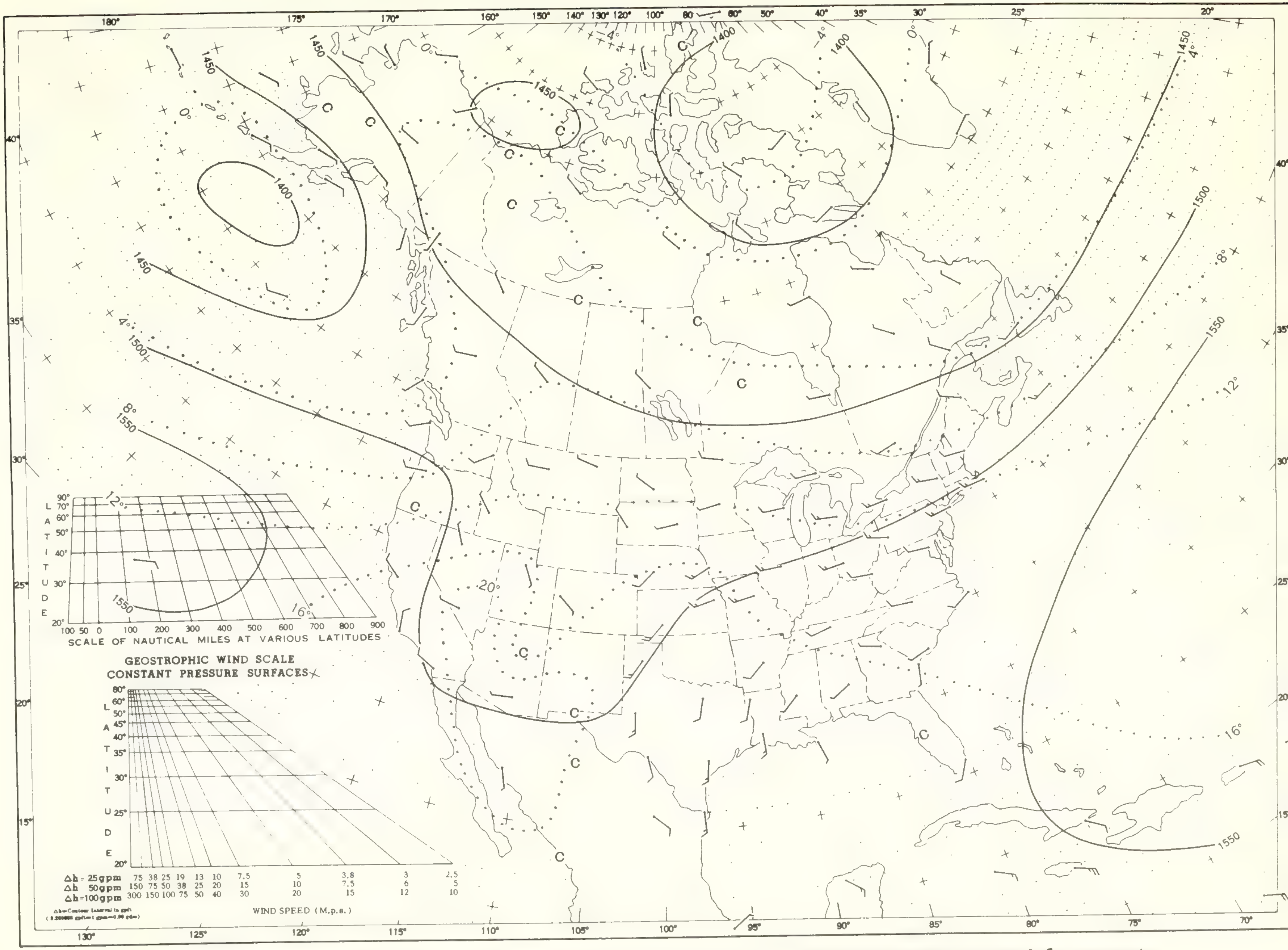
Circle indicates position of center at 7:00 a.m. E.S.T. Figure above circle indicates date, figure below, pressure to nearest millibar. Dots indicate intervening 6-hourly positions. Squares indicate position of stationary center for period shown. Dashed line in track indicates reformation at new position. Only those centers which could be identified for 24 hours or more are included.

Chart X. Average Sea Level Pressure (mb) and Resultant Surface Wind, June 1968. Inset: Departure of Average Pressure (mb) from Normal, June 1968.



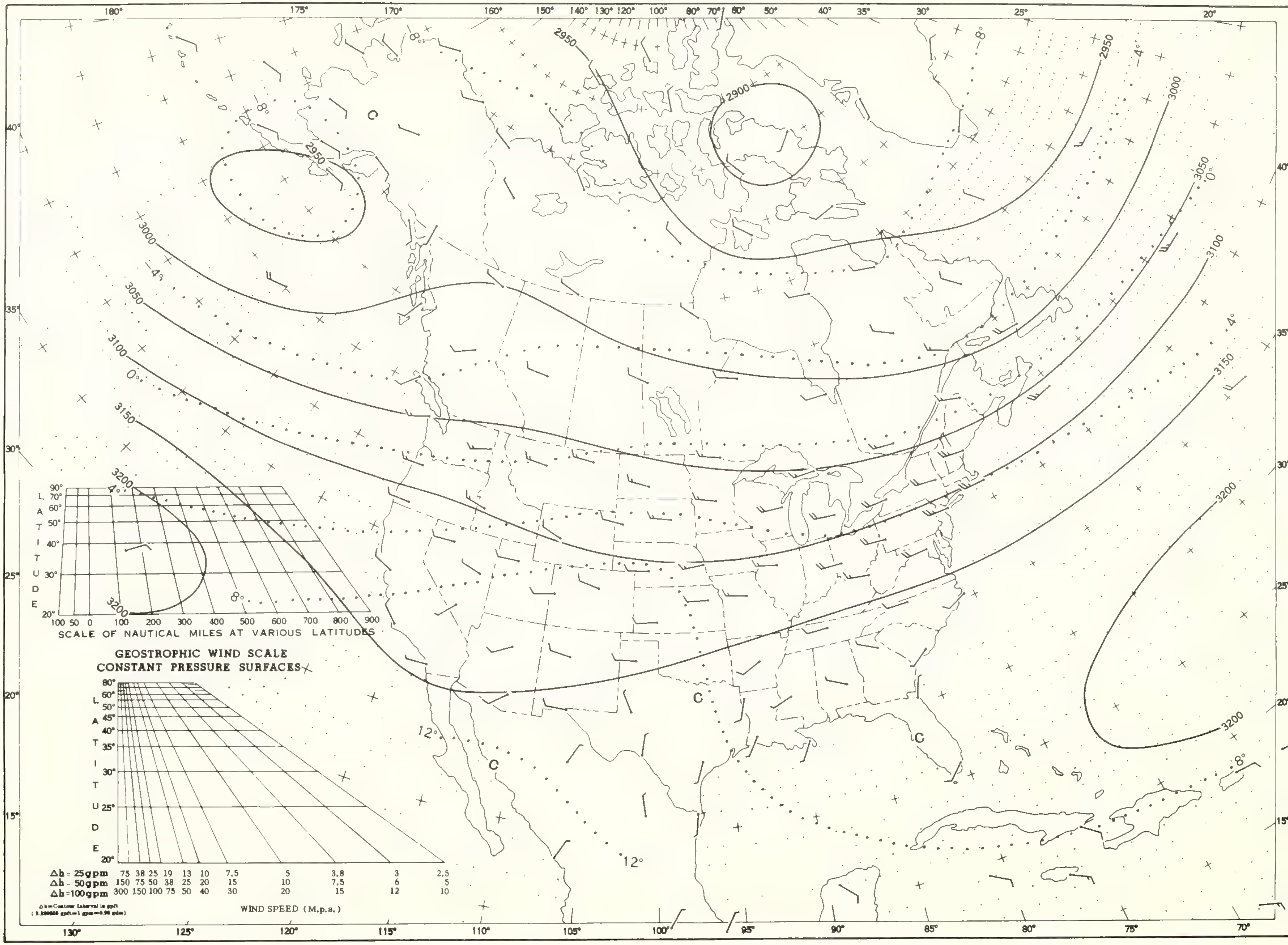
Average sea level pressures are obtained from eight daily 3-hourly observations. Resultant wind directions and speeds are shown by arrows. Constancy ratios (resultant speed÷average speed) are shown to two decimal places. Pressure normals are computed for stations having at least 10 years of record and for 10° intersections in a diamond grid over the oceans.

Chart XI. 850-mb. Surface, 1200 GMT, June 1968. Average Height and Temperature, and Resultant Winds.



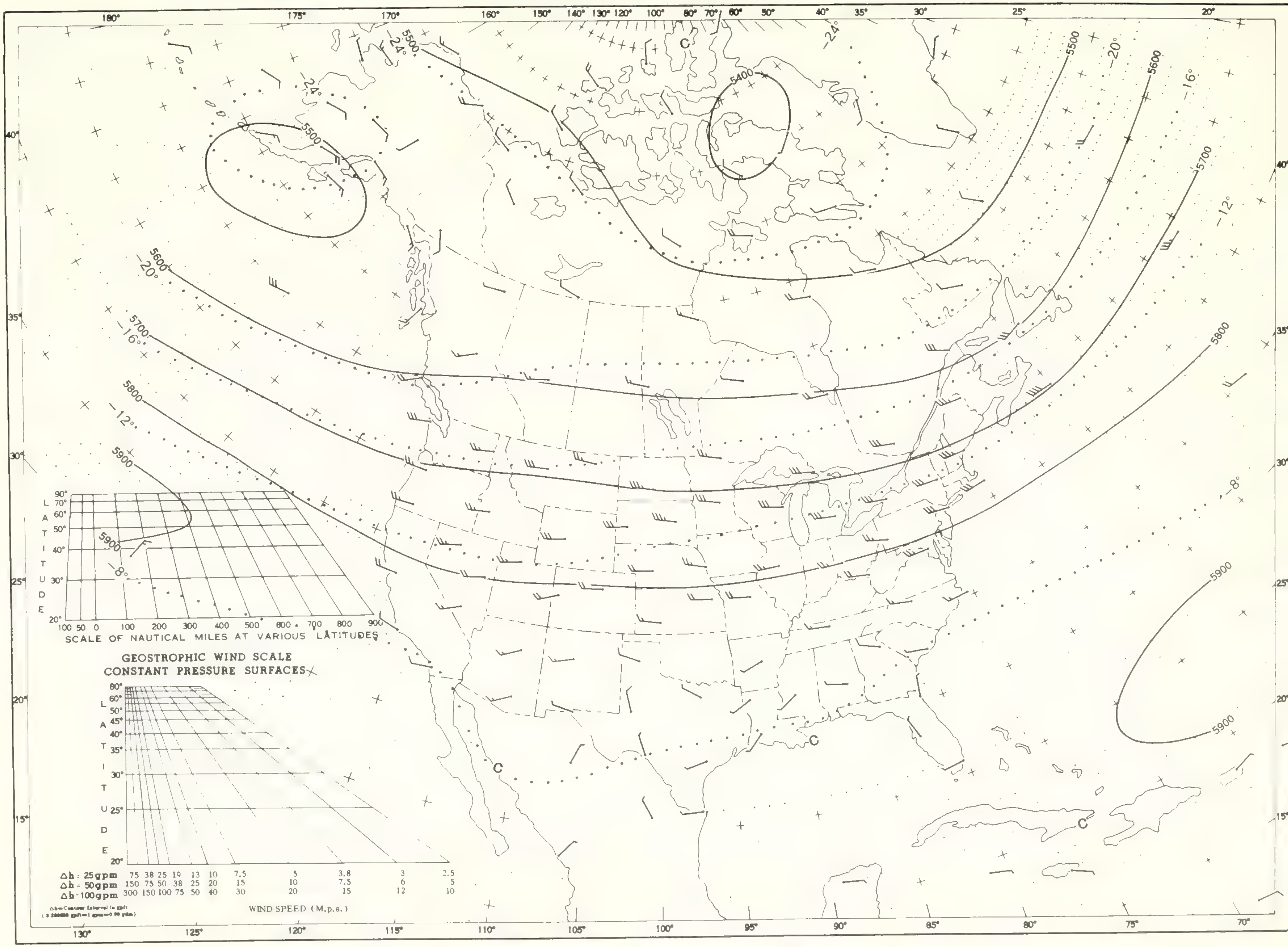
Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XII. 700-mb. Surface, 1200 GMT, June 1968. Average Height and Temperature, and Resultant Winds.



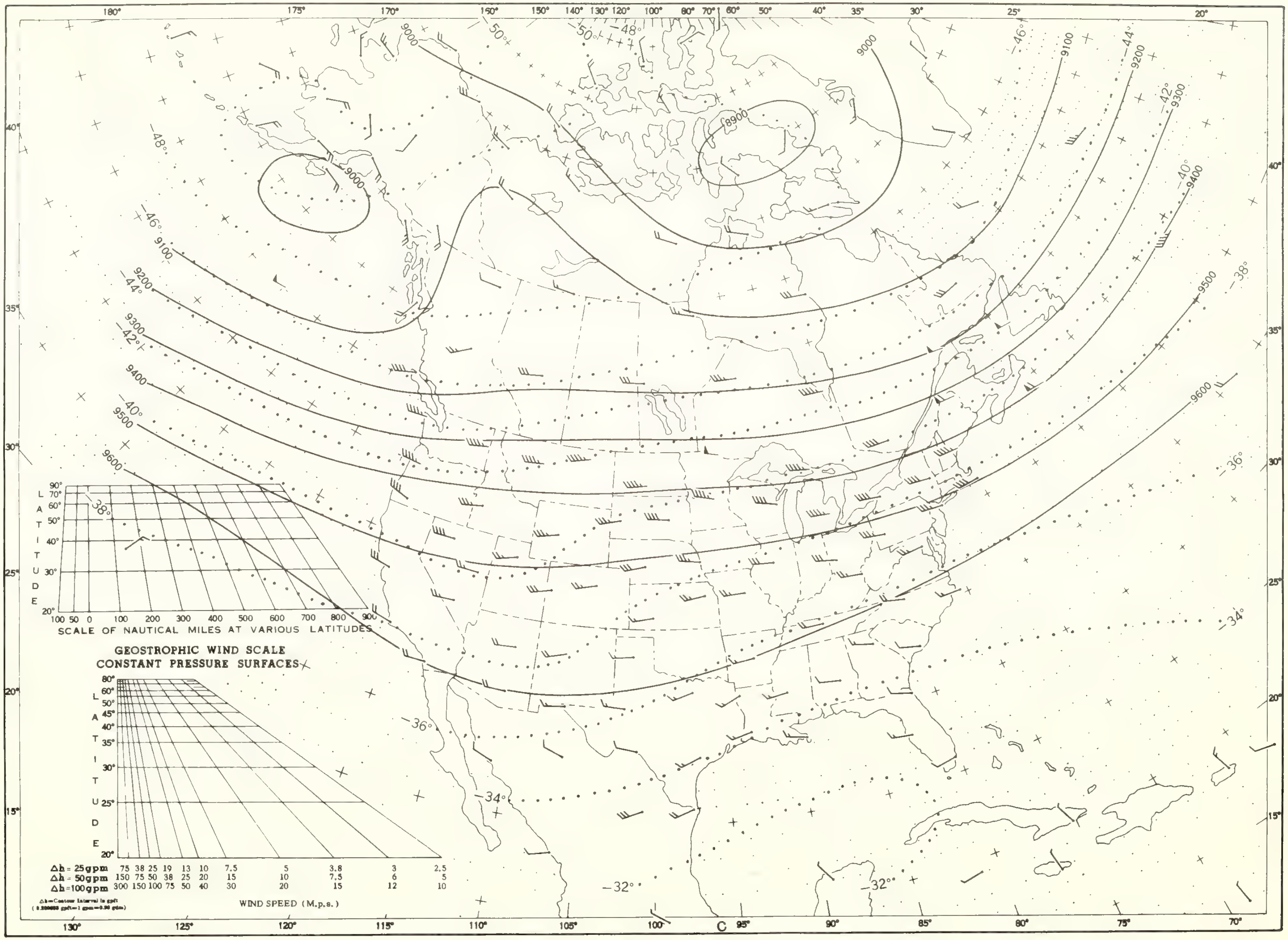
Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XIII. 500-mb. Surface, 1200 GMT, June 1968. Average Height and Temperature, and Resultant Winds.



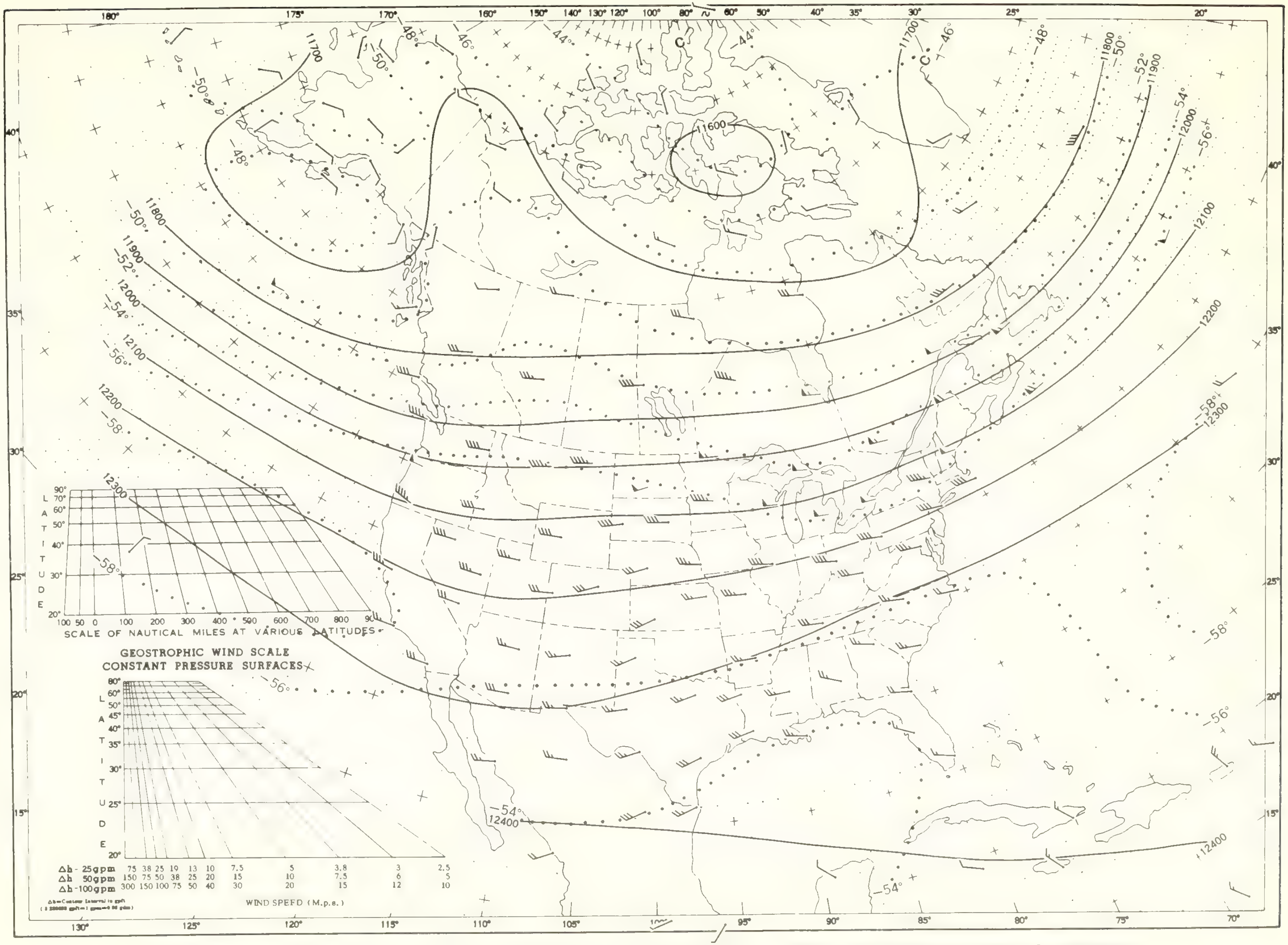
Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XIV. 300-mb. Surface, 1200 GMT, June 1968. Average Height and Temperature, and Resultant Winds.



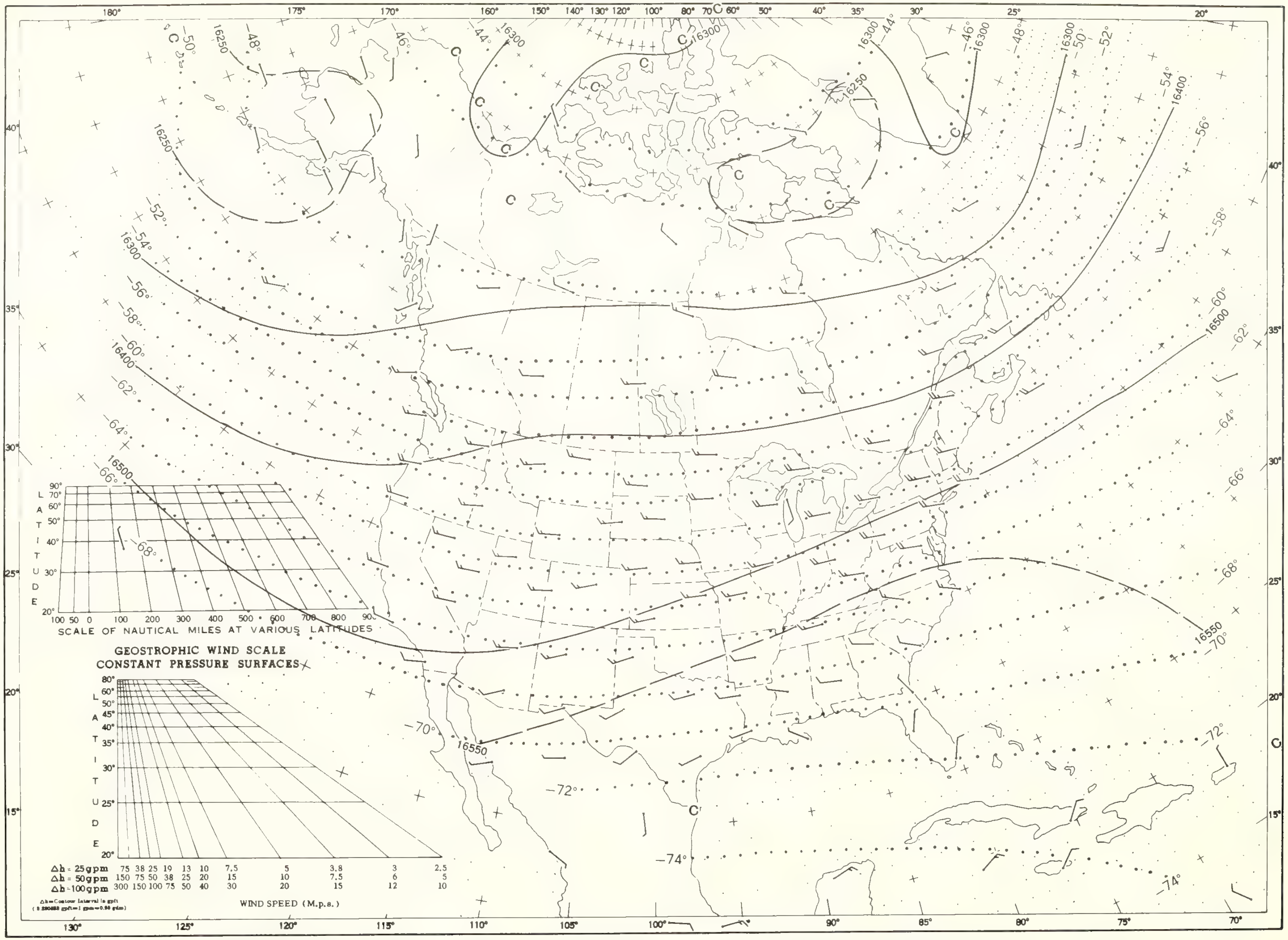
Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XV. 200-mb. Surface, 1200 GMT, June 1968. Average Height and Temperature, and Resultant Winds.



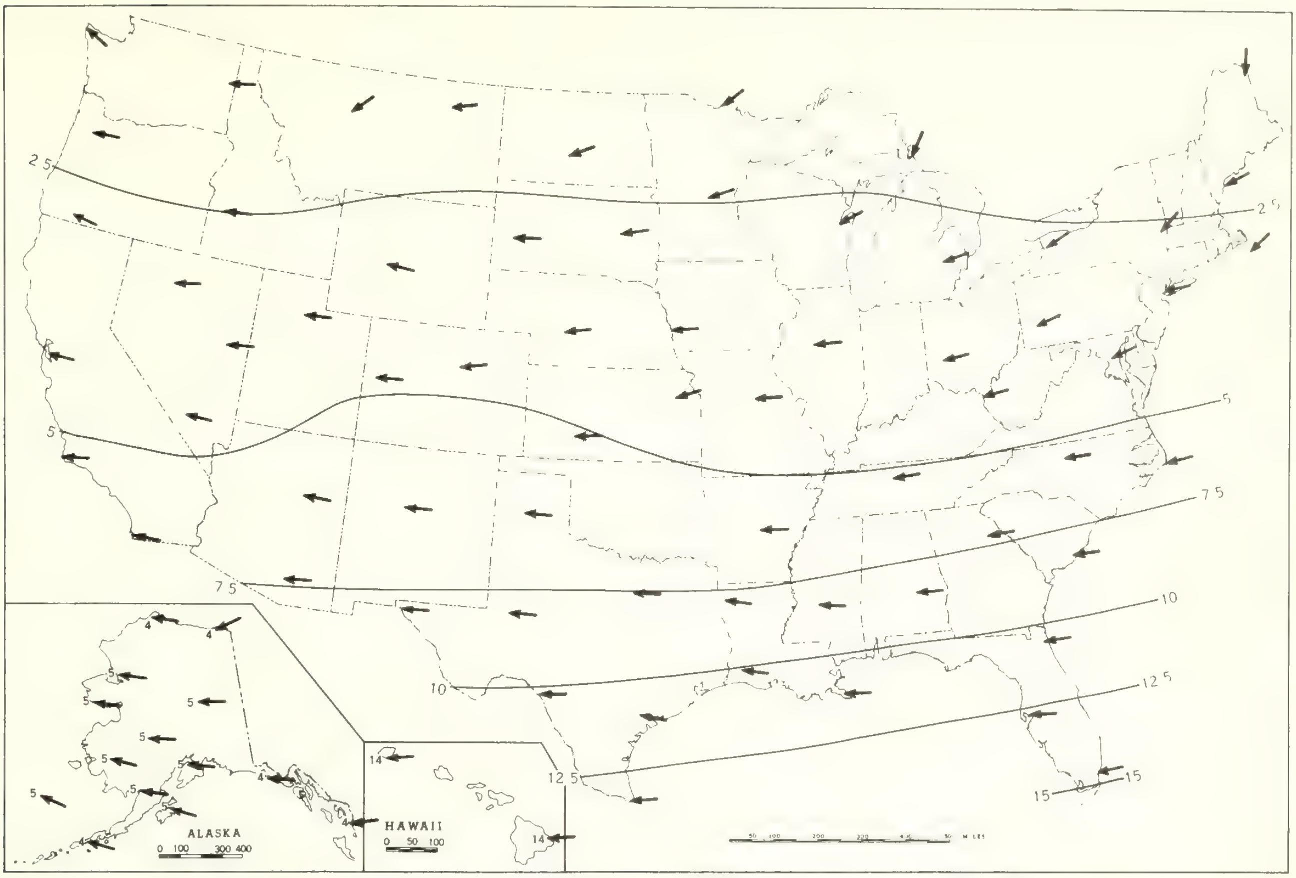
Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XVI. 100-mb. Surface, 1200 GMT, June 1968. Average Height and Temperature, and Resultant Winds.

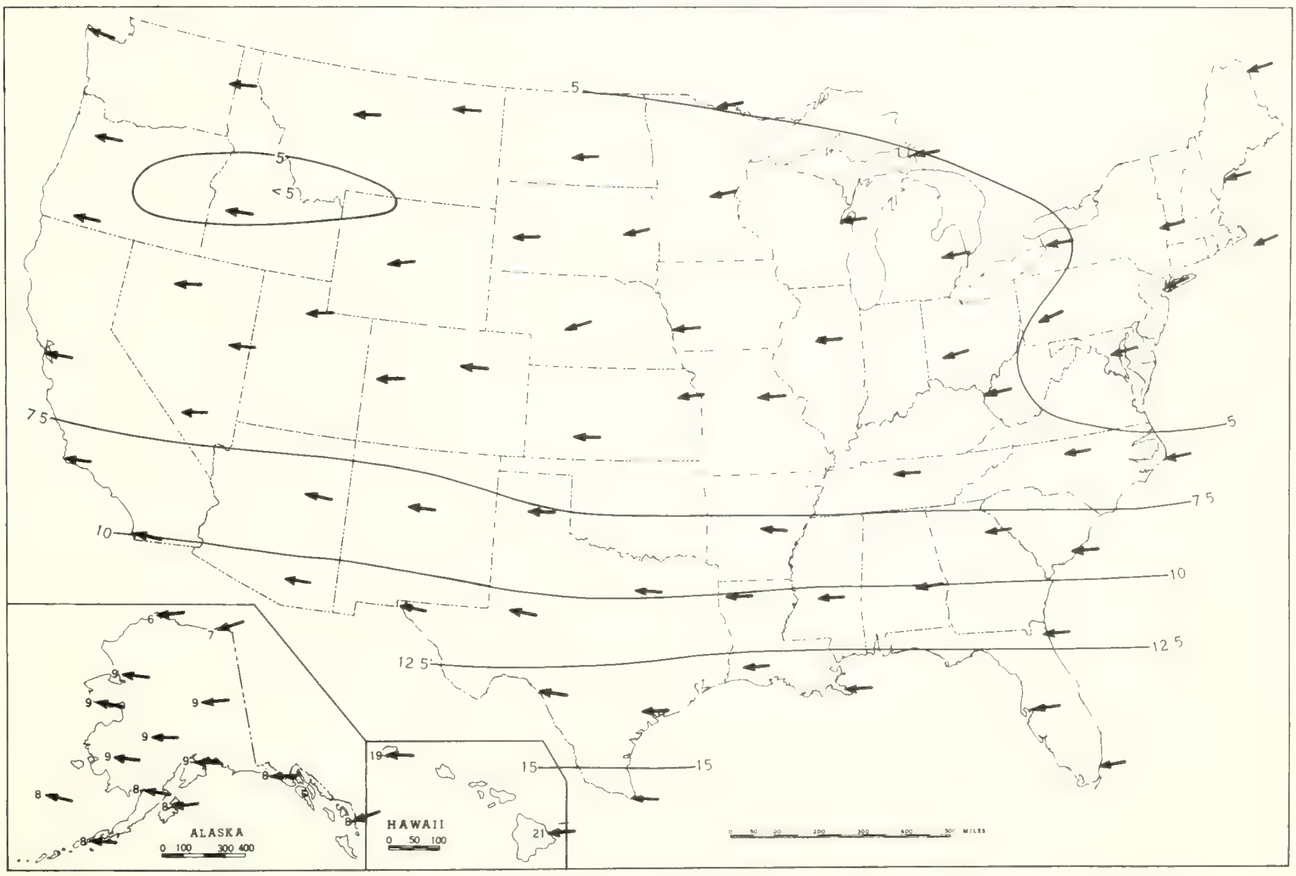


Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XVII. A. 50-mb. Surface, 1200 GMT, June 1968. Resultant Winds.



B. 30-mb. Surface, 1200 GMT, June 1968. Resultant Winds.



Wind speed (isotachs) in meters per second. Arrows show resultant wind direction. All wind data are based on rawin observations.

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CLIMATOLOGICAL DATA

NATIONAL SUMMARY

JULY 1968

Volume 19 No. 7

ASHEVILLE: 1968

CONTENTS

NOTE: Delayed data and corrections will be carried in the June and December issues of this publication. An explanatory page "Description of Charts" will be carried in the January and July issues.

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CLIMATOLOGICAL DATA

NATIONAL SUMMARY

Volume 19 No. 7 JULY 1968

GENERAL SUMMARY OF WEATHER CONDITIONS

HIGHLIGHTS:
1. Spotty heavy rains in Iowa, Kansas, and Mississippi.
2. Only light rains in Far West and scattered points in the East.
3. Many hot days in West; hot, humid weather in the East interrupted by occasional brief cool periods.

TEMPERATURE.--Temperatures in July averaged above normal from the Pacific Ocean to the northern Rockies in the Northwest, over the Great Basin, and in California. Afternoon readings at Elko, Nev., reached 90° or higher on 30 consecutive days. Desert temperatures reached 100° or higher on many afternoons. Reno, Nev., averaged 5° warmer than normal. Most of the Far West was warmer than normal throughout the month.

An erratic temperature pattern prevailed over the central Great Plains where cold dry and warm humid air masses waged their battles. Although cooler than normal in the first 3 weeks of July, heat and humidity increased in the Southeast in the final week adding to the citizen's discomfort.

Afternoon temperatures over the Far West soared to 90° or higher on many afternoons in the first half of July. Afternoon readings in the desert areas of Washington reached 106° to 110° on several afternoons. Miles City, Mont., registered 110° on July 10. Some localities in the southwestern deserts registered 110° to 116° on a few afternoons in the 2d week of July.

Mid-America warmed during the 1st week of July with weekend readings in the Great Plains reaching the 90's. The East, especially the Northeast, was very hot and humid at the beginning of July. Philadelphia registered 96°, New York and Washington 95°, and Atlantic City 99° on July 1. At midweek, the weather in the East became quite comfortable as cool air spilled across the Canadian border. On July 4, the temperature at Cleveland, Ohio, dropped to 41°, setting a new record-low July temperature for that location. By the weekend, warm weather had returned. At the end of the 2d week (July 14), afternoon temperatures in the East had reached the high 80's and low 90's from Florida to western New England. Albany, Buffalo, and Rochester, N. Y., each recorded 91° on the 14th. High humidity increased the discomfort on that hot afternoon.

Southerly winds on the back side of a stationary dome of high pressure continued to pump hot humid air from the Gulf of Mexico northward over the eastern half of the Nation in the 3d week of July. On the 16th, Waltham, Mass., registered 100°, the mercury at Healy, Kans., rocketed to 110°, and many stations in the Great Plains suffered under 100° heat. Following these torrid temperatures, a cold front passage brought a delightfully comfortable weekend to the East.

Pleasant summer weather continued over most of the Nation in the last week of July. Afternoon temperatures reached 100° or higher in parts of Kansas and Oklahoma on a few afternoons and in the southwestern deserts almost every day, reaching 108° at Blythe, Calif., on the 24th. The Dakotas averaged several degrees cooler than normal in the last week of July when eastern Oregon averaged several degrees warmer than normal. The last days of July were hot over the Far West and in the central and southern Great Plains but confortable temperatures prevailed elsewhere.

PRECIPITATION.--Most of the rain that fell in July occurred in connection with the fronts that stretched across the central Great Plains to New England or in the hot humid air south of the fronts. Rain also fell in the northern Great Plains and Lakes region, in the warm air overrunning the fronts, and in the 2d week along the Washington coast in connection with a Pacific storm. The heaviest rains caused flooding along small streams. Elsewhere, the afternoon and evening thundershowers replenished soil moisture. Spots missed by the rains continued very dry.

Early in July, a front stretched from the Great Lakes across the central Great Plains to New Mexico. Showers fell along this front and in the hot humid Gulf area to the south and east. Two inches of rain fell in an hour and a half about 30 miles southeast of Wichita, Kans., and 2.36 inches fell at Harrison, Ark., in 6 hours, on the morning of July 1. As the front moved southeastward, it produced generous rains in the Gulf States on the 2d and from Alabama to New England on the 3d. Spots in the Carolinas received between 2 and 3 inches of rain on the afternoon of July 3.

A new cold front edged into North Dakota and Minnesota early on July 4, setting off scattered showers in Minnesota and Upper Michigan. On the afternoon and evening of the 5th, spotty showers benefited growing crops in Nebraska and Kansas.

Southeasterly winds from the Gulf of Mexico blew over the Desert Southwest for several days bringing heavy showers. Four inches of rain in 3 days caused flooding in the El Paso, Tex., area and 4 inches fell at Roswell, N. Mex., in 4 days.

Early in the 2d week of July generous showers, some accompanied by hail, occurred in the central Great Plains and torrential rains fell in east-central Mississippi. Widespread flooding occurred at Columbia, Miss., on July 9 after almost 16 inches fell in 24 hours. Other heavy showers occurred from Texas to Florida and from Florida to Virginia from the 9th to 12th. Heavy thundershowers drenched southern Texas late on July 11 with about 6 inches falling in the Los Almos-Arroyo watershed.

Another storm center, the third in 2 weeks, developed over the northern Great Plains in the 2d week of July. Widely scattered thunderstorms occurred over the central Great Plains and from Texas to Virginia and the Carolinas.

In general, the showers were light and widely scattered in the first half of the second week but more numerous and heavier in the latter half.

Scattered showers fell from the Rocky Mountains to the Atlantic coast in the 3d week of July, being especially numerous and heavy early in the week from the central Great Plains to the Ohio River Valley. Some spots in Nebraska and Kansas received 6 to 9 inches of rain on the 15th and 16th and many stations in northeastern Iowa registered 5 to 15 inches. On the 17th and 19th, thunderstorms occurred in New England. Some were accompanied by damaging lightning, winds, and soil-washing rains. Heavy showers fell in the last week of July along a front that stretched from the Great Plains

to the Northeast; also from the Dakotas to the Great Lakes in the warm air overrunning the front and in the warm moist air along the Gulf. Heavy rains in Iowa on the 23d--2 to 6 inches--caused local flooding along small creeks. Seven inches in 3 hours at Hickman, Nebr., caused extensive flooding in that vicinity. A downpour of 8.55 inches along Rock Creek flooded 3/4 of the town of Louisville, Kans. Many spots in east-central Kansas became drenched by 5- to 6-inch rains on the afternoon and evening of the 23d and the morning of the 24th.

Prescott, Ariz., received 3.57 inches on the 23d after several weeks of dry weather. Other areas in Arizona also received beneficial rains. New England received rains on the 24th and 27th and rains fell in the Deep South on several days in the last week of July.

Rains in July were of little consequence in the Far West and the northern and central Rocky Mountains. Spots in the Great Basin and most of the interior valleys in California received no rain in July.

CONDENSED CLIMATOLOGICAL SUMMARY

JULY 1968

Section	Temperature						Precipitation			
	Monthly extremes						Monthly extremes			
	Station	Highest	Date	Station	Lowest	Date	Station	Greatest	Station	Least
		°F			°F			In.		In.
Alabama	Calera 2SW	104	1	2 Stations	51	6+	Magella	14.71	Florence	0.71
Alaska	West Fork	91	24+	do	28	15+	Kodiak NAS	7.60	Fort Yukon	.00
Arizona	Willow Beach	117	13	do	29	1	Crown King	8.18	Dateland	.00
Arkansas	Beedeville	101	27	Evening Shade 1NE	46	4	Harrison FAA AP	9.48	Augusta	.22
California	Death Valley	121	5	2 Stations	28	1	Ranchita	4.12	245 Stations	.00
Colorado	3 Stations	105	16	Fraser	18	1	Ayer Ranch	7.40	Browns Park Refuge	.01
Connecticut	2 Stations	99	2+	Coventry	39	30	Barkhamsted	2.97	Easton Lake Reservoir	.41
Delaware	Selbyville	100	1	Newark University Farm	54	7	Newark University Farm	3.34	Milford 2WSW	.86
Florida	Woodruff Dam	100	2	Stuart 1N	61	12	Steinhatchee McCain Tr	19.98	Tavernier	3.09
Georgia	2 Stations	102	27+	Clayton 1W	52	24	Siloam	12.15	Dover	1.46
Hawaii	Mauna Kea Beach 98	95	30	Mauna Loa Slope Obs	35	24	Wahiawa Mountain 990	14.13	10 Stations	.00
Idaho	Brownlee Dam	109	29+	Stanley 1NNE	15	6	Strevell	2.81	18 Stations	.00
Illinois	3 Stations	100	22+	3 Stations	44	11+	Pleasant Hill	10.35	Keithsburg 1NW	1.09
Indiana	do	97	29+	2 Stations	43	4+	Columbus	9.83	Elwood Waterworks	.76
Iowa	4 Stations	98	21+	Le Mars 2N	41	3	Dumont 3NNW	16.69	Dubuque L and D No 11	1.20
Kansas	Healy	110	16	2 Stations	45	3	Westmoreland	14.30	2 Stations	1.01
Kentucky	2 Stations	98	23+	Vanceburg	41	6+	Flemingsburg	9.15	Golden Pond 8N	.79
Louisiana	3 Stations	98	29+	3 Stations	53	5	Homer Exp Station	11.56	Longville	.96
Maine	Hiram	98	17	2 Stations	35	11	Caribou WBAP	4.24	Jonesboro	.19
Maryland	Salisbury	101	2	do	40	5	Beltsville	5.64	Williamsport	.03
Massachusetts	2 Stations	99	16	do	40	30	Northbridge 2	3.56	Nantucket WBAP	.15
Michigan	Vanderbilt Trout Sta	97	17	Herman	26	10	Alberta Ford For Cntr	10.08	Midland Dow Chemical	.35
Minnesota	Beardsley	99	15	3 Stations	35	10+	New Ulm 2SE	12.58	Campbell	.57
Mississippi	Meridian WBAP	101	27	2 Stations	51	6+	Columbus	18.93	Abbeville	.23
Missouri	2 Stations	99	27+	Berryman 6NW	40	5	Warrensburg	10.20	Malden	1.16
Montana	Miles City	108	12	Cooke City	22	1	Westby	3.13	Canyon Creek	.00
Nebraska	Culbertson 3WSW	105	31+	2 Stations	35	2+	Hickman	10.16	Harrisburg 10NW	.50
Nevada	Sunrise Manor Las Vegas	114	21	Ruth	18	1	Pahranagat WL Refuge	4.22	11 Stations	.00
New Hampshire	Manchester	98	17	Mount Washington	30	30	Mount Washington	6.18	Nashua 2NNW	.45
New Jersey	Burlington	102	1	Sussex 1SE	42	30	Pemberton 3E	6.45	Pottersville 2NNW	.39
New Mexico	Lordsburg	108	13	Eagle Nest	27	1	Mayhill Ranger Station	9.58	Gallup	T
New York	New York Laurel Hill	103	1	Gabriels	35	30	Boonville 2SSW	6.39	Avon	.29
North Carolina	2 Stations	103	2+	Banner Elk	45	6	Willard 1N	13.51	Franklin 1SSW	1.47
North Dakota	Foxholm 7N	103	10	Keene 3W	32	2	Hannah 2N	9.24	Mandan Ft Lincoln Park	T
Ohio	Ironton	98	1	2 Stations	37	4	Cincinnati Abbe Obs	8.37	Lancaster 2NW	.52
Oklahoma	Fort Supply Dam	107	17	Hennessey 1N	51	4	Calvin	9.67	Newkirk	.14
Oregon	Spray	111	5	Fremont	24	17	Brightwood	1.75	22 Stations	.00
Pennsylvania	2 Stations	100	19+	Clermont 4NW	34	30	Derry	6.18	Everett 1SW	.14
Puerto Rico	do	96	31+	2 Stations	58	18+	Maricao	23.29	Ensenada	.43
Rhode Island	Greenville	96	17	Kingston	44	30	Kingston	1.91	Woonsocket	.71
South Carolina	5 Stations	100	28+	Caesars Head 1NE	57	4	Effingham	14.42	Tilghman For Nursery	3.24
South Dakota	Midland	108	20	Custer	32	2	Stephan 1ENE	8.36	Bonesteel	.12
Tennessee	Savannah	104	18	2 Stations	45	5	Jefferson City Evap	9.68	Ripley	.26
Texas	3 Stations	105	31+	3 Stations	52	6+	Farmersville 1W	8.50	Waelder 7SSW	.19
Utah	Mexican Hat	109	18	2 Stations	24	6+	Alton	3.78	7 Stations	.00
Vermont	2 Stations	97	17+	Somerset	34	30	Mount Mansfield	5.13	South Londonderry	.51
Virginia	3 Stations	102	2+	Monterey	45	6	Charlottesville 2N	9.93	Washington WB Nat AP	1.31
Washington	Lower Granite Dam Near	112	5	Satus Pass 2SSW	26	13	Glacier Ranger Station	3.10	2 Stations	.00
West Virginia	Williamson	100	19	2 Stations	34	5	Kermit	9.33	Harpers Ferry	.17
Wisconsin	Lancaster	97	14	do	32	10+	Gordon 2ESE	10.44	Two Rivers	.98
Wyoming	Spencer 10NE	104	14	do	19	1	Stroner 2NW	3.84	3 Stations	T

\+ And also on an earlier date or dates.

NOTE: Dates in the above Condensed Climatological Summary apply to the period 24 hours prior to time of observation. In some cases the actual occurrence is on the calendar date preceding that shown. (See individual Climatological Data for times of observations).

CLIMATOLOGICAL DATA

ENGLISH UNITS

JULY 1968

State and Station	Elevation (ground)	Pressure: Station ∅	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No. of days: Max. 90°F. or above	Temperature: No. of days: Min. 32°F. or below	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No. of days: .01 inch or more	Precipitation: No. of days: With thunderstorms	Snow, Sleet: Total	Snow, Sleet: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile: Speed	Wind: Fastest mile: Direction	Wind: Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	No. of days (sunrise to sunset): Partly cloudy, 4-7	No. of days (sunrise to sunset): Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
ALABAMA	Ft.	Mb.	Mb.	°F.	°F.	°F.	F.	°F.		°F.				°F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
BIRMINGHAM	620	997.3	1019.4	89	69	78.8	- 2.8	99	1	64	4	14	0	69	76	9.39	4.23	4.39	15	16	0.0	0	1.3	3	31	N	12	6	8	17	6.9	62
HUNTSVILLE	624	996.6	1019.4	88	69	78.8	- 2.3	97	1	60	5	16	0	69	77	2.90	- 1.35	0.86	12	10	0.0	0	1.3	12	30	32	28	6	8	17	6.8	
MOBILE	211	1010.8	1018.8	92	73	82.7	0.1	100	28	67	30	28	0	71	73	3.08	- 6.59	1.10	10	13	0.0	0	0.9	13	20	27	29	4	19	8	6.3	
MONTGOMERY	194	1011.9	1019.1	91	71	80.9	- 0.9	99	1	68	30	23	0	71	76	4.96	- 0.44	1.41	10	13	0.0	0	0.8	28	22	NE	21	4	14	13	6.3	68
ALASKA												8																				
ANCHORAGE	114	1010.8	1015.8	66	54	59.9	1.7	75	7	47	17	9	0	49	70	1.34	- 0.52	0.66	9	0	0.0	0	2.9	21	21	18	26	6	5	20	7.3	47
ANNETTE	110	1014.6	1018.5	68	53	60.5	3.2	78	19+	48	15	13	0	51	75	4.81	- 1.21	1.42	12	1	0.0	0	2.4	17	23	14	10+	2	8	21	8.1	
BARROW	31			48	36	42.3	3.2	71	29	28	1	1	3			0.19	- 0.58	0.14	5	0	0.2	0			31	9	27+	7	13	11	6.0	
BARTER ISLAND	39	1016.3	1017.9	48	38	42.8	1.5	64	22	32	2	0	1	39	86	0.30	- 0.58	0.30	1	0	0.0	0	13.6	9	33	9	27+	6	12	13	6.2	
BETHEL	125	1008.5	1014.1	66	50	57.9	3.2	83	25	43	6	10	0	50	77	1.60	- 0.43	0.39	13	1	0.0	0	3.7	20	23	14	29+	3	7	21	8.1	
COLD BAY	96	1009.8	1013.7	58	48	52.9	3.2	72	25	42	1	1	0	46	80	0.99	- 0.83	0.19	11	0	0.0	0	6.6	17	33	15	3	0	6	25	8.8	
FAIRBANKS	436	997.3	1014.0	78	54	65.8	6.1	89	24	47	4	27	0	48	56	0.84	- 1.00	0.50	8	2	0.0	0	1.1	3	17	7	26+	8	10	13	6.1	
JUNEAU	12	1016.6	1017.4	67	47	56.8	1.5	77	25	39	7	13	0	51	85	4.60	0.11	1.88	13	0	0.0	0	1.6	8	22	12	5	4	4	23	8.0	41
KING SALMON	49	1011.9	1014.1	64	47	55.5	0.6	78	25	38	20	5	0	42	63	1.14	- 0.92	0.32	10	1	0.0	0	4.3	16	35	15	29	4	1	26	8.4	
KOTZEBUE	10	1012.9	1013.3	64	52	57.6	4.9	82	8	35	2	6	0	50	77	1.47	0.01	0.39	11	3	0.0	T	2.7	22	32	27	27+	5	11	15	6.7	
MC GRATH	344	1001.4	1013.9	73	49	60.9	2.2	87	25	40	2	17	0	47	65	1.38	- 1.05	0.26	14	7	0.0	0	2.1	21	18	7	21	2	15	14	7.0	
NOME	13	1011.9	1012.5	62	47	54.1	4.6	86	8	39	1	6	0	42	65	1.65	- 0.64	0.54	13	0	0.0	0	3.3	16	23	14	18+	5	8	18	7.4	43
ST. PAUL ISLAND	22	1010.2	1011.0	49	43	45.8	0.3	55	8	40	3+	0	0	45	96	2.81	0.56	0.96	20	0	0.0	0	4.2	17	25	25	13	0	1	30	9.9	
SHEMYA	122	1006.4	1010.2	49	43	46.2	- 0.2	60	31	40	1	0	0	44	95	0.72	- 1.43	0.24	12	0	0.0	0	2.8	24	35	23	17+	0	0	31	9.9	
YAKUTAT	28	1016.6	1017.5	61	46	53.3	- 0.8	71	24+	35	14	3	0	50	88	5.40	- 3.03	1.73	20	0	0.0	0	1.2	15	20	14	8	4	2	25	8.3	
ARIZONA																																
FLAGSTAFF	6993	792.4	1016.9	80	50	64.9	- 0.6	86	21+	38	1	0	0	44	55	3.61	1.33	0.89	14	18	0.0	0	2.7	22	23	2	20	10	11	10	4.9	
PHOENIX	1117	972.6	1010.3	103	77	90.2	0.4	110	11	67	1	31	0	57	36	1.70	0.93	0.88	8	10	0.0	0	1.2	21	53Y	SE	27	16	11	4	3.5	85
TUCSON	2584	925.8	1011.4	97	73	84.9	- 1.4	105	2	68	5+	30	0	56	44	1.97	- 0.09	0.89	12	12	0.0	0	2.0	19	50	E	18	11	15	5	5.0	79
WINSLOW	4895	853.7	1013.6	93	62	77.8	- 2.4	103	21	51	1	24	0	44	37	0.83	- 0.19	0.42	8	11	0.0	0	3.2	21	40	9	4	13	10	8	4.2	
YUMA	194	1003.1	1009.9	104	79	91.4	- 1.4	112	11	70	6+	30	0	61	40	0.91	0.68	0.86	3	3	0.0	0	5.5	18	39	E	4	19	7	5	3.0	87
ARKANSAS																																
FORT SMITH	447	1001.7	1018.1	91	70	80.3	- 2.7	97	27	59	5+	21	0	68	69	1.61	- 1.19	0.91	8	9	0.0	0	1.7	16	29	SW	14	5	10	16	6.7	76
LITTLE ROCK	257	1008.8	1018.2	88	68	77.8	- 4.1	93	27+	56	5+	13	0	70	79	5.98	2.64	2.40	10	12	0.0	0	2.1	17	33	W	27	4	10	17	6.8	74
TEXARKANA	391	1005.1	1018.0	91	71	81.0	- 1.6	98	18	59	5	20	0	71	76	3.21	- 0.63	0.96	9	12	0.0	0	2.9	17	23	17	21+	9	12	10	5.8	
CALIFORNIA																																
BAKERSFIELD	475	994.9	1012.1	101	73	86.6	2.3	108	11+	66	3	31	0	48	28	T	- 0.01	T	0	0	0.0	0	3.8	33	20	33	6	25	2	4	1.6	
BISHOP	4108	874.0		97	59	77.8	1.2	102	21+	50	1	28	0			0.70	0.58	0.40	6		0.0	0						21	3	7	3.2	
BLUE CANYON	5280			79	61	70.2	2.2	87	27+	54	16	0	0			0.03	- 0.06	0.03	1		0.0	0			16	23	19	23	5	3	2.1	
EUREKA U	43			61	52	56.3	0.0	67	11	49	9+	0	0			0.04	- 0.07	0.04	1		0.0	0			24	N	4	3	11	17	7.5	42
FRESNO	328	1000.3	1011.9	100	65	82.4	1.1	108	19+	58	1	31	0	49	35	T	0.00	T	0	0	0.0	0	5.1	29	19	NW	1	25	2	4	1.6	89
LONG BEACH	34	1013.2	1014.6	85	63	73.8	2.2	98	10	57	3	6	0	56	61	T	0.00	T	0	1	0.0	0	2.4	24	16	27	10+	18	10	3	3.4	
LOS ANGELES	97	1010.5	1014.2	73	63	68.3	- 0.8	80	29+	59	3+	0	0	59	76	0.04	0.03	0.04	1	0	0.0	0	6.7	25	22Y	W	28+	15	13	3	4.1	
LOS ANGELES U	270			84	66	74.7	1.7	94	10	59	2	4	0			0.01	0.01	0.01	1		0.0	0			16	W	10	22	5	4	2.9	69
MT SHASTA R	3544			88	51	69.6	1.6	98	28	40	1	10	0			0.02	- 0.28	0.10	1		0.0	0										
OAKLAND	6	1015.2	1015.5	70	57	63.2	- 1.1	87	18	53	27	0	0	55	78	T	0.00	T	0	1	0.0	0	8.2	28	23	32	6	16	11	4	3.9	
RED BLUFF	342	999.7	1012.2	97	65	81.1	- 2.7	108	6	59	24	27	0	49	37	T	- 0.04	T	0	0	0.0	0	4.3	17	23	S	11	27	1	3	1.5	93
SACRAMENTO	17	1011.9	1012.7	95	58	76.2	0.8	105	5	52	24	23	0	54	53	T	0.00	T	0	0	0.0	0	7.5	21	24	W	12	24	6	1	1.8	95
SANDBERG R	4517	864.9		84	62	73.0	- 1.4	93	4	50	15	5	0			0.06	0.04	0.05	2		0.0	0			30	18	24	24	3	4	2.0	
SAN DIEGO	13	1013.2	1014.3	77	66	71.7	1.6	88	10	58	1	0	0	60	69	0.13	0.12	0.10	2	0	0.0	0	4.8	28	23	NW	8	12	13	6	4.6	70
SAN FRANCISCO	8	1014.9	1015.6	71	53	61.9	- 0.8	88	18	49	27+	0	0	52	78	T	- 0.01	T	0	0	0.0	0	13.1	29	38	W	15	18	9	4	3.3	
SAN FRANCISCO U	52			63	53	58.0	- 0.8	79	29	49	27+	0	0			T	- 0.01	T	0		0.0	0			30	W	13					66
SANTA MARIA	236			74	55	64.2	2.0	84	10	50	17	0	0			T	- 0.03	T	0		0.0	0						19	8	4	3.6	
STOCKTON	22	1012.2	1013.3	94	59	76.4	- 1.8	106	5	52	24	25	0	47	41	0.00	- 0.01	0.00	0	0	0.0	0	7.4	30	22	26	13	24	4	3	1.7	
COLORADO																																
ALAMOSA	7536	777.9		79	48	63.6	- 1.3	87	21	34	1	0	0			3.50	2.43	1.20	10		0.0	0						9	15	7	5.2	
COLORADO SPRINGS	6145	816.5	1017.0	81	56	68.4	- 2.1	91	16	46	31	1	0	48	54	5.27	2.90	0.88	19	20	0.0	0	2.5	4	47	35	18	4	17	10	6.1	
DENVER	5283	840.2	1014.8	86	57	71.7	- 1.2	95	20+	47	2	9	0	47	49	1.34	- 0.19	0.78	9	10	0.0	0	1.9	17	37	NW	29	7	18	6	5.2	58
GRAND JUNCTION	4855	854.0	1012.7	93	63	78.0	- 0.2	100	21+	48	1	24	0	43	34	0.49	- 0.08	0.43	4	5	0.0	0	2.8	13	31	NE	24	13	12	6	4.5	70
PUEBLO	4684	858.8	1014.9	89	60	74.5	- 2.0	97	16+	51	31	19	0	53	55	4.41	2.59	1.87	12	11	0.0	0	1.5	3	45	N	22+	8	17	6	5.1	76

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure: Station	Pressure: Sea level	Temperature: Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	No. of days: Max. 90 F. or above	No. of days: Min. 32 F. or below	Average dew point	Average relative humidity	Precipitation: Total	Departure from normal	Greatest in 24 hours	No. of days: .01 inch or more	No. of days: With thunderstorms	Snow, Sleet: Total	Snow, Sleet: Maximum depth on ground	Wind: Resultant speed	Resultant direction	Fastest mile: Speed	Fastest mile: Direction	Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
CONNECTICUT	Ft.	Mb.	Mb.	F.	F.	F.	F	F.		F.				F.	%	In	In.	In.			In.	In.	M.p.h.		M.p.h.							%
BRIDGEPORT	7	1018.3	1018.9	83	67	75.1	1.4	92	17	57	30	4	0	63	68	1.00	- 2.77	0.62	4	3	0.0	0	4.8	24	25	22	19	8	11	12	5.7	
HARTFORD	169	1011.5	1018.1	87	63	75.1	1.7	99	1	48	30	11	0	61	64	1.58	- 2.03	0.93	4	3	0.0	0	3.3	22	25	W	19	10	12	9	5.6	72
NEW HAVEN	6	1018.6		82	64	73.2	1.3	91	17+	52	30	2	0			1.12	- 2.31	0.90	3		0.0	0			22	W	19	9	12	10	5.5	77
DELAWARE																																
WILMINGTON	74	1016.3	1019.3	86	68	76.7	0.7	95	17+	58	7	9	0	65	70	1.83	- 2.42	0.77	8	7	0.0	0	2.1	20	32	29	2	12	10	9	5.4	
DIST.OF COLUMBIA																																
WASH NATL AP	14	1016.9	1019.1	89	71	79.9	1.7	97	1	62	5	12	0	66	64	1.31	- 2.84	0.78	4	4	0.0	0	1.9	19	30	NW	2	8	13	10	5.5	61
FLORIDA																																
APALACHICOLA U	13			88	75	81.5	0.0	94	28+	71	10	10	0			8.93	1.00	2.86	11	12	0.0	0			20	E	7	7	16	8	5.5	73
DAYTONA BEACH	31	1019.0	1020.3	88	73	80.7	0.6	96	29+	70	21	10	0	71	77	6.25	- 0.49	2.95	10	12	0.0	0	3.7	13	26	17	9+	4	18	9	6.1	
FORT MYERS	15	1019.3	1019.5	91	75	82.9	0.7	97	29	73	23+	22	0	73	76	9.85	0.77	2.25	17	22	0.0	0	3.5	10	29	4	20	4	18	9	6.0	
JACKSONVILLE	20	1018.6	1019.7	91	75	82.8	0.2	98	27	73	21+	18	0	73	77	6.84	- 0.84	1.74	15	12	0.0	0	3.1	17	46	SW	17	7	14	10	5.9	65
KEY WEST	4	1018.0	1018.6	88	79	83.7	0.4	90	31+	75	2	5	0	75	77	3.81	- 0.35	1.14	16	13	0.0	0	9.0	12	34	SE	31+	1	20	10	6.4	84
LAKELAND U	214			89	73	81.0	- 0.6	96	28	69	15+	14	0			8.14	- 0.16	1.43	16		0.0	0						7	15	9	6.2	54
MIAMI	7	1019.0	1019.2	87	76	81.6	- 0.2	91	31	73	2	6	0	72	73	6.15	- 0.60	1.27	16	13	0.0	0	5.9	11	26	20	6	3	21	7	6.0	
ORLANDO	108	1015.9	1020.4	90	72	81.3	- 1.2	96	29	70	19+	18	0			5.60	- 2.40	1.62	13	21	0.0	0	2.8	15	35	20	9	5	12	14	6.5	
PENSACOLA	112	1014.6	1018.6	89	73	81.0	- 0.7	96	28	69	10+	9	0	72	75	4.97	- 3.05	2.40	11		0.0	0	1.2	18	38	E	7	4	14	13	6.5	66
TALLAHASSEE	55	1016.9	1019.4	92	72	81.8	0.5	98	31+	68	17+	23	0	73	81	4.89	- 3.16	0.98	20	24	0.0	0	1.0	14	23	12	31+	3	18	10	6.2	
TAMPA	19	1019.3	1019.5	89	72	80.2	- 1.4	94	29+	68	18+	13	0	71	79	8.39	- 0.23	2.32	16	19	0.0	0	2.1	14	30	11	2	3	15	13	6.7	60
WEST PALM BEACH	15	1019.0	1019.8	88	73	80.4	- 2.2	92	29	69	29	5	0	72	77	4.66	- 2.00	2.28	10	13	0.0	0	5.9	12	34	10	1	8	16	7	5.7	
GEORGIA																																
ATHENS	802	990.9	1019.4	87	69	77.9	- 1.8	96	2	65	5	10	0	69	78	8.50	3.51	2.60	13	12	0.0	0	0.3	4	23	31	28	4	15	12	6.5	
ATLANTA	1010	983.4	1019.5	87	69	77.7	- 1.2	93	2+	65	13	8	0	69	80	5.34	0.62	1.60	17	14	0.0	0	0.4	7	33		6	4	16	11	6.6	62
AUGUSTA	145	1013.9	1019.0	91	69	80.0	- 0.7	97	28+	66	24+	21	0	70	76	4.44	- 0.06	1.31	15	11	0.0	0	1.2	16	40	32	16	3	18	10	6.1	
COLUMBUS	385			91	70	80.5	- 0.6	97	1	68	13	21	0	71	79	3.02	- 2.85	0.80	12		0.0	0	0.4	2	21	9	8	5	15	11	6.5	
MACON	354	1006.4	1019.2	93	69	80.7	- 1.2	100	28+	67	30+	24	0	68	71	4.44	- 1.20	1.28	12	14	0.0	0	0.6	13	38	W	31	3	17	11	6.5	67
ROME	637			90	67	78.4	- 0.6	98	1	62	7	19	0			3.94	- 0.95	1.16	17		0.0	0										
SAVANNAH	46	1017.6	1019.5	91	72	81.6	0.3	99	29+	68	1	20	0	72	80	6.35	- 0.26	2.65	15	13	0.0	0	2.2	19	36	W	31	5	16	10	6.2	70
IDAHO																																
BOISE	2838	915.0	1012.3	94	61	77.3	2.1	104	27	48	20	23	0	45	34	7.43	- 2.39	2.73	22	1	0.0	0	1.3	14	18	E	24	2	7	22	8.1	39
LEWISTON	1413			92	61	76.4	2.6	105	28+	50	23+	20	0			0.29	- 0.15	0.15	6	1	0.0	0	11.1	6	30	NE	22	5	15	11	6.3	71
POCATELLO	4454	864.5	1014.1	91	52	71.6	- 0.8	97	29+	37	1	20	0	40	34	0.42	- 0.01	0.24	6	0	0.0	0	12.3	5	30	E	28	5	10	16	6.6	70
																1.70	- 0.24	0.40	19	1	0.0	0	9.1	6	27	NE	17	1	13	17	7.4	64
HAWAII																																
HILO	27	1015.6	1016.8	85	69	76.8	1.9	88	8	66	10	0	0	69	79																	
HONOLULU	7	1015.6	1016.1	89	74	81.5	2.7	92	5	70	4	12	0	67	65	T	- 0.21	T	0	1	0.0	0	2.7	30	42	NW	19	23	8	0	1.8	92
KAHULUI	48	1013.2	1015.6	89	69	79.0	0.7	93	16+	62	2	11	0	68		0.41	- 0.02	0.32	2		0.0	0						20	8	3	2.9	
LIHUE	103	1012.2	1017.3	84	72	78.2	0.6	85	31+	66	4+	0	0	71	80	0.10	- 0.41	0.06	3	5	0.0	0	3.1	24	57	W	16	18	12	1	3.0	86
ILLINOIS																																
CAIRO U	314			89	72	80.3	- 0.8	96	27	60	4	17	0			3.07	- 0.12	1.33	10		0.0	0			29	NW	18	6	15	10	6.3	72
CHICAGO O HARE	658	994.6	1018.5	82	62	72.0	- 0.7	92	21+	48	3	6	0	59	63	2.03	- 1.36	1.21	8	7	0.0	0	2.2	20	30	34	23+	9	15	7	5.3	
CHICAGO MIDWAY	607	996.3		84	65	74.3	- 1.3	95	16	52	3	6	0	60	62	1.55	- 1.82	0.61	8	6	0.0	0	3.1	21	32	S	17	12	11	8	4.9	67
MOLINE	582	996.6	1017.8	84	62	73.1	- 2.5	95	21	47	3	4	0	60	65	3.91	0.65	2.21	6	7	0.0	0	2.6	20	32	SW	7	9	15	7	5.4	76
PEORIA	652	994.6	1018.3	83	64	73.2	- 2.8	90	13	50	3	1	0	63	72	4.32	0.78	1.87	10	8	0.0	0	2.2	19	30	SW	17	8	11	12	5.6	72
ROCKFORD	724	991.2	1018.0	81	61	70.9	- 3.3	90	16+	48	11+	4	0	60	69	2.62	- 1.52	0.97	9	7	0.0	0	2.6	22	21	15	23+	10	12	9	5.4	
SPRINGFIELD	588	996.3	1018.1	86	65	75.8	- 2.2	95	13	51	3	12	0	63	67	4.67	1.18	1.41	10	11	0.0	0	2.2	19	34	SW	14	12	7	12	5.2	69
INDIANA																																
EVANSVILLE	381	1005.4	1019.2	89	67	77.7	- 1.1	94	18	50	4	19	0	66	70	5.59	2.27	1.49	9	8	0.0	0	1.9	23	27	NE	10	11	9	11	5.5	71
FORT WAYNE	791	989.5	1018.9	83	63	73.0	- 1.2	92	17	48	4	5	0	61	69	2.54	- 0.83	0.87	12	11	0.0	0	2.7	23	27	W	31	6	15	10	6.2	81
INDIANAPOLIS	792	990.5	1019.1	85	65	75.3	0.1	92	17	48	4	11	0	64	70	2.19	- 1.31	0.79	7	6	0.0	0	1.8	23	31	SW	15	4	17	10	6.1	62
SOUTH BEND	773	990.9	1018.5	81	61	71.0	- 2.6	90	16	49	3	1	0	58	65	2.06	- 1.41	0.97	9	10	0.0	0	3.1	24	21	35	23	6	15	10	6.0	

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No. of days: Max. 90° F. or above	Temperature: No. of days: Min. 32° F. or below	Temperature: Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No. of days: .01 inch or more	Precipitation: No. of days: With thunderstorms	Precipitation: Snow, Sleet: Total	Precipitation: Snow, Sleet: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile: Speed	Wind: Fastest mile: Direction	Wind: Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	No. of days (sunrise to sunset): Partly cloudy, 4-7	No. of days (sunrise to sunset): Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	Ft.	Mb.	Mb.	°F.	°F.	°F.	F.	F.		°F.				°F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
IOWA																																
BURLINGTON	692			84	64	74.2	-2.4	94	21	50	3	4	0	62	67	1.36	-2.04		4	4	0.0		3.0	20	23	18	30	9	12	10	5.5	
DES MOINES	938	983.4	1017.7	84	64	74.2	-2.1	93	12	53	3	5	0	61	64	4.48	1.42	1.63	9	8	0.0	0	3.0	18	73	W	8	7	16	8	5.5	75
DUBUQUE	1056	979.3		81	61	70.7	-1.9	89	13	46	3	0	0			3.02	-0.49	1.83	11		0.0	0						8	14	9	5.6	
SIOUX CITY	1095	977.3	1016.3	86	63	74.6	-2.8	96	11	47	3	10	0	62	67	1.68	-1.43	0.58	10	9	0.0	0	3.0	17	42	SE	29	12	10	9	5.3	75
WATERLOO	868	986.1	1017.4	81	61	70.8	-3.0	92	13	49	3	2	0	61	72	12.60	8.81	9.31	10	8	0.0	0	3.0	20	44	13	16	9	15	7	5.7	
KANSAS																																
CONCORDIA	1470	963.8	1015.7	90	66	78.0	-2.3	100	23	51	3	17	0	63	65	3.81	0.98	0.89	15	16	0.0	0	6.3	16	61	NW	17	14	8	9	4.7	69
DODGE CITY	2582	926.5	1015.1	89	66	77.8	-2.4	102	23	56	2	17	0	61	60	4.08	1.77	2.41	7	10	0.0	0	6.7	15	42	NE	8	4	18	9	6.2	82
GOODLAND	3650	890.6	1014.6	89	62	75.2	-1.4	101	16	50	4	18	0	57	59	2.85	0.18	0.98	11	13	0.0	0	5.1	15	29	9	18+	11	14	6	5.0	
TOPEKA	876	985.8	1017.0	86	66	76.4	-3.5	93	12+	49	3	6	0	65	70	10.17	6.57	2.49	10	12	0.0	0	3.9	16	60	NW	23	10	8	13	5.7	70
WICHITA	1321	969.2	1016.0	92	68	80.3	-0.6	102	23	57	3	23	0	63	60	3.65	0.01	1.81	10	8	0.0	0	8.1	16	34	SW	16	9	9	13	6.0	66
KENTUCKY																																
COVINGTON	869	988.5	1019.5	86	66	75.7	0.3	94	1	50	4	7	0	62	67	7.50	3.89	1.94	13	10	0.0	0	1.3	20	29	25	15	7	10	14	6.5	
LEXINGTON	966	984.8	1019.8	86	66	75.9	-1.5	93	1	50	4	5	0	63	70	4.54	0.56	0.83	13	15	0.0	0	1.5	19	20	21	14	8	10	13	5.9	
LOUISVILLE	477	1001.7	1018.8	88	68	77.7	0.1	94	1	51	4	13	0	65	68	3.07	-0.29	0.85	16	12	0.0	0	1.4	21	34	NW	28+	6	12	13	6.3	61
LOUISIANA																																
ALEXANDRIA	92	1014.6	1018.7	92	70	80.7	-1.5	96	31	59	5	25	0	72	81	1.72	-3.53	0.50	9	11	0.0	0	0.8	12	23	35	29	6	12	13	6.2	
BATON ROUGE	64	1015.9	1018.5	92	72	81.8	-0.9	94	30+	65	5	27	0	72	79	3.52	-2.75	1.51	13	15	0.0	0	1.7	13	32	16	18	5	17	9	5.9	
LAKE CHARLES	9	1016.9	1018.0	90	73	81.5	-0.8	92	29+	65	6	18	0	73	82	7.82	0.53	2.78	11	12	0.0	0	1.5	14	29	17	2	6	14	11	6.3	
NEW ORLEANS	3	1017.6	1018.6	91	74	82.4	0.8	96	29+	69	6	23	0	72	74	4.96	-1.76	1.18	15	12	0.0	0	1.0	12	19	6	8	7	15	9	5.8	
SHREVEPORT	254	1008.8	1018.1	90	72	81.0	-2.7	96	18	62	5	22	0	70	73	4.68	0.93	2.12	8	9	0.0	0	2.3	16	28	13	18+	7	12	12	6.4	63
MAINE																																
CARIBOU	624	992.6		79	54	66.3	1.8	93	16+	42	11	3	0			4.24	0.20	1.51	9		0.0	0						3	19	9	6.2	
PORTLAND	47	1014.9	1017.4	81	59	70.0	1.9	96	16	49	31	2	0	60	73	0.65	-2.21	0.35	5	2	0.0	0	2.9	21	22	S	19	10	15	6	5.3	71
MARYLAND																																
BALTIMORE	148	1013.9	1019.3	88	68	78.2	1.4	98	1	59	5	12	0	65	67	2.75	-1.47	2.04	6	6	0.0	0	1.2	22	42	NW	19	11	13	7	5.0	66
MASSACHUSETTS																																
BLUE HILL OBS R	629			83	62	72.5	1.6	94	16	53	30	4	0			0.72	-2.55	0.37	6		0.0	0			30	WNW	28+					70
BOSTON	15	1017.3	1018.2	84	67	75.2	1.5	98	16	58	12	6	0	61	64	0.55	-2.33	0.30	4	3	0.0	0	5.4	24	24	NW	29+	11	13	7	5.1	73
NANTUCKET	43	1018.6	1018.9	76	59	67.8	-0.2	90	1	50	6	1	0	63	88	0.15	-2.56	0.14	2	2	0.0	0	4.5	23	23	NE	11+	8	6	17	6.4	59
PITTSFIELD	1170			80	57	68.6	0.8	91	17	46	30	2	0			1.57	-3.32	0.66	4		0.0	0										
WORCESTER	986	982.7	1019.3	81	62	71.2	1.4	92	1	51	30	3	0	57	63	1.06	-2.57	0.52	6	4	0.0	0	5.4	26	23	31	25	10	14	7	5.1	
MICHIGAN																																
ALPENA	689	992.2	1017.4	79	53	66.0	0.1	95	15	37	11	4	0	55	68	2.37	-0.49	1.02	9	7	0.0	0	3.4	25	22	SE	15	8	13	10	5.9	68
DETROIT	619			83	64	73.7	-0.7	94	22	52	3	5	0	59	61	4.95	2.13	1.68	7	5	0.0	0	2.7	24	22	27	1					
DETROIT M WAYNE CO	633	994.6	1018.3	82	61	71.7	-0.7	92	17	51	29+	4	0	59	67	5.14	2.45	2.75	8	8	0.0	0	3.3	24	50	SW	9	11	14	6	5.1	78
DETROIT WILLOW RUN	711	990.9	1018.7	81	59	70.1	-4.1	90	18+	48	4	2	0	57	65	3.62	0.94	2.18	7	8	0.0	0	3.7	24	26	22	18	12	12	7	5.1	
FLINT	770	990.5	1018.1	79	58	68.6	-2.6	89	17+	45	3	0	0	59	73	2.73	-0.18	1.23	9	8	0.0	0	4.8	22	22	21	18	13	12	6	4.8	
GRAND RAPIDS	784	989.5	1018.3	82	58	69.8	-2.5	92	17	43	3	5	0	58	65	2.74	0.01	1.41	8	5	0.0	0	4.1	23	29	SW	31	9	14	8	5.3	72
HOUGHTON LAKE	1149	977.0	1018.5	78	54	65.7	-1.3	90	17	39	3	1	0	56	71	1.84	-1.04	0.58	7	6	0.0	0	4.3	25	23	27	2	7	16	8	5.5	
LANSING	841	987.1	1018.5	82	59	70.2	-1.5	94	17	45	3	4	0	58	66	3.03	0.45	1.31	6	8	0.0	0	4.4	24	26	SW	31	10	17	4	4.8	77
MARQUETTE U	677			76	57	66.1	-0.6	95	15	41	10	2	0			1.81	-1.39	0.61	14		0.0	0			40	SW	1	6	12	13	6.5	66
MUSKEGON	627	995.3	1018.0	79	59	68.9	-2.4	92	17	44	3	2	0	59	70	3.05	0.64	1.73	9	5	0.0	0	4.8	23	23	20	17	16	9	6	4.2	
SAULT STE MARIE	721	990.2	1016.6	74	50	61.9	-2.7	89	17+	38	10+	0	0	55	78	3.04	0.56	1.06	12	6	0.0	0	3.9	26	34	NW	28	9	7	15	6.3	62
MINNESOTA																																
DULUTH	1428	965.1	1016.2	75	53	64.2	-1.3	86	15	41	10+	0	0	53	70	3.60	0.06	2.02	11	11	0.0	0	3.8	24	42	SW	1	2	14	15	7.2	60
INTERNATIONAL FALLS	1179	972.2	1015.0	77	54	65.3	-0.3	88	7+	40	2	0	0	55	71	4.97	1.48	2.32	13	14	0.0	0	3.6	25	31	23	13	2	12	17	7.3	
MINNEAPOLIS	834	986.5	1016.3	81	61	71.1	-1.2	90	15+	50	3	4	0	61	70	6.46	3.19	1.95	8	9	0.0	0	3.4	23	36	SW	13	11	12	8	5.2	75
ROCHESTER	1297	970.2	1017.4	78	57	67.7	-4.6	86	21	47	3	0	0	58	73	5.07	1.39	1.89	11	10	0.0	0	4.3	22	29	27	1	8	14	9	5.4	
ST CLOUD	1034	978.3	1015.8	80	59	69.4	-1.6	91	15+	47	3+	3	0		70	1.95	-1.31	0.80	9		0.0	0						9	12	10	5.7	

See footnotes at end of table

CLIMATOLOGICAL DATA

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State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No. of days: Max. 90 F. or above	Temperature: No. of days: Min. 32 F. or below	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No. of days: 01 inch or more	Precipitation: No. of days: With thunderstorms	Precipitation: Snow, Sleet: Total	Precipitation: Snow, Sleet: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile: Speed	Wind: Fastest mile: Direction	Wind: Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	No. of days (sunrise to sunset): Partly cloudy, 4-7	No. of days (sunrise to sunset): Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	Ft.	Mb.	Mb.	F.	F.	F.	F.	F.		F.				F	%	In.	In	In.			In.	In.	M.p.h.		M.p.h.							%
MISSISSIPPI																																
JACKSON	310	1007.1	1018.8	92	70	80.7	- 1.6	95	28+	60	5	25	0	71	76	2.24	- 2.52	0.95	7	11	0.0	0	1.4	16	26	SW	12	8	13	10	5.8	62
MERIDIAN	290	1008.5	1019.4	92	69	80.6	- 0.9	101	27	62	5	22	0	70	78	3.04	- 3.18	0.92	9	13	0.0	0	0.3	21	23	15	18	2	14	15	6.9	
MISSOURI																																
COLUMBIA	778	989.8	1017.8	86	67	76.6	- 2.1	94	21	55	3	6	0	65	69	3.18	- 0.23	0.78	12	8	0.0	0	2.9	18	28	W	17	11	4	16	6.3	71
KANSAS CITY	742	990.9	1017.2	89	70	79.4	- 2.1	97	12	55	3	15	0		63	5.13	1.94	1.35	10	6	0.0	0	4.1	17	33	SE	16	11	6	14	5.8	67
ST JOSEPH	811			87	65	76.0	- 3.4	95	12	46	3	9	0	65	72	7.59	4.37		7	9	0.0		3.6	18	22	18	17	11	10	10	4.9	
ST LOUIS	535	998.3	1016.5	88	68	77.6	- 0.5	95	13	53	4	12	0	64	64	3.92	0.62	0.85	10	11	0.0	0	1.9	19	33	SW	15	8	8	15	6.4	73
SPRINGFIELD	1268	973.9	1018.5	88	65	76.2	- 2.6	96	27	50	4	11	0	65	72	3.60	- 0.29	1.59	6	10	0.0	0	4.2	17	40	NW	27	9	12	10	5.7	62
MONTANA																																
BILLINGS	3567	893.3	1015.0	85	59	72.1	- 2.6	99	29	47	31	11	0	49	48	0.25	- 0.65	0.11	6	7	0.0	0	1.8	3	35	NE	25	17	11	3	3.4	85
GLASGOW	2284	934.6	1015.2	84	54	69.0	- 1.7	100	12	44	31+	9	0	47	50	0.82	- 0.51	0.37	8	9	0.0	0	1.5	3	41	33	29	16	12	3	3.8	
GREAT FALLS	3662	891.0	1015.6	84	52	67.8	- 1.6	97	29	42	31	8	0	44	45	0.06	- 1.22	0.02	4	2	0.0	0	1.6	23	47	NW	29	17	10	4	3.6	85
HAVRE	2584	924.8	1015.4	86	52	68.6	- 1.4	98	29+	42	31+	11	0	43	44	0.49	- 0.78	0.36	4	4	0.0	0	2.2	29	50	SW	20	12	14	5	4.5	88
HELENA	3828	883.2	1016.2	85	52	68.2	- 0.2	95	29+	41	1	7	0	45	47	0.26	- 0.77	0.15	3	3	0.0	0	2.9	31	34	NW	19	20	7	4	3.2	81
KALISPELL	2965	913.0	1016.2	84	48	65.5	- 0.2	96	9+	35	16	12	0	46	55	0.46	- 0.58	0.36	5	5	0.0	0	1.5	36	26	2	29	15	11	5	3.6	
MILES CITY	2629	923.8	1014.9	89	59	73.6	- 1.7	103	12	46	1	16	0	50	48	0.93	- 0.41		8	9	0.0		0.7	5								
MISSOULA	3190	906.2	1016.1	88	51	69.8	2.8	101	28	42	21	15	0	40	37	0.21	- 0.64	0.14	7	4	0.0	0	2.8	33	37	NW	19	18	11	2	3.0	87
NEBRASKA																																
GRAND ISLAND	1841	951.6	1016.2	87	64	75.2	- 2.0	97	16+	50	3	12	0	62	68	4.82	2.31	2.52	8	10	0.0	0	4.3	16	52	32	16	14	8	9	4.8	
LINCOLN U	1150			88	68	77.8	- 2.3	98	21+	52	3	13	0			3.71	0.44	1.67	9		0.0	0			40	S	30	14	6	11	5.1	74
NORFOLK	1544			86	63	74.8	- 2.2	95	20+	49	3+	10	0			2.42	- 0.60	1.19	8		0.0	0						12	12	7	4.8	
NORTH PLATTE	2775	919.4	1015.5	86	59	72.6	- 3.5	97	14	44	1	11	0	57	62	1.82	- 0.70	0.69	7	9	0.0	0	5.1	13	35	NE	27	9	16	6	5.0	73
OMAHA	977	981.7	1016.4	87	65	76.4	- 2.1	98	21	50	3	11	0	63	67	2.61	- 0.76	1.27	8	8	0.0	0	3.3	17	38	N	30	6	16	9	5.7	77
SCOTTSBLUFF	3957	882.2	1015.0	88	59	73.4	- 1.3	101	20	43	1	13	0	52	55	1.17	- 0.28	0.62	7	9	0.0	0	2.7	12	35	25	17	10	15	6	4.5	
VALENTINE	2587			86	59	72.5	- 2.9	102	14	43	2	8	0			1.70	- 0.62	0.89	5		0.0	0			43	S	20	14	14	3	4.2	82
NEVADA																																
ELKO	5050	845.9	1012.6	96	55	75.4	5.8	101	19	37	1	30	0	40	31	0.04	- 0.36	0.04	1	6	0.0	0	1.2	25	32	19	3	20	7	4	3.2	
ELY	6253	812.4	1013.1	87	50	68.4	0.9	93	21	30	1	6	1	39	41	1.32	0.67	0.40	11	15	0.0	0	5.2	20	32	S	7	12	16	3	4.2	80
LAS VEGAS	2162	936.3	1010.6	103	75	89.0	- 0.7	110	20+	62	1	31	0	49	29	0.11	- 0.39	0.08	3	7	0.0	0	4.1	20	40	NE	25	17	9	5	3.4	85
RENO	4404	866.9	1013.3	95	51	73.0	5.3	100	28+	42	21+	28	0	41	34	0.05	- 0.22	0.05	1	0	0.0	0	3.2	28	42	NW	2	21	4	6	2.8	85
WINNEMUCCA	4299	868.3	1012.3	95	54	74.3	3.3	103	28	34	1	28	0	31	22	T	- 0.27	T	0	5	0.0	0	2.3	25	29	SW	7	18	7	6	3.5	83
NEW HAMPSHIRE																																
CONCORD	342	1005.4	1017.9	83	56	69.3	- 0.3	95	16	43	30	4	0	58	70	1.62	- 1.79	1.04	9	7	0.0	0	2.5	25	25	NW	6	10	12	9	5.2	66
MT WASHINGTON OBS	6262			55	43	49.1	0.0	67	18	30	30	0	1			6.18	- 0.53	2.87	16	5	0.0	0			68Y	W	29	0	10	21	8.2	32
NEW JERSEY																																
ATLANTIC CITY	64	1016.6	1019.1	85	64	74.2	- 0.9	99	1	53	30	7	0	65	75	1.75	- 1.97	0.73	7	6	0.0	0	2.6	19	32	16	23	7	14	10	5.8	59
ATLANTIC CITY U	11			83	70	76.5	2.3	98	1	61	6	4	0			1.26	- 2.60	0.63	8		0.0				38	NNW	6+					
NEWARK	7	1018.0	1018.8	87	69	78.2	1.9	98	16+	60	29	9	0	63	63	1.87	- 1.80	1.13	3	4	0.0	0	4.1	21	23	20	24+	8	15	8	5.3	
TRENTON U	56			86	68	76.7	0.7	97	17+	58	7	9	0			2.35	- 1.83	1.51	5		0.0	0			24	NW	24+	8	10	13	6.0	61
NEW MEXICO																																
ALBUQUERQUE	5311	841.5	1014.0	89	63	76.1	- 2.4	97	21+	59	17+	18	0	50	48	3.33	2.13	0.95	9	10	0.0	0	2.9	11	54	E	2	12	12	7	4.8	72
CLAYTON	4969			85	59	72.1	- 2.4	96	16	52	31	10	0			2.56	0.23	0.63	11		0.0	0						8	11	12	6.0	
RATON	6379			81	53	67.1	- 2.7	90	16	47	8+	1	0			5.25	2.85	2.05	15		0.0	0						3	17	11	6.5	
ROSWELL	3617	893.7		89	62	75.6	- 3.0	99	1	57	29+	21	0	60	63	5.50	3.73	2.71	13	8	0.0	0	3.3	14	34	NW	13	15	9	7	4.8	72
SILVER CITY	5373			87	62	74.3	- 2.8	97	17	58	30+	11	0			3.59	1.50	1.36	14		0.0	0						6	18	7	5.8	
NEW YORK																																
ALBANY	275	1007.8	1018.3	86	60	72.7	0.6	96	17+	44	30	10	0	59	63	0.49	- 3.00	0.35	4	5	0.0	0	3.7	22	25	W	28	3	18	10	6.2	67
BINGHAMTON	1590	961.7	1019.7	78	61	69.4	1.0	89	18	49	5	0	0	60	74	1.66	- 2.05	1.14	5	4	0.0	0	3.9	25	29	W	1	2	22	7	6.1	73
BUFFALO	705	993.2	1018.6	81	61	71.2	1.4	94	18	47	30	2	0	58	65	1.19	- 1.38	0.70	4	3	0.0	0	7.0	23	32	SW	1	10	14	7	5.3	74
J.F. KENNEDY	13	1018.3	1019.1	85	70	77.0	1.1	98	16	59	30	6	0	64	67	2.58	- 1.46	1.80	4	2	0.0	0	5.5	21	26	19	22	10	10	11	5.5	
NEW YORK U	132	1015.2	1018.4	86	69	77.3	0.5	98	17	60	30	6	0	61	60	2.63	- 1.07	2.02	3	2	0.0	0	3.4	24	28	SW	24					60
NEW YORK LA GUARDIA	11	1016.9	1018.8	85	70	77.2	0.4	96	1	62	30+	6	0	60	59	2.39	- 1.32	1.78	3	4	0.0	0	3.3	23	28	S	22+	10	11	10	5.6	

See footnotes at end of table

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ENGLISH UNITS

JULY 1968

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Date	Temperature: Lowest	Date	No. of days: Max. 90°F. or above	No. of days: Min. 32°F. or below	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	No. of days: .01 inch or more	No. of days: With thunderstorms	Snow, Sleet: Total	Snow, Sleet: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Fastest mile: Speed	Fastest mile: Direction	Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	Ft.	Mb.	Mb.	°F.	F.	°F.	°F.	F.		°F.				°F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
NEW YORK																																
ROCHESTER	547	998.6	1018.7	82	59	70.7	- 0.9	92	18+	45	30	6	0	60	70	1.42	- 1.42	0.49	5	3	0.0	0	4.6	25	26	SW	1	8	16	7	5.4	76
SYRACUSE	410	1003.7	1018.3	80	59	69.9	- 2.3	91	1	46	4	2	0	59	68	3.77	0.68	1.76	10	8	0.0	0	3.6	24	30	NW	5	9	16	6	5.2	67
NORTH CAROLINA																																
ASHEVILLE	2140	945.5	1020.5	83	63	73.1	0.7	92	1	57	24+	1	0	66	85	7.18	1.33	2.58	13	9	0.0	0	0.9	1	29	28	2	2	13	16	7.1	56
CAPE HATTERAS R	7	1019.6	1019.8	85	73	78.6	0.6	90	28+	62	22	2	0	72	81	7.65	1.50	3.55	15	11	0.0	0	3.4	21	28	S	9	10	9	12	5.7	74
CHARLOTTE	736	992.6	1019.5	86	68	77.0	- 2.2	96	2	63	4	9	0	69	79	5.13	0.25	1.60	11	8	0.0	0	0.6	20	25	5	18	11	5	15	5.9	71
GREENSBORO	897	988.8	1019.9	87	67	77.0	- 0.3	97	1	60	9	12	0	68	78	2.60	- 2.19	0.76	11	8	0.0	0	0.1	13	24	W	25	9	6	16	6.2	56
RALEIGH	434	1003.7	1019.3	86	68	76.9	- 1.0	96	1	62	21+	11	0	69	82	5.15	- 0.34	1.96	10	7	0.0	0	0.9	19	23	29	25	11	8	12	5.7	61
WILMINGTON	28	1018.3	1019.8	90	71	80.5	0.5	99	28	65	8	16	0	71	79	9.31	1.63	2.70	19	11	0.0	0	2.0	22	23	SW	19	9	10	12	6.0	60
NORTH DAKOTA																																
BISMARCK	1647	956.7	1015.6	82	54	67.6	- 4.1	95	20	45	22+	4	0	56	68	0.18	- 2.01	0.10	2	6	0.0	0	0.8	31	43	N	26	14	9	8	4.7	86
FARGO	896	983.1	1015.3	82	57	69.6	- 1.8	95	13	42	9	7	0	59	71	1.49	- 1.42	0.70	9	6	0.0	0	1.4	23	39	W	1	8	18	5	5.0	80
WILLISTON	1899	947.5	1015.0	85	54	69.4	- 1.9	102	10	38	2	10	0	50	56	0.63	- 1.24	0.38	7	9	0.0	0	1.9	28	42	NW	12	13	12	6	4.4	81
OHIO																																
AKRON	1208	975.6	1019.6	83	62	72.9	0.3	92	18	47	4	4	0	62	71	4.13	0.36	1.75	10	8	0.0	0	2.4	24	29	34	1	8	13	10	5.7	
CINCINNATI OBS	761			86	66	76.1	- 0.8	93	1	50	4	10	0			8.37	4.78	1.56	15		0.0	0			27	W	18					59
CLEVELAND	777	990.9	1019.7	80	60	70.0	- 1.9	92	18	41	4	2	0	59	70	3.58	0.27	1.76	12	8	0.0	0	3.0	23	35	SW	22	9	11	11	5.7	56
COLUMBUS	812	990.2	1019.7	85	64	74.1	- 0.7	95	18	47	4	7	0	61	66	2.80	- 1.13	0.63	12	13	0.0	0	1.1	19	27	SW	24+	5	13	13	6.2	
DAYTON	1002	983.7	1019.5	84	64	73.9	- 1.3	91	18+	49	4	3	0	61	68	3.61	0.08	1.37	10	10	0.0		2.1	21	38	W	22	8	9	14	6.2	69
MANSFIELD	1295			83	61	72.3	0.6	91	18	47	4	2	0	61	71	3.13	- 0.35	1.80	11	10	0.0	0	3.0	24	23	23	18	6	16	9	5.7	
TOLEDO	669	994.6	1019.4	83	61	71.9	- 0.8	92	18+	45	4	4	0	62	73	4.50	1.91	1.56	11	11	0.0	0	2.4	24	28	W	31	6	17	8	5.8	67
YOUNGSTOWN	1178	977.7	1019.8	81	59	70.1	- 0.4	90	18	42	4	1	0	60	71	2.06	- 2.26	0.82	9	7	0.0	0	2.4	25	23	31	16	9	13	9	5.6	
OKLAHOMA																																
OKLAHOMA CITY	1285	971.2	1016.8	90	69	79.8	- 2.7	98	27	59	4	21	0	66	68	1.41	- 0.96	0.53	5	4	0.0	0	6.7	17	35	E	1	8	12	11	5.9	76
TULSA	650	993.6	1017.3	91	70	80.6	- 1.6	101	27	58	4+	20	0	67	68	1.37	- 1.57	0.60	4	4	0.0	0	6.3	17	30	NE	1	8	11	12	5.9	71
OREGON																																
ASTORIA	8	1018.0	1018.8	69	53	61.0	0.4	85	1	45	13	0	0	53	79	1.23	- 0.04	0.51	7	0	0.0	0	5.5	27	23	32	5	5	12	14	6.6	
BURNS U	4151	874.4	1014.2	90	55	72.4	2.9	101	28	40	17	18	0	35	28	T	- 0.34	T	0		0.0	0	3.4	31				21	9	1	2.7	
EUGENE	359	1003.7	1017.1	85	53	68.7	2.1	99	31	46	16+	10	0	53	63	0.02	- 0.25	0.02	1	0	0.0	0	2.7	30	22	35	20	16	9	6	3.6	
MEACHAM	4050	879.1	1014.8	80	54	66.7	3.3	94	5	41	16	6	0			0.36	- 0.14	0.27	2		0.0	0	2.8	31	20	29	11	23	6	2	2.1	
MEDFORD	1298	968.5	1015.2	93	56	74.1	2.1	103	27	46	16	21	0	50	47	T	- 0.21	T	0	0	0.0	0	4.6	31	20	30	19	26	2	3	1.6	
PENDLETON	1482	962.1	1014.8	93	61	77.2	3.6	108	6	49	16	20	0	42	32	0.17	- 0.05	0.09	2	2	0.0	0	3.6	29	46	28	19	21	9	1	2.3	
PORTLAND	21	1015.9	1017.0	81	56	68.6	1.4	99	31	48	13	5	0	52	61	0.14	- 0.27	0.13	2	0	0.0	0	4.8	33	20	NW	28+	13	10	8	4.5	67
SALEM	196	1009.8	1017.2	83	49	66.1	0.0	99	31	42	23+	8	0	53	65	0.39	0.04	0.24	3	0	0.0	0	2.5	33	20	4	20	17	8	6	3.8	
SEXTON SUMMIT R	3836	886.2	1015.3	78	53	65.5	1.9	90	3	44	17+	1	0			0.06	- 0.26	0.06	1		0.0	0			30	34	4	25	4	2	1.4	
PACIFIC AREA																																
JOHNSTON	7	1013.2	1013.8	86	78	82.0	0.9	87	30+	75	3+	0	0	72	73	0.71	- 0.59	0.33	14	0	0.0	0	15.5	8	32	E	26	4	14	13	6.7	53
KOROR R	94	1006.1	1009.8	89	76	82.0	1.1	93	3	72	21	13	0	76	84	16.43	1.26	2.74	27	3	0.0	0	1.8	21	29	NW	22	0	4	27	9.1	60
KWAJALEIN	8	1009.1	1009.8	86	76	81.1	- 0.5	89	30	73	25+	0	0	76	84	12.01	3.10	1.92	22	1	0.0	0	8.0	8	32	13	4	0	0	31	9.9	
MAJURO	10	1009.8	1010.1	86	76	80.9	0.7	88	31	73	20+	0	0	75	80	11.39	- 1.14	1.94	25	1	0.0	0	6.8	8	34	E	6	0	7	24	8.5	56
PAGO PAGO	12	1012.2	1012.5	84	73	78.5		88	15	68	17+	0	0	73	83	3.56		1.55	19	0	0.0	0	10.8	11	29	SE	21+	8	16	7	5.6	67
PONAPE R	123	1004.1	1009.6	87	72	79.5	- 0.2	91	27	70	19+	3	0	75	89	22.32	6.10	4.11	29	5	0.0	0	2.6	13	17	SW	18	0	6	25	8.8	42
TAGUAC GUAM R	361			86	73	79.4	- 0.1	89	25	69	17	0	0			12.36	3.38	2.68	28		0.0	0			22	W	21	0	10	21	8.4	46
TRUK MOEN ISLAND	5	1009.1	1009.4	87	74	80.2	- 0.3	89	29+	70	7	0	0	75	85	15.75	3.42	3.26	25	1	0.0	0	2.2	11	25	N	30	0	5	26	9.0	64
WAKE	11	1012.9	1013.3	88	77	82.8	0.8	89	31+	74	16	0	0	74	77	3.48	- 1.12	0.51	22	0	0.0	0	12.2	10	26	E	17+	5	9	18	7.5	83
YAP R	44	1007.1	1009.1	87	74	80.6	- 0.8	89	20+	71	10+	0	0	75	84	14.24	0.46	2.67	26	2	0.0	0	2.3	24	25	SW	23	0	3	28	9.5	59
PENNSYLVANIA																																
ALLENTOWN	387	1005.4	1019.1	86	63	74.5	0.4	96	18	49	7	6	0	61	65	1.60	- 3.22	0.88	5	3	0.0	0	2.6	23	25	23	19	12	10	9	5.3	
ERIE	731	992.9	1019.3	79	61	70.1	- 1.0	94	18	47	4	1	0	59	68	2.34	- 1.33	1.11	6	5	0.0	0	3.6	24	26	27	1	8	15	8	5.3	
HARRISBURG	338	1006.4	1019.0	88	67	77.3	1.1	97	1	54	5	12	0	64	67	1.94	- 1.57	1.12	6	6	0.0	0	1.7	23	33	N	19	11	9	11	5.4	83
PHILADELPHIA	5	1018.0	1018.8	86	68	77.1	1.5	96	1	55	7	8	0	66	71	2.00	- 2.16	1.12	5	4	0.0	0	2.2	21	22	N	24	11	8	12	5.8	65
PITTSBURGH	1137	976.0	1019.6	85	60	72.4	0.3	93	22	46	4	4	0	58	64	2.36	- 1.52	1.69	7	7	0.0	0	3.2	26	29	28	24	4	18	9	6.0	71
READING U	266			87	68	77.5	0.6	97	1	56	5	9	0			1.49	- 2.77	0.47	7		0.0	0			33	SW	19	8	14	9	5.2	67

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

JULY 1968

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	No. of days: Max. 90 F. or above	No. of days: Min. 32 F. or below	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	No. of days: 01 inch or more	No. of days: With thunderstorms	Snow, Sleet: Total	Snow, Sleet: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Fastest mile: Speed	Fastest mile: Direction	Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	Ft.	Mb.	Mb.	F.	F.	F.	F.	F.		F.				F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
PENNSYLVANIA																																
SCRANTON	930	985.8	1019.7	84	63	73.7	1.3	94	18	50	7+	6	0	61	68	1.23	- 3.56	0.58	5	4	0.0	0	2.5	22	25	W	19	9	13	9	5.3	72
WILLIAMSPORT	524	1000.3	1019.2	85	60	72.4	- 1.2	94	17	47	7	6	0	63	74	1.39	- 2.79	0.96	5	6	0.0	0	2.5	24	22	16	31	6	18	7	5.3	
RHODE ISLAND																																
BLOCK ISLAND	110			77	64	70.2	0.6	88	17	52	30	0	0			0.78	- 1.91	0.39	5		0.0	0						8	11	12	6.1	
PROVIDENCE	51	1015.9	1018.4	83	63	73.1	1.0	95	16	53	30	5	0	61	68	1.49	- 1.42	0.38	8	2	0.0	0	4.5	24	23	23	22	10	11	10	5.5	62
SOUTH CAROLINA																																
CHARLESTON	40	1018.0	1019.5	90	73	81.5	0.9	97	28+	67	23	19	0	70	72	7.77	0.06	1.73	14	11	0.0	0	3.0	21	43Y	NW	4	8	13	10	5.5	62
CHARLESTON U	9			88	76	82.0	0.5	98	28	71	6+	12	0			5.18	- 2.60	0.93	13		0.0	0			35	E	8					
COLUMBIA	213	1011.5	1019.4	91	70	80.5	- 1.1	99	28	63	7	21	0	71	78	9.28	3.19	2.39	10	12	0.0	0	0.5	16	23	27	18	7	14	10	6.0	62
GNVLE-SPARTANBURG	957	985.8	1019.7	86	68	77.0	- 2.0	95	2+	62	7	10	0	67	77	6.92	2.27	2.39	12	12	0.0	0	0.6	2	22	N	11	4	10	17	7.0	59
SOUTH DAKOTA																																
ABERDEEN	1296	969.2	1015.5	82	58	69.9	- 3.6	97	15	45	3	8	0	56	63	2.20	- 0.30	0.90	8	10	0.0	0	0.8	17	35	36	16	12	12	7	4.9	
HURON	1282	969.5	1015.3	83	60	71.4	- 3.6	99	20	47	22	5	0	60	71	2.05	0.24	0.88	6	8	0.0	0	2.1	16	45	NE	26	9	17	5	4.9	77
RAPID CITY	3162	906.9	1015.7	82	56	69.2	- 4.6	91	20+	41	2	3	0	54	62	2.44	0.66	0.98	8	14	0.0	0	2.3	1	45	NW	30	15	10	6	4.2	71
SIOUX FALLS	1418	955.5	1016.0	84	60	71.8	- 2.5	99	14	44	3	6	0	59	66	2.37	- 0.47	0.99	9	11	0.0	0	2.6	19	32	34	16	12	12	7	4.8	
TENNESSEE																																
BRISTOL	1507	967.2	1020.5	88	64	75.8	- 0.1	94	21+	55	5	11	0	64	74	2.89	- 2.66	1.40	11	11	0.0	0	0.7	1	28	30	2	5	11	15	6.7	
CHATTANOOGA	665	994.9	1019.1	90	69	79.3	- 1.4	97	27+	60	5	20	0	67	71	1.92	- 3.19	0.66	9	7	0.0	0	0.5	22	23	SW	2	3	15	13	6.7	51
KNOXVILLE	980	984.8	1019.0	87	67	77.2	- 1.2	93	18+	61	5	11	0	66	74	2.57	- 2.25	0.55	12	14	0.0	0	0.8	32	25	N	16	3	12	16	6.9	66
MEMPHIS	258	1008.8	1018.7	90	72	80.8	- 0.5	95	27	59	4	15	0	68	67	2.69	- 0.85	1.35	4	6	0.0	0	2.5	18	28	W	18	6	10	15	6.7	71
NASHVILLE	590	997.6	1019.0	88	67	77.8	- 2.4	96	1	54	5	16	0	68	75	6.87	3.15	2.24	11	14	0.0	0	1.1	21	34	SW	1	4	11	16	6.8	54
OAK RIDGE R	905			88	67	77.3	0.1	94	18+	57	4	11	0			2.80	- 3.15	0.99	12		0.0	0			44Y		12	4	10	17	6.8	
TEXAS																																
ABILENE	1762	955.6	1015.9	90	71	80.7	- 2.5	95	30+	64	7+	20	0	65	63	7.15	4.87	2.65	8	8	0.0	0	7.6	17	40	SE	19	11	9	11	5.4	82
AMARILLO	3604	894.0	1014.2	89	65	77.0	- 3.6	98	30	60	7+	17	0	59	59	2.96	0.62	1.46	11	9	0.0	0	8.2	18	35	NW	17	9	14	8	5.5	73
AUSTIN	597	995.6	1017.2	92	73	82.2	- 2.3	96	31	64	6	25	0	68	68	3.11	0.93	2.78	4	5	0.0	0	5.3	16	26	N	8	5	23	3	5.7	75
BROWNSVILLE	19	1015.6	1016.2	92	76	83.6	- 0.4	94	31+	73	27+	28	0	74	76	1.20	- 0.48	0.78	10	4	0.0	0	9.0	14	29	SE	13	5	20	6	5.7	77
CORPUS CHRISTI	41	1015.2	1016.8	89	75	82.0	- 2.1	93	31+	73	29+	13	0	74	81	5.43	3.11	2.31	10	7	0.0	0	7.0	14	26	SE	13+	2	19	10	6.5	66
DALLAS	481	1000.3	1017.3	91	74	82.4	- 2.5	97	31	67	5+	19	0	67	63	1.53	- 0.41	0.42	9	5	0.0	0	6.9	16	29	NE	19	6	15	10	5.7	73
DEL RIO	1026	979.7	1015.1	94	73	83.5	- 2.7	100	22	68	6	28	0	68	64	3.07	1.76	2.21	6	8	0.0	0	9.7	13	29	6	27+	5	13	13	6.3	
EL PASO	3918	883.2	1012.3	90	68	79.1	- 2.8	100	1	64	30+	19	0	57	52	5.53	4.24	2.63	11	14	0.0	0	2.5	15	35	NE	18	14	12	5	4.3	78
FORT WORTH	537	997.3	1017.3	91	71	81.0	- 4.4	97	28	62	5	21	0	70	72	1.88	0.13	0.55	7	8	0.0	0	5.3	18	30	20	14	7	14	10	5.7	
GALVESTON U	7			87	78	82.3	- 0.8	91	7	71	5+	1	0			2.26	- 2.53	0.90	10		0.0	0			27	S	12					54
HOUSTON	50	1015.6	1017.8	90	75	82.5	- 0.5	93	28+	69	6	23	0	72	76	6.49	2.20	1.65	12	13	0.0	0	3.7	14	29	22	21	3	17	11	6.2	68
LUBBOCK	3254	906.2	1015.4	87	63	75.3	- 4.2	96	30	58	10	15	0	60	65	3.14	1.13	1.12	13	12	0.0	0	7.1	16	44	5	1	9	13	9	5.6	
MIDLAND	2851	918.4	1014.8	90	67	78.5	- 4.4	99	17	63	7+	21	0	59	56	1.01	- 0.87	0.39	7	7	0.0	0	8.3	15	28	26	13	11	11	9	5.4	
PORT ARTHUR	16	1017.6	1018.3	90	72	81.3	- 0.6	94	28	63	5	21	0	72	78	6.15	0.15	1.28	11	12	0.0	0	2.3	15	47	SE	10	5	17	9	5.9	63
SAN ANGELO	1903	949.9	1015.1	95	70	82.5	- 2.3	102	17	58	6	27	0	65	62	1.23	- 0.18	0.80	6	4	0.0	0	7.0	17	25	18	30+	11	7	13	5.4	
SAN ANTONIO	788	989.5	1017.0	93	73	82.7	- 1.3	97	31+	65	6	28	0	68	67	1.53	- 0.56	1.32	8	4	0.0	0	6.4	15	26	SE	11	1	22	8	6.4	69
VICTORIA	104	1013.2	1017.2	91	75	82.7	- 0.5	95	29	71	6+	23	0	73	79	3.75	0.14	1.25	10	9	0.0	0	5.4	15	33Y	SE	18	3	15	13	6.7	
WACO	501	999.3	1017.2	92	74	82.9	- 2.4	98	31+	62	6+	23	0	68	65	0.98	- 1.01	0.88	3	3	0.0	0	6.9	15	25	14	14	8	16	7	5.4	
WICHITA FALLS	994	980.4	1016.0	96	70	82.7	- 2.9	104	28	62	9+	26	0	67	64	3.29	1.32	1.41	8	7	0.0	0	8.0	15	36	18	14	8	13	10	5.8	
UTAH																																
MILFORD	5028	848.3		91	57	74.3	0.5	99	19	40	1	24	0			0.97	0.27	0.69	8		0.0	0						14	12	5	4.0	
SALT LAKE CITY	4220	872.3	1012.7	95	62	78.3	1.4	102	19	40	1	30	0	45	34	0.09	- 0.49	0.07	2	6	0.0	0	4.1	16	40	S	22	22	7	2	2.7	89
WENDOVER	4237	871.7	1013.4	92	67	79.7	0.3	101	19	53	1	26	0			0.39	0.08	0.22	3		0.0	0										
VERMONT																																
BURLINGTON	332	1004.7	1017.1	80	58	68.7	- 0.3	92	16	45	30	4	0	59	72	2.70	- 1.15	0.92	9	9	0.0	0	3.3	21	33	S	31	4	19	8	6.1	80
VIRGINIA																																
LYNCHBURG	916			86	66	76.0	- 0.3	97	1	59	6	12	0			2.58	- 1.63	1.12	9		0.0	0			26	SW	23	9	11	11	5.9	54
NORFOLK	22	1018.3	1019.4	85	71	78.0	- 0.8	97	2	64	7	5	0	70	80	4.23	- 1.69	1.71	17	7	0.0	0	1.5	13	34	W	3	8	10	13	5.7	76
RICHMOND	164	1013.5	1019.4	88	69	78.9	0.8	99	2	61	5	14	0	68	74	3.41	- 2.20	1.15	9	6	0.0	0	0.8	14	28	NW	19	6	14	11	6.1	65

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No. of days: Max. 90° F. or above	Temperature: No. of days: Min. 32° F. or below	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No. of days: .01 inch or more	Precipitation: No. of days: With thunderstorms	Precipitation: Snow, Sleet: Total	Precipitation: Snow, Sleet: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile: Speed	Wind: Fastest mile: Direction	Wind: Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	No. of days (sunrise to sunset): Partly cloudy, 4-7	No. of days (sunrise to sunset): Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	Ft.	Mb.	Mb.	°F.	F.	F.	F.	F.		F.				F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
VIRGINIA																																
ROANOKE	1149	978.3	1019.7	86	65	75.6	- 1.0	97	1	56	21	9	0	63	69	2.95	- 1.30	1.23	11	9	0.0	0	0.8	23	22	27	17	8	12	11	5.8	
WALLOPS ISLAND	9			83	71	76.8		96	1	62	7	4	0			4.06		1.58	8		0.0	0			28Y	NNE	25	5	11	15	6.5	
WASHINGTON																																
OLYMPIA	195	1010.5	1017.6	80	50	64.8	0.9	95	31	42	16+	4	0	54	71	0.89	0.13	0.51	6	1	0.0	0	1.3	24	21	21	14	11	14	6	4.9	
QUILLAYUTE	179	1011.2	1018.5	71	50	60.6	0.9	88	30	43	13	0	0	53	81	1.74	- 0.57	1.02	6	0	0.0	0	2.4	25	19	S	11	6	13	12	6.1	49
SEATTLE TACOMA	400	1001.4	1017.7	78	56	67.0	2.1	92	2	50	16+	2	0	53	64	0.83	0.02	0.56	5	0	0.0	0	2.3	30	24	20	19	10	15	6	5.0	73
SPOKANE	2356	932.3	1014.3	87	56	71.1	0.6	101	6	46	16+	12	0	41	37	0.23	- 0.15	0.22	2	0	0.0	0	2.6	18	42	W	19	14	15	2	3.7	86
STAMPEDE PASS R	3958	882.5		69	50	59.4	3.2	85	3	40	16+	0	0			1.62	0.16	0.78	8		0.0	0						12	10	9	5.0	
WALLA WALLA U	949			92	64	77.7	1.7	106	6	54	21+	18	0			0.48	0.27	0.28	2		0.0	0			26	NW	19	19	10	2	2.8	89
YAKIMA	1052	976.3	1014.2	88	54	70.9	- 0.1	101	6	41	13	12	0	46	42	0.02	- 0.11	0.02	1	0	0.0	0	4.7	29	43	24	11	19	9	3	2.8	
WEST INDIES																																
SAN JUAN P.R.	13	1016.3	1018.8	87	75	81.2	0.8	91	30	73	23+	3	0	76	85	5.25	- 1.00	1.03	19	5	0.0	0	6.9	9	25	E	24+	7	16	8	5.8	66
SWAN ISLAND	28			87	78	82.5	0.0	89	29+	72	14	0	0			3.26	- 0.94	0.61	17		0.0	0						3	14	14	7.2	
WEST VIRGINIA																																
BECKLEY	2504	933.6	1020.1	80	59	69.6	- 1.3	87	1	46	5	0	0	61	77	3.17	- 1.41	1.12	16	8	0.0	0	1.7	22	28	34	2	6	8	17	6.6	
CHARLESTON	939	986.1	1019.6	86	63	74.2	- 0.7	94	18	47	5	4	0	64	76	4.02	- 1.65	1.06	10	7	0.0	0	0.7	23	23	22	27	4	8	19	6.8	
ELKINS	1970	950.6	1021.1	82	56	69.2	- 0.9	88	18+	40	5	0	0			3.46	- 2.03	1.01	10	8	0.0	0			21	30	22	5	9	17	7.0	
HUNTINGTON	827	990.2	1019.9	87	63	75.2	0.0	94	18+	46	5	14	0	63	71	2.59	- 1.91	0.85	11	11	0.0	0	1.2	21	18	29	19	8	10	13	6.1	
PARKERSBURG U	615			85	64	74.9	- 0.9	93	22+	49	5	5	0			3.79	- 0.32	1.83	10		0.0	0			41	W	22					65
WISCONSIN																																
GREEN BAY	682	991.9	1017.0	79	58	68.3	- 2.2	89	16+	42	10	0	0	59	71	2.00	- 0.71	0.48	11	7	0.0	0	5.0	23	36	SW	21	8	13	10	5.5	66
LA CROSSE	651	993.2	1017.2	82	62	71.9	- 1.9	95	16	49	3	4	0	61	71	4.06	0.31	1.79	11	8	0.0	0	2.8	20	35	28	21	10	11	10	5.4	
MADISON	858	986.5	1017.6	81	57	68.9	- 2.2	92	15	42	3	4	0	59	71	2.54	- 1.04	1.55	9	5	0.0	0	3.6	23	33	NW	21	12	10	9	5.0	77
MILWAUKEE	672	993.2	1018.1	79	60	69.5	0.8	91	15+	49	3	2	0	60	71	3.59	0.64	1.97	10	7	0.0	0	3.4	22	29	W	21+	12	12	7	4.9	78
WYOMING																																
CASPER	5338	841.2	1015.3	86	52	69.1	- 2.6	95	20+	37	1	10	0	44	47	1.02	0.02	0.32	8	8	0.0	0	0.8	25	32	30	22	14	12	5	4.0	
CHEYENNE	6126	817.1	1016.5	83	54	68.2	- 1.8	93	20	39	1	5	0	43	46	1.25	- 0.57	0.49	11	9	0.0	0	2.8	26	36	NW	24	10	12	9	5.3	57
LANDER	5563	832.7	1014.9	85	55	69.7	- 0.9	93	15	39	1	5	0	41	39	0.68	- 0.09	0.37	3	10	0.0	0	3.3	26	50	W	29	11	16	4	4.5	80
SHERIDAN	3964	881.5	1016.4	84	51	67.6	- 3.7	95	14	37	31	7	0	48	53	0.33	- 0.86	0.18	6	10	0.0	0	0.9	29	43	NW	30	18	9	4	3.5	81

Data from airport unless otherwise specified. U indicates Urban, R indicates Rural, sites.

Precipitation data in column headed "Greatest in 24 hours" are computed on a 24-hour basis without regard to calendar day - data may include precipitation with a measurable amount from the last day of the previous month or the first day of the following month.

Wind directions under resultant direction are in tens of degrees.

Value entered in column "Fastest Mile" is the highest observed 1-minute wind speed when the direction is in tens of degrees. These stations are not equipped with a recording anemometer from which "Fastest Mile" data can be evaluated.

B Number of days maximum 70°F. or above for Alaskan Stations.
Y Peak Gust.
\+ And also on an earlier date or dates.
Ø Station pressures apply to elevations shown in the "Elevations - Station Pressure" table of the annual issue of this publication.

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Date	Temperature: Lowest	Date	No. of days: Max 32.2 °C or above	No. of days: Min. 0 C or lower	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	No. of days: 25 mm or more	No. of days: With thunderstorms	Snow, Sleet: Total	Snow, Sleet: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Fastest mile (1.6 kilometers): Speed	Fastest mile: Direction	Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
ALABAMA	M.	Mb.	Mb.	C.	C.	C.	C.	C.		C.				C.	%	Mm.	Mm.	Mm.			Mm.	Mm.	M.p.s.		M.p.s.							%
BIRMINGHAM	189	997.3	1019.4	31.7	20.6	26.0	-1.6	37.2	1	17.8	4	14	0	20.6	76	239	107	112	15	16	0	0	0.6	3	13.9	N	12	6	8	17	6.9	62
HUNTSVILLE	190	996.6	1019.4	31.1	20.6	26.0	-1.3	36.1	1	15.6	5	16	0	20.6	77	74	- 34	22	12	10	0	0	0.6	12	13.4	32	28	6	8	17	6.8	
MOBILE	64	1010.8	1018.8	33.3	22.8	28.2	0.1	37.8	28	19.4	30	28	0	21.7	73	78	-167	28	10	13	0	0	0.4	13	8.9	27	29	4	19	8	6.3	
MONTGOMERY	59	1011.9	1019.1	32.8	21.7	27.2	-0.5	37.2	1	20.0	30	23	0	21.7	76	126	- 11	36	10	13	0	0	0.4	28	9.8	NE	21	4	14	13	6.2	68
ALASKA																																
ANCHORAGE	35	1010.8	1015.8	18.9	12.2	15.5	0.9	23.9	7	8.3	17	9	0	9.4	70	34	- 13	17	9	0	0	0	1.3	21	9.4	18	26	6	5	20	7.3	47
ANNETTE	34	1014.6	1018.5	20.0	11.7	15.8	1.8	25.6	19+	8.9	15	13	0	10.6	75	122	- 31	36	12	1	0	0	1.1	17	10.3	14	10+	2	8	21	8.1	
BARROW	9			8.9	2.2	5.7	1.8	21.7	29	- 2.2	1	1	3			5	- 15	4	5	0	5	0			13.9	9	27+	7	13	11	6.0	
BARTER ISLAND	12	1016.3	1017.9	8.9	3.3	6.0	0.8	17.8	22	0.0	2	0	1	3.9	86	8	- 15	8	1	0	0	0	6.1	9	14.8	9	27+	6	12	12	6.2	
BETHEL	38	1008.5	1014.1	18.9	10.0	14.4	1.8	28.3	25	6.1	6	10	0	10.0	77	41	- 11	10	13	1	0	0	1.7	20	10.3	14	29+	3	7	21	8.1	
COLD BAY	29	1009.8	1013.7	14.4	8.9	11.6	1.8	22.2	25	5.6	1	1	0	7.8	80	25	- 21	5	11	0	0	0	3.0	17	14.8	15	3	0	6	25	8.8	
FAIRBANKS	133	997.3	1014.0	25.6	12.2	18.8	3.4	31.7	24	8.3	4	27	0	8.9	56	21	- 25	13	8	2	0	0	0.5	3	7.6	7	26+	8	10	13	6.1	
JUNEAU	4	1016.6	1017.4	19.4	8.3	13.8	0.8	25.0	25	3.9	7	13	0	10.6	95	117	3	48	13	0	0	0	0.7	8	9.8	12	5	4	4	23	8.0	41
KING SALMON	15	1011.9	1014.1	17.8	8.3	13.1	0.3	25.6	25	3.3	20	5	0	5.6	63	29	- 23	8	10	1	0	0	1.9	16	15.6	15	29	4	1	26	8.4	
KOTZEBUE	3	1012.9	1013.3	17.8	11.1	14.2	2.7	27.9	8	1.7	2	6	0	10.0	77	37	0	10	11	3	0	T	1.2	22	14.3	27	27+	5	11	15	6.7	
MC GRATH	105	1001.4	1013.9	22.8	9.4	16.1	1.2	30.6	25	4.4	2	17	0	8.3	65	35	- 27	7	14	7	0	0	0.9	21	8.0	7	21	2	15	14	7.0	
NOME	4	1011.9	1012.5	16.7	8.3	12.3	2.6	30.0	8	3.9	1	6	0	5.6	65	42	- 16	14	13	0	0	0	1.5	16	10.3	14	18+	5	8	18	7.4	42
ST. PAUL ISLAND	7	1010.2	1011.0	9.4	6.1	7.7	0.2	12.8	8	4.4	3+	0	0	7.2	96	71	14	24	20	0	0	0	1.9	17	11.2	25	13	0	1	30	9.9	
SHEMYA	37	1006.4	1010.2	9.4	6.1	7.9	-0.1	15.6	31	4.4	1	0	0	6.7	95	18	- 36	6	12	0	0	0	1.3	24	15.6	23	17+	0	0	31	9.9	
YAKUTAT	9	1016.6	1017.5	16.1	7.8	11.8	-0.4	21.7	24+	1.7	14	3	0	10.0	88	137	- 77	44	20	0	0	0	0.5	15	8.9	14	8	4	2	25	8.3	
ARIZONA																																
FLAGSTAFF	2131	792.4	1016.9	26.7	10.0	18.3	-0.3	30.0	21+	3.3	1	0	0	6.7	55	92	34	23	14	18	0	0	1.2	22	10.3	2	20	10	11	10	4.9	
PHOENIX	340	972.6	1010.3	39.4	25.0	32.3	0.2	43.3	11	19.4	1	31	0	13.9	36	43	24	22	8	10	0	0	0.5	21	23.7Y	SE	27	16	11	4	3.5	85
TUCSON	788	925.8	1011.4	36.1	22.8	29.4	-0.8	40.6	2	20.0	5+	30	0	13.3	44	50	- 2	23	12	12	0	0	0.9	19	22.4	E	18	11	15	5	5.0	79
WINSLOW	1492	853.7	1013.6	33.9	16.7	25.4	-1.3	39.4	21	10.6	1	24	0	6.7	37	21	- 5	11	8	11	0	0	1.4	21	17.9	9	4	13	10	8	4.2	
YUMA	59	1003.1	1009.9	40.0	26.1	33.0	-0.8	44.4	11	21.1	6+	30	0	16.1	40	23	17	22	3	3	0	0	2.5	18	17.4	E	4	19	7	5	3.0	87
ARKANSAS																																
FORT SMITH	136	1001.7	1018.1	32.8	21.1	26.8	-1.5	36.1	27	15.0	5+	21	0	20.0	69	41	- 30	23	8	9	0	0	0.8	16	13.0	SW	14	5	10	16	6.7	76
LITTLE ROCK	78	1008.8	1018.2	31.1	20.0	25.4	-2.3	33.9	27+	13.3	5+	13	0	21.1	79	152	67	61	10	12	0	0	0.9	17	14.8	W	27	4	10	17	6.8	74
TEXARKANA	119	1005.1	1018.0	32.8	21.7	27.2	-0.9	36.7	18	15.0	5	20	0	21.7	76	82	- 16	24	9	12	0	0	1.3	17	10.3	17	21+	9	12	10	5.8	
CALIFORNIA																																
BAKERSFIELD	145	994.9	1012.1	38.3	22.8	30.3	1.3	42.2	11+	18.9	3	31	0	8.9	28	T	0	T	0	0	0	0	1.7	33	8.9	33	6	25	2	4	1.6	
BISHOP	1252	874.0		36.1	15.0	25.4	0.7	38.9	21+	10.0	1	28	0			18	15	10	6		0	0						21	3	7	3.2	
BLUE CANYON	1609			26.1	16.1	21.2	1.2	30.6	27+	12.2	16	0	0			1	- 2	1	1		0	0			7.2	23	19	23	5	3	2.1	
EUREKA U	13			16.1	11.1	13.5	0.0	19.4	11	9.4	9+	0	0			1	- 2	1	1		0	0			10.7	N	4	3	11	17	7.5	42
FRESNO	100	1000.3	1011.9	37.8	18.3	28.0	0.6	42.2	19+	14.4	1	31	0	9.4	35	T	0	T	0	0	0	0	2.3	29	8.5	NW	1	25	2	4	1.6	80
LONG BEACH	10	1013.2	1014.6	29.4	17.2	23.2	1.2	36.7	10	13.9	3	6	0	13.3	61	T	0	T	0	1	0	0	1.1	24	7.2	27	10+	18	10	3	3.4	
LOS ANGELES	30	1010.5	1014.2	22.8	17.2	20.2	-0.4	26.7	29+	15.0	3+	0	0	15.0	76	1	1	1	1	0	0	0	3.0	25	9.8Y	W	28+	15	13	3	4.1	
LOS ANGELES U	82			28.9	18.9	23.7	0.9	34.4	10	15.0	2	4	0			T	0	T	1		0	0			7.2	W	10	22	5	4	2.9	69
MT SHASTA R	1080			31.1	10.6	20.9	0.9	36.7	28	4.4	1	10	0			1	- 7	3	1		0	0										
OAKLAND	2	1015.2	1015.5	21.1	13.9	17.3	-0.6	30.6	18	11.7	27	0	0	12.8	78	T	0	T	0	1	0	0	3.7	28	10.3	32	6	16	11	4	3.9	
RED BLUFF	104	999.7	1012.2	36.1	18.3	27.3	-1.5	42.2	6	15.0	24	27	0	9.4	37	T	- 1	T	0	0	0	0	1.9	17	10.3	S	11	27	1	3	1.5	93
SACRAMENTO	5	1011.9	1012.7	35.0	14.4	24.6	0.4	40.6	5	11.1	24	23	0	12.2	53	T	0	T	0	0	0	0	3.4	21	10.7	W	12	24	6	1	1.8	95
SANDBERG R	1377	864.9		28.9	16.7	22.8	-0.8	33.9	4	10.0	15	5	0			2	1	1	2		0	0			13.4	18	24	24	3	4	2.0	
SAN DIEGO	4	1013.2	1014.3	25.0	18.9	22.1	0.9	31.1	10	14.4	1	0	0	15.6	69	3	3	3	2	0	0	0	2.1	28	10.3	NW	8	12	13	6	4.6	70
SAN FRANCISCO	2	1014.9	1015.6	21.7	11.7	16.6	-0.4	31.1	18	9.4	27+	0	0	11.1	78	T	0	T	0	0	0	0	5.9	29	17.0	W	15	18	9	4	3.3	
SAN FRANCISCO U	16			17.2	11.7	14.4	-0.4	26.1	29	9.4	27+	0	0			T	0	T	0		0	0			13.4	W	13					66
SANTA MARIA	72			23.3	12.8	17.9	1.1	28.9	10	10.0	17	0	0			T	- 1	T	0		0	0						19	8	4	3.6	
STOCKTON	7	1012.2	1013.3	34.4	15.0	24.7	-1.0	41.1	5	11.1	24	25	0	8.3	41	0	0	0	0	0	0	0	3.3	30	9.8	26	13	24	4	3	1.7	
COLORADO																																
ALAMOSA	2297	777.9		26.1	8.9	17.6	-0.7	30.6	21	1.1	1	0	0			89	62	30	10		0	0						9	15	7	5.2	
COLORADO SPRINGS	1873	816.5	1017.0	27.2	13.3	20.2	-1.2	32.8	16	7.8	31	1	0	8.9	54	134	74	22	19	20	0	0	1.1	4	21.0	35	18	4	17	10	6.1	
DENVER	1610	840.2	1014.8	30.0	13.9	22.1	-0.7	35.0	20+	8.3	2	9	0	8.3	49	34	- 5	20	9	10	0	0	0.8	17	16.5	NW	29	7	18	6	5.2	58
GRAND JUNCTION	1480	854.0	1012.7	33.9	17.2	25.6	-0.1	37.8	21+	8.9	1	24	0	6.1	34	12	- 2	11	4	5	0	0	1.3	13	13.9	NE	24	13	12	6	4.5	70
PUEBLO	1428	858.8	1014.9	31.7	15.6	23.6	-1.1	36.1	16+	10.6	31	19	0	11.7	55	112	66	47	12	11	0	0	0.7	3	20.1	N	22+	8	17	6	5.1	76
CONNECTICUT																																
BRIDGEPORT	2	1018.3	1018.9	28.3	19.4	23.9	0.8	33.3	17	13.9	30	4	0	17.2	68	25	- 70	16	4	3	0	0	2.1	24	11.2	22	19	8	11	12	5.7	

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure: Station ∅	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	No. of days: Max. 32.2 °C or above	No. of days: Min. 0 °C or lower	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	No. of days: .25 mm. or more	No. of days: With thunderstorms	Snow, Sleet: Total	Snow, Sleet: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Fastest mile (1.6 kilometers): Speed	Fastest mile: Direction	Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	M.	Mb.	Mb.	°C.	°C.	°C.	°C.	°C.		°C.				°C.	%	Mm.	Mm.	Mm.			Mm.	Mm.	M.p.s.		M.p.s.							%
CONNECTICUT																																
HARTFORD	52	1011.5	1018.1	30.6	17.2	23.9	0.9	37.2	1	8.9	30	11	0	16.1	64	40	- 52	24	4	3	0	0	1.5	22	11.2	W	19	10	12	9	5.6	72
NEW HAVEN	2	1018.6		27.8	17.8	22.9	0.7	32.8	17+	11.1	30	2	0			28	- 59	23	3		0	0			9.8	W	19	9	12	10	5.5	77
DELAWARE																																
WILMINGTON	23	1016.3	1019.3	30.0	20.0	24.8	0.4	35.0	17+	14.4	7	9	0	18.3	70	46	- 61	20	8	7	0	0	0.9	20	14.3	29	2	12	10	9	5.4	
DIST.OF COLUMBIA																																
WASH NATL AP	4	1016.9	1019.1	31.7	21.7	26.6	0.9	36.1	1	16.7	5	12	0	18.9	64	33	- 72	20	4	4	0	0	0.8	19	13.4	NW	2	8	13	10	5.5	61
FLORIDA																																
APALACHICOLA U	4			31.1	23.9	27.5	0.0	34.4	28+	21.7	10	10	0			227	25	73	11	12	0	0			8.9	E	7	7	16	8	5.5	73
DAYTONA BEACH	9	1019.0	1020.3	31.1	22.8	27.1	0.3	35.6	29+	21.1	21	10	0	21.7	77	159	- 12	75	10	12	0	0	1.7	13	11.6	17	9+	4	18	9	6.1	
FORT MYERS	5	1019.3	1019.5	32.8	23.9	28.3	0.4	36.1	29	22.8	23+	22	0	22.8	76	250	20	57	17	22	0	0	1.6	10	13.0	4	20	4	18	9	6.0	
JACKSONVILLE	6	1018.6	1019.7	32.8	23.9	28.2	0.1	36.7	27	22.8	21+	18	0	22.8	77	174	- 21	44	15	12	0	0	1.4	17	20.6	SW	17	7	14	10	5.9	65
KEY WEST	1	1018.0	1018.6	31.1	26.1	28.7	0.2	32.2	31+	23.9	2	5	0	23.9	77	97	- 9	29	16	13	0	0	4.0	12	15.2	SE	31+	1	20	10	6.4	84
LAKELAND U	65			31.7	22.8	27.2	-0.3	35.6	28	20.6	15+	14	0			207	- 4	36	16		0	0						7	15	9	6.2	54
MIAMI	2	1019.0	1019.2	30.6	24.4	27.6	-0.1	32.8	31	22.8	2	6	0	22.2	73	156	- 15	32	16	13	0	0	2.6	11	11.6	20	6	3	21	7	6.0	
ORLANDO	33	1015.9	1020.4	32.2	22.2	27.4	-0.7	35.6	29	21.1	19+	18	0			142	- 61	41	13	21	0	0	1.3	15	15.6	20	5	5	12	14	6.5	
PENSACOLA	34	1014.6	1018.6	31.7	22.8	27.2	-0.4	35.6	28	20.6	10+	9	0	22.2	75	126	- 77	61	11		0	0	0.5	18	17.0	E	7	4	14	13	6.5	66
TALLAHASSEE	17	1016.9	1019.4	33.3	22.2	27.7	0.3	36.7	31+	20.0	17+	23	0	22.8	81	124	- 80	25	20	24	0	0	0.4	14	10.3	12	31+	3	18	10	6.2	
TAMPA	6	1019.3	1019.5	31.7	22.2	26.8	-0.8	34.4	29+	20.0	18+	13	0	21.7	79	213	- 6	59	16	19	0	0	0.9	14	13.4	11	2	3	15	13	6.7	60
WEST PALM BEACH	5	1019.0	1019.8	31.1	22.8	26.9	-1.2	33.3	29	20.6	29	5	0	22.2	77	118	- 51	58	10	13	0	0	2.6	12	15.2	10	1	8	16	7	5.7	
GEORGIA																																
ATHENS	244	990.9	1019.4	30.6	20.6	25.5	-1.0	35.6	2	18.3	5	10	0	20.6	78	216	89	66	13	12	0	0	0.1	4	10.3	31	28	4	15	12	6.5	
ATLANTA	308	983.4	1019.5	30.6	20.6	25.4	-0.7	33.9	2+	18.3	13	8	0	20.6	80	136	16	41	17	14	0	0	0.2	7	14.8		6	4	16	11	6.6	62
AUGUSTA	44	1013.9	1019.0	32.8	20.6	26.7	-0.4	36.1	28+	18.9	24+	21	0	21.1	76	113	- 2	33	15	11	0	0	0.5	16	17.9	32	16	3	18	10	6.1	
COLUMBUS	117			32.8	21.1	26.9	-0.3	36.1	1	20.0	13	21	0	21.7	79	77	- 72	20	12		0	0	0.2	2	9.4	9	8	5	15	11	6.5	
MACON	108	1006.4	1019.2	33.9	20.6	27.1	-0.7	37.8	28+	19.4	30+	24	0	20.0	71	113	- 30	33	12	14	0	0	0.3	13	17.0	W	31	3	17	11	6.5	67
ROME	194			32.2	19.4	25.8	-0.3	36.7	1	16.7	7	19	0			100	- 24	29	17		0	0										
SAVANNAH	14	1017.6	1019.5	32.8	22.2	27.6	0.2	37.2	29+	20.0	1	20	0	22.2	80	161	- 7	67	15	13	0	0	1.0	19	16.1	W	31	5	16	10	6.2	70
HAWAII																																
HILO	8	1015.6	1016.8	29.4	20.6	24.9	1.1	31.1	8	18.9	10	0	0	20.6	79	189	- 61	69	22	1	0	0	0.6	14	8.0	E	24	2	7	22	8.1	39
HONOLULU	2	1015.6	1016.1	31.7	23.3	27.5	1.5	33.3	5	21.1	4	12	0	19.4	65	7	- 4	4	6	1	0	0	5.0	6	13.4	NE	22	5	15	11	6.3	71
KAHULUI	15	1013.2	1015.6	31.7	20.6	26.1	0.4	33.9	16+	16.7	2	11	0	20.0		11	0	6	6	0	0	0	5.5	5	13.4	E	28	5	10	16	6.6	70
LIHUE	31	1012.2	1017.3	28.9	22.2	25.7	0.3	29.4	31+	18.9	4+	0	0	21.7	80	43	- 6	10	19	1	0	0	4.1	6	12.1	NE	17	1	13	17	7.4	64
IDAHO																																
BOISE	865	915.0	1012.3	34.4	16.1	25.2	1.2	40.0	27	8.9	20	23	0	7.2	34	T	- 5	T	0	1	0	0	1.2	30	18.8	NW	19	23	8	0	1.8	92
LEWISTON	431			33.3	16.1	24.7	1.4	40.6	28+	10.0	23+	20	0			10	- 1	8	2		0	0						20	8	3	2.9	
POCATELLO	1358	864.5	1014.1	32.8	11.1	22.0	-0.4	36.1	29+	2.8	1	20	0	4.4	34	3	- 10	2	3	5	0	0	1.4	24	25.5	W	16	18	12	1	3.0	86
ILLINOIS																																
CAIRO U	96			31.7	22.2	26.8	-0.4	35.6	27	15.6	4	17	0			78	- 3	34	10		0	0			13.0	NW	18	6	15	10	6.3	72
CHICAGO O HARE	201	994.6	1018.5	27.8	16.7	22.2	-0.4	33.3	21+	8.9	3	6	0	15.0	63	52	- 35	31	8	7	0	0	1.0	20	13.4	34	23+	9	15	7	5.3	
CHICAGO MIDWAY	185	996.3		28.9	18.3	23.5	-0.7	35.0	16	11.1	3	6	0	15.6	62	39	- 46	15	8	6	0	0	1.4	21	14.3	S	17	12	11	8	4.9	67
MOLINE	177	996.6	1017.8	28.9	16.7	22.8	-1.4	35.0	21	8.3	3	4	0	15.6	65	99	17	56	6	7	0	0	1.2	20	14.3	SW	7	9	15	7	5.4	76
PEORIA	199	994.6	1018.3	28.3	17.8	22.9	-1.6	32.2	13	10.0	3	1	0	17.2	72	110	20	47	10	8	0	0	1.0	19	13.4	SW	17	8	11	12	5.6	72
ROCKFORD	221	991.2	1018.0	27.2	16.1	21.6	-1.8	32.2	16+	8.9	11+	4	0	15.6	69	67	- 39	25	9	7	0	0	1.2	22	9.4	15	23+	10	12	9	5.4	
SPRINGFIELD	179	996.3	1018.1	30.0	18.3	24.3	-1.2	35.0	13	10.6	3	12	0	17.2	67	119	30	36	10	11	0	0	1.0	19	15.2	SW	14	12	7	12	5.2	69
INDIANA																																
EVANSVILLE	116	1005.4	1019.2	31.7	19.4	25.4	-0.6	34.4	18	10.0	4	19	0	18.9	70	142	58	38	9	8	0	0	0.8	23	12.1	NE	10	11	9	11	5.5	71
FORT WAYNE	241	989.5	1018.9	28.3	17.2	22.8	-0.7	33.3	17	8.9	4	5	0	16.1	69	65	- 21	22	12	11	0	0	1.2	23	12.1	W	31	6	15	10	6.2	81
INDIANAPOLIS	241	990.5	1019.1	29.4	18.3	24.1	0.1	33.3	17	8.9	4	11	0	17.8	70	56	- 33	20	7	6	0	0	0.8	23	13.9	SW	15	4	17	10	6.1	62
SOUTH BEND	236	990.9	1018.5	27.2	16.1	21.7	-1.4	32.2	16	9.4	3	1	0	14.4	65	52	- 36	25	9	10	0	0	1.4	24	9.4	35	23	6	15	10	6.0	
IOWA																																
BURLINGTON	211			28.9	17.8	23.4	-1.3	34.4	21	10.0	3	4	0	16.7	67	35	- 52		4	4	0		1.3	20	10.3	18	30	9	12	10	5.5	
DES MOINES	286	983.4	1017.7	28.9	17.8	23.4	-1.2	33.9	12	11.7	3	5	0	16.1	64	114	36	41	9	8	0	0	1.3	18	32.6	W	8	7	16	8	5.5	75
DUBUQUE	322	979.3		27.2	16.1	21.5	-1.1	31.7	13	7.8	3	0	0			77	- 12	46	11		0	0						8	14	9	5.6	
SIOUX CITY	334	977.3	1016.3	30.0	17.2	23.7	-1.6	35.6	11	8.3	3	10	0	16.7	67	43	- 36	15	10	9	0	0	1.3	17	18.8	SE	29	12	10	9	5.3	75

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No. of days: Max 32.2 °C or above	Temperature: No. of days: Min 0 C or lower	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No. of days: 25 mm or more	Precipitation: No. of days: With thunderstorms	Snow, Sleet: Total	Snow, Sleet: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile (1.6 kilometers): Speed	Wind: Fastest mile: Direction	Wind: Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	No. of days: Partly cloudy, 4-7	No. of days: Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	M.	Mb.	Mb.	C.	C.	C.	C.	C		C.				C.	%	Mm	Mm	Mm			Mm	Mm	M.p.s.		M.p.s.							%
IOWA																																
WATERLOO	265	986.1	1017.4	27.2	16.1	21.6	-1.7	33.3	13	9.4	3	2	0	16.1	72	320	224	236	10	8	0	0	1.3	20	19.7	13	16	9	15	7	5.7	
KANSAS																																
CONCORDIA	448	963.8	1015.7	32.2	18.9	25.6	-1.3	37.8	23	10.6	3	17	0	17.2	65	97	25	23	15	16	0	0	2.8	16	27.3	NW	17	14	8	9	4.7	69
DODGE CITY	787	926.5	1015.1	31.7	18.9	25.4	-1.3	38.9	23	13.3	2	17	0	16.1	60	104	45	61	7	10	0	0	3.0	15	18.8	NE	8	4	18	9	6.2	82
GOODLAND	1113	890.6	1014.6	31.7	16.7	24.0	-0.8	38.3	16	10.0	4	18	0	13.9	59	72	5	25	11	13	0	0	2.3	15	13.0	9	18+	11	14	6	5.0	
TOPEKA	267	985.8	1017.0	30.0	18.9	24.7	-1.9	33.9	12+	9.4	3	6	0	18.3	70	258	167	63	10	12	0	0	1.7	16	26.8	NW	23	10	8	13	5.7	70
WICHITA	403	969.2	1016.0	33.3	20.0	26.8	-0.3	38.9	23	13.9	3	23	0	17.2	60	93	0	46	10	8	0	0	3.6	16	15.2	SW	16	9	9	12	6.0	66
KENTUCKY																																
COVINGTON	265	988.5	1019.5	30.0	18.9	24.3	0.2	34.4	1	10.0	4	7	0	16.7	67	191	99	49	13	10	0	0	0.6	20	13.0	25	15	7	10	14	6.5	
LEXINGTON	294	984.8	1019.8	30.0	18.9	24.4	-0.8	33.9	1	10.0	4	5	0	17.2	70	115	14	21	13	15	0	0	0.7	19	8.9	21	14	8	10	13	5.9	
LOUISVILLE	145	1001.7	1018.8	31.1	20.0	25.4	0.1	34.4	1	10.6	4	13	0	18.3	68	78	- 7	22	16	12	0	0	0.6	21	15.2	NW	28+	6	12	13	6.3	61
LOUISIANA																																
ALEXANDRIA	28	1014.6	1018.7	33.3	21.1	27.1	-0.8	35.6	31	15.0	5	25	0	22.2	81	44	- 90	13	9	11	0	0	0.4	12	10.3	35	29	6	12	13	6.2	
BATON ROUGE	20	1015.9	1018.5	33.3	22.2	27.7	-0.5	34.4	30+	18.3	5	27	0	22.2	79	89	- 70	38	13	15	0	0	0.8	13	14.3	16	18	5	17	9	5.0	
LAKE CHARLES	3	1016.9	1018.0	32.2	22.8	27.5	-0.4	33.3	29+	18.3	6	18	0	22.9	82	199	13	71	11	12	0	0	0.7	14	13.0	17	2	6	14	11	6.3	
NEW ORLEANS	1	1017.6	1018.6	32.8	23.3	28.0	0.4	35.6	29+	20.6	6	23	0	22.2	74	126	- 45	30	15	12	0	0	0.4	12	8.5	6	8	7	15	9	5.8	
SHREVEPORT	77	1008.8	1018.1	32.2	22.2	27.2	-1.5	35.6	18	16.7	5	22	0	21.1	73	119	24	54	8	9	0	0	1.0	16	12.5	13	18+	7	12	12	6.4	63
MAINE																																
CARIBOU	190	992.6		26.1	12.2	19.1	1.0	33.9	16+	5.6	11	3	0			108	5	38	9		0	0						3	19	9	6.2	
PORTLAND	14	1014.9	1017.4	27.2	15.0	21.1	1.1	35.6	16	9.4	31	2	0	15.6	73	17	- 56	9	5	2	0	0	1.3	21	9.8	S	19	10	15	6	5.3	71
MARYLAND																																
BALTIMORE	45	1013.9	1019.3	31.1	20.0	25.7	0.8	36.7	1	15.0	5	12	0	18.3	67	70	- 37	52	6	6	0	0	0.5	22	18.8	NW	19	11	13	7	5.0	66
MASSACHUSETTS																																
BLUE HILL OBS P	192			28.3	16.7	22.5	0.9	34.4	16	11.7	30	4	0			18	- 65	9	6		0	0			13.4	WNW	28+					70
BOSTON	5	1017.3	1018.2	28.9	19.4	24.0	0.8	36.7	16	14.4	12	6	0	16.1	64	14	- 59	8	4	3	0	0	2.4	24	10.7	NW	29+	11	13	7	5.1	73
NANTUCKET	13	1018.6	1018.9	24.4	15.0	19.9	-0.1	32.2	1	10.0	6	1	0	17.2	88	4	- 65	4	2	2	0	0	2.0	23	10.3	NE	11+	8	6	17	6.4	59
PITTSFIELD	357			26.7	13.9	20.3	0.4	32.8	17	7.8	30	2	0			40	- 84	17	4		0	0										
WORCESTER	301	982.7	1019.3	27.2	16.7	21.8	0.8	33.3	1	10.6	30	3	0	13.9	63	27	- 65	13	6	4	0	0	2.4	26	10.3	31	25	10	14	7	5.1	
MICHIGAN																																
ALPENA	210	992.2	1017.4	26.1	11.7	18.9	0.1	35.0	15	2.8	11	4	0	12.8	68	60	- 12	26	9	7	0	0	1.5	25	9.8	SE	15	8	13	10	5.9	68
DETROIT	189			28.3	17.8	23.2	-0.4	34.4	22	11.1	3	5	0	15.0	61	126	54	43	7	5	0	0	1.2	24	9.8	27	1					
DETROIT M WAYNE CO	193	994.6	1018.3	27.8	16.1	22.1	-0.4	33.3	17	10.6	29+	4	0	15.0	67	131	62	70	8	8	0	0	1.5	24	22.4	SW	5	11	14	6	5.1	78
DETROIT WILLOW RUN	217	990.9	1018.7	27.2	15.0	21.2	-2.3	32.2	18+	8.9	4	2	0	13.9	65	92	24	55	7	8	0	0	1.7	24	11.6	22	18	12	12	7	5.1	
FLINT	235	990.5	1018.1	26.1	14.4	20.3	-1.4	31.7	17+	7.2	3	0	0	15.0	73	69	- 5	31	9	8	0	0	2.1	22	9.8	21	18	13	12	6	4.8	
GRAND RAPIDS	239	989.5	1018.3	27.8	14.4	21.0	-1.4	33.3	17	6.1	3	5	0	14.4	65	70	0	36	8	5	0	0	1.8	23	13.0	SW	31	9	14	8	5.3	72
HOUGHTON LAKE	350	977.0	1018.5	25.6	12.2	18.7	-0.7	32.2	17	3.9	3	1	0	13.3	71	47	- 26	15	7	6	0	0	1.9	25	10.3	27	2	7	16	8	5.5	
LANSING	256	987.1	1018.5	27.8	15.0	21.2	-0.8	34.4	17	7.2	3	4	0	14.4	66	77	11	33	6	8	0	0	2.0	24	11.6	SW	31	10	17	4	4.8	77
MARQUETTE U	206			24.4	13.9	18.9	-0.3	35.0	15	5.0	10	2	0			46	- 35	15	14		0	0			17.9	SW	1	6	12	13	6.5	66
MUSKEGON	191	995.3	1018.0	26.1	15.0	20.5	-1.3	33.3	17	6.7	3	2	0	15.0	70	77	16	44	9	5	0	0	2.1	23	10.3	20	17	16	9	6	4.2	
SAULT STE MARIE	220	990.2	1016.6	23.3	10.0	16.6	-1.5	31.7	17+	3.3	10+	0	0	12.8	78	77	14	27	12	6	0	0	1.7	26	15.2	NW	28	9	7	15	6.3	62
MINNESOTA																																
DULUTH	435	965.1	1016.2	23.9	11.7	17.9	-0.7	30.0	15	5.0	10+	0	0	11.7	70	91	2	51	11	11	0	0	1.7	24	18.8	SW	1	2	14	15	7.2	60
INTERNATIONAL FALLS	359	972.2	1015.0	25.0	12.2	18.5	-0.2	31.1	7+	4.4	2	0	0	12.8	71	126	38	59	13	14	0	0	1.6	25	13.9	23	13	2	12	17	7.3	
MINNEAPOLIS	254	986.5	1016.3	27.2	16.1	21.7	-0.7	32.2	15+	10.0	3	4	0	16.1	70	164	81	50	8	9	0	0	1.5	23	16.1	SW	13	11	12	8	5.2	75
ROCHESTER	395	970.2	1017.4	25.6	13.9	19.8	-2.6	30.0	21	8.3	3	0	0	14.4	73	129	35	48	11	10	0	0	1.9	22	13.0	27	1	8	14	9	5.4	
ST CLOUD	315	978.3	1015.8	26.7	15.0	20.8	-0.9	32.8	15+	8.3	3+	3	0		70	50	- 33	20	9		0	0						9	12	10	5.7	
MISSISSIPPI																																
JACKSON	94	1007.1	1018.8	33.3	21.1	27.1	-0.9	35.0	28+	15.6	5	25	0	21.7	76	57	- 64	24	7	11	0	0	0.6	16	11.6	SW	12	8	13	10	5.8	62
MERIDIAN	88	1008.5	1019.4	33.3	20.6	27.0	-0.5	38.3	27	16.7	5	22	0	21.1	78	77	- 81	23	9	13	0	0	0.1	21	10.3	15	18	2	14	15	6.9	
MISSOURI																																
COLUMBIA	237	989.8	1017.8	30.0	19.4	24.8	-1.2	34.4	21	12.8	3	6	0	18.3	69	81	- 6	20	12	8	0	0	1.3	18	12.5	W	17	11	4	16	6.3	71
KANSAS CITY	226	990.9	1017.2	31.7	21.1	26.3	-1.2	36.1	12	12.8	3	15	0		63	130	49	34	10	6	0	0	1.8	17	14.8	SE	16	11	6	14	5.8	67
ST JOSEPH	247			30.6	19.3	24.4	-1.9	35.0	12	7.8	3	9	0	18.3	72	193	111		7	9	0		1.6	18	9.8	18	17	11	10	10	4.9	

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Date	Temperature: Lowest	Date	No. of days: Max 32.2 °C or above	No. of days: Min. 0 C or lower	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	No. of days: .25 mm or more	No. of days: With thunderstorms	Snow, Sleet: Total	Snow, Sleet: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Fastest mile (1.6 kilometers): Speed	Fastest mile: Direction	Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
MISSOURI	M.	Mb.	Mb.	C.	C.	C.	C.	C.		C.				C.	%	Mm.	Mm.	Mm.			Mm.	Mm.	M.p.s.		M.p.s.							%
ST LOUIS	163	998.3	1018.5	31.1	20.0	25.3	-0.3	35.0	13	11.7	4	12	0	17.8	64	100	16	22	10	11	0	0	0.8	19	14.8	SW	15	8	8	15	6.4	73
SPRINGFIELD	386	973.9	1018.5	31.1	18.3	24.6	-1.4	35.6	27	10.0	4	11	0	18.3	72	91	-7	40	6	10	0	0	1.9	17	17.9	NW	27	9	12	10	5.7	62
MONTANA																																
BILLINGS	1087	893.3	1015.0	29.4	15.0	22.3	-1.4	37.2	29	8.3	31	11	0	9.4	48	6	-17	3	6	7	0	0	0.8	3	15.6	NE	25	17	11	3	3.4	85
GLASGOW	696	934.6	1015.2	28.9	12.2	20.6	-0.9	37.8	12	6.7	31+	9	0	8.3	50	21	-13	9	8	9	0	0	0.7	3	18.3	33	29	16	12	3	3.8	
GREAT FALLS	1116	891.0	1015.6	28.9	11.1	19.9	-0.9	36.1	29	5.6	31	8	0	6.7	45	2	-31	1	4	2	0	0	0.7	23	21.0	NW	29	17	10	4	3.6	85
HAVRE	788	924.8	1015.4	30.0	11.1	20.3	-0.8	36.7	29+	5.6	31+	11	0	6.1	44	12	-20	9	4	4	0	0	1.0	29	22.4	SW	20	12	14	5	4.5	88
HELENA	1167	883.2	1016.2	29.4	11.1	20.1	-0.1	35.0	29+	5.0	1	7	0	7.2	47	7	-20	4	3	3	0	0	1.3	31	15.2	NW	19	20	7	4	3.2	81
KALISPELL	904	913.0	1016.2	28.9	8.9	18.6	-0.1	35.6	9+	1.7	16	12	0	7.8	55	12	-15	9	5	5	0	0	0.7	36	11.6	2	29	15	11	5	3.6	
MILES CITY	801	923.8	1014.9	31.7	15.0	23.1	-0.9	39.4	12	7.8	1	16	0	10.0	48	24	-10		8	9	0		0.3	5								
MISSOULA	972	906.2	1016.1	31.1	10.6	21.0	1.6	38.3	28	5.6	21	15	0	4.4	37	5	-16	4	7	4	0	0	1.3	33	16.5	NW	19	18	11	2	3.0	87
NEBRASKA																																
GRAND ISLAND	561	951.6	1016.2	30.6	17.8	24.0	-1.1	36.1	16+	10.0	3	12	0	16.7	68	122	59	64	8	10	0	0	1.9	16	23.2	32	16	14	8	9	4.8	
LINCOLN U	351			31.1	20.0	25.4	-1.3	36.7	21+	11.1	3	13	0			94	11	42	9		0	0			17.9	S	30	14	6	11	5.1	74
NORFOLK	471			30.0	17.2	23.8	-1.2	35.0	20+	9.4	3+	10	0			61	-15	30	8		0	0						12	12	7	4.8	
NORTH PLATTE	846	919.4	1015.5	30.0	15.0	22.6	-1.9	36.1	14	6.7	1	11	0	13.9	62	46	-18	18	7	9	0	0	2.3	13	15.6	NE	27	9	16	6	5.0	73
OMAHA	298	981.7	1016.4	30.6	18.3	24.7	-1.2	36.7	21	10.0	3	11	0	17.2	67	66	-19	32	8	8	0	0	1.5	17	17.0	N	30	6	16	9	5.7	77
SCOTTSBLUFF	1206	882.2	1015.0	31.1	15.0	23.0	-0.7	38.3	20	6.1	1	13	0	11.1	55	30	-7	16	7	9	0	0	1.2	12	15.6	25	17	10	15	6	4.5	
VALENTINE	789			30.0	15.0	22.5	-1.6	38.9	14	6.1	2	8	0			43	-16	23	5		0	0			19.2	S	20	14	14	3	4.2	82
NEVADA																																
ELKO	1539	845.9	1012.6	35.6	12.8	24.1	3.2	38.3	19	2.8	1	30	0	4.4	31	1	-9	1	1	6	0	0	0.5	25	14.3	19	3	20	7	4	3.2	
ELY	1906	812.4	1013.1	30.6	10.0	20.2	0.5	33.9	21	-1.1	1	6	1	2.9	41	34	17	10	11	15	0	0	2.3	20	14.3	S	7	12	16	3	4.2	80
LAS VEGAS	659	936.3	1010.6	39.4	23.9	31.7	-0.4	43.3	20+	16.7	1	31	0	9.4	29	3	-10	2	3	7	0	0	1.8	20	17.9	NE	25	17	9	5	3.4	85
RENO	1342	866.9	1013.3	35.0	10.6	22.8	2.9	37.8	28+	5.6	21+	28	0	5.0	34	1	-6	1	1	0	0	0	1.4	28	18.8	NW	2	21	4	6	2.8	85
WINNEMUCCA	1310	868.3	1012.3	35.0	12.2	23.5	1.8	39.4	28	1.1	1	28	0	-0.6	22	T	-7	T	0	5	0	0	1.0	25	13.0	SW	7	18	7	6	3.5	83
NEW HAMPSHIRE																																
CONCORD	104	1005.4	1017.9	28.3	13.3	20.7	-0.2	35.0	16	6.1	30	4	0	14.4	70	41	-45	26	9	7	0	0	1.1	25	11.2	NW	6	10	12	9	5.2	66
MT WASHINGTON OBS	1909			12.8	6.1	9.5	0.0	19.4	18	-1.1	30	0	1			157	-13	73	16	5	0	0			30.4Y	W	29	0	10	21	8.2	32
NEW JERSEY																																
ATLANTIC CITY	20	1016.6	1019.1	29.4	17.8	23.4	-0.5	37.2	1	11.7	30	7	0	18.3	75	44	-50	19	7	6	0	0	1.2	19	14.3	16	23	7	14	10	5.9	50
ATLANTIC CITY U	3			28.3	21.1	24.7	1.3	36.7	1	16.1	6	4	0			32	-66	16	8		0				17.0	NNW	6+					
NEWARK	2	1018.0	1018.8	30.6	20.6	25.7	1.1	36.7	16+	15.6	29	9	0	17.2	63	47	-46	29	3	4	0	0	1.8	21	10.3	20	24+	8	15	8	5.3	
TRENTON U	17			30.0	20.0	24.8	0.4	36.1	17+	14.4	7	9	0			60	-46	38	5		0	0			10.7	NW	24+	8	10	13	6.0	61
NEW MEXICO																																
ALBUQUERQUE	1619	841.5	1014.0	31.7	17.2	24.5	-1.3	36.1	21+	15.0	17+	18	0	10.0	48	85	54	24	9	10	0	0	1.3	11	24.1	E	2	12	12	7	4.8	72
CLAYTON	1515			29.4	15.0	22.3	-1.3	35.6	16	11.1	31	10	0			65	6	16	11		0	0						8	11	12	6.0	
RATON	1944			27.2	11.7	19.5	-1.5	32.2	16	8.3	8+	1	0			133	72	52	15		0	0						3	17	11	6.5	
ROSWELL	1102	893.7		31.7	16.7	24.2	-1.7	37.2	1	13.9	29+	21	0	15.6	63	140	95	69	13	8	0	0	1.5	14	15.2	NW	13	15	9	7	4.9	72
SILVER CITY	1638			30.6	16.7	23.5	-1.6	36.1	17	14.4	30+	11	0			91	38	35	14		0	0						6	18	7	5.8	
NEW YORK																																
ALBANY	84	1007.8	1018.3	30.0	15.6	22.6	0.3	35.6	17+	6.7	30	10	0	15.0	63	12	-76	9	4	5	0	0	1.7	22	11.2	W	28	3	18	10	6.2	67
BINGHAMTON	485	961.7	1019.7	25.6	16.1	20.8	0.6	31.7	18	9.4	5	0	0	15.6	74	42	-52	29	5	4	0	0	1.7	25	13.0	W	1	2	22	7	6.1	73
BUFFALO	215	993.2	1018.6	27.2	16.1	21.8	0.8	34.4	18	8.3	30	2	0	14.4	65	30	-35	18	4	3	0	0	3.1	23	14.3	SW	1	10	14	7	5.3	74
J.F. KENNEDY	4	1018.3	1019.1	29.4	21.1	25.0	0.6	36.7	16	15.0	30	6	0	17.8	67	66	-37	46	4	2	0	0	2.5	21	11.6	19	22	10	10	11	5.5	
NEW YORK U	40	1015.2	1018.4	30.0	20.6	25.2	0.3	36.7	17	15.6	30	6	0	16.1	60	67	-27	51	3	2	0	0	1.5	24	12.5	SW	24					60
NEW YORK LA GUARDIA	3	1016.9	1018.8	29.4	21.1	25.1	0.2	35.6	1	16.7	30+	6	0	15.6	59	61	-34	45	3	4	0	0	1.5	23	12.5	S	22+	10	11	10	5.6	
ROCHESTER	167	998.6	1018.7	27.8	15.0	21.5	-0.5	33.3	18+	7.2	30	6	0	15.6	70	36	-36	12	5	3	0	0	2.1	25	11.6	SW	1	8	16	7	5.4	76
SYRACUSE	125	1003.7	1018.3	26.7	15.0	21.1	-1.3	32.8	1	7.8	4	2	0	15.0	69	96	17	45	10	8	0	0	1.6	24	13.4	NW	5	9	16	6	5.2	67
NORTH CAROLINA																																
ASHEVILLE	652	945.5	1020.5	28.3	17.2	22.8	0.4	33.3	1	13.9	24+	1	0	18.9	85	182	34	66	13	9	0	0	0.4	1	13.0	28	2	2	13	16	7.1	56
CAPE HATTERAS R	2	1019.6	1019.8	29.4	22.8	25.9	0.3	32.2	28+	16.7	22	2	0	22.2	81	194	38	90	15	11	0	0	1.5	21	12.5	S	9	10	9	12	5.7	74
CHARLOTTE	224	992.6	1019.5	30.0	20.0	25.0	-1.2	35.6	2	17.2	4	9	0	20.6	79	130	6	41	11	8	0	0	0.3	20	11.2	S	16	11	5	15	5.9	71
GREENSBORO	273	988.8	1019.9	30.6	19.4	25.0	-0.2	36.1	1	15.6	9	12	0	20.0	78	66	-56	19	11	8	0	0	0.0	13	10.7	W	25	9	6	16	6.2	56
RALEIGH	132	1003.7	1019.3	30.0	20.0	24.9	-0.6	35.6	1	16.7	21+	11	0	20.6	82	131	-9	50	10	7	0	0	0.4	19	10.3	29	25	11	8	12	5.7	61
WILMINGTON	9	1018.3	1019.8	32.2	21.7	26.9	0.3	37.2	28	18.3	8	16	0	21.7	79	236	41	69	19	11	0	0	0.9	22	10.3	SW	19	9	10	12	6.0	60

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No. of days: Max 32.2 °C or above	Temperature: No. of days: Min 0 C or lower	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No. of days: 25 mm or more	Precipitation: No. of days: With thunderstorms	Snow, Sleet: Total	Snow, Sleet: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile (1.6 kilometers): Speed	Wind: Fastest mile: Direction	Wind: Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	No. of days: Partly cloudy, 4-7	No. of days: Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	M.	Mb.	Mb.	C	C.	C.	C	C		C.				C.	%	Mm	Mm.	Mm.			Mm	Mm.	M.p.s.		M.p.s							%
NORTH DAKOTA																																
BISMARCK	502	956.7	1015.6	27.8	12.2	19.8	-2.3	35.0	20	7.2	22+	4	0	13.3	68	5	-51	3	2	6	0	0	0.4	31	19.2	N	26	14	9	8	4.7	86
FARGO	273	983.1	1015.3	27.8	13.9	20.9	-1.0	35.0	13	5.6	9	7	0	15.0	71	38	-36	18	9	6	0	0	0.6	23	17.4	W	1	8	18	5	5.0	80
WILLISTON	579	947.5	1015.0	29.4	12.2	20.8	-1.1	38.9	10	3.3	2	10	0	10.0	56	16	-31	10	7	9	0	0	0.8	28	18.8	NW	12	13	12	6	4.4	81
OHIO																																
AKRON	368	975.6	1019.6	28.3	16.7	22.7	0.2	33.3	18	8.3	4	4	0	16.7	71	105	9	44	10	8	0	0	1.1	24	13.0	34	1	8	13	10	5.7	
CINCINNATI OBS	232			30.0	18.9	24.5	-0.4	33.9	1	10.0	4	10	0			213	121	40	15		0	0			12.1	W	18					59
CLEVELAND	237	990.9	1019.7	26.7	15.6	21.1	-1.1	33.3	18	5.0	4	2	0	15.0	70	91	7	45	12	8	0	0	1.3	23	15.6	SW	22	9	11	11	5.7	56
COLUMBUS	247	990.2	1019.7	29.4	17.8	23.4	-0.4	35.0	18	8.3	4	7	0	16.1	66	71	-29	16	12	13	0	0	0.5	19	12.1	SW	24+	5	13	13	6.2	
DAYTON	305	983.7	1019.5	28.9	17.8	23.3	-0.7	32.8	18+	9.4	4	3	0	16.1	68	92	2	35	10	10	0		0.9	21	17.0	W	22	8	9	14	6.2	69
MANSFIELD	395			28.3	16.1	22.4	0.3	32.8	18	8.3	4	2	0	16.1	71	80	-9	46	11	10	0	0	1.3	24	10.3	23	18	6	16	9	5.7	
TOLEDO	204	994.6	1019.4	28.3	16.1	22.2	-0.4	33.3	18+	7.2	4	4	0	16.7	73	114	49	40	11	11	0	0	1.1	24	12.5	W	31	6	17	8	5.8	67
YOUNGSTOWN	359	977.7	1019.8	27.2	15.0	21.2	-0.2	32.2	18	5.6	4	1	0	15.6	71	52	-57	21	9	7	0	0	1.1	25	10.3	31	16	9	13	9	5.6	
OKLAHOMA																																
OKLAHOMA CITY	392	971.2	1016.8	32.2	20.6	26.6	-1.5	36.7	27	15.0	4	21	0	18.9	68	36	-24	13	5	4	0	0	3.0	17	15.6	E	1	8	12	11	5.9	76
TULSA	198	993.6	1017.3	32.8	21.1	27.0	-0.9	38.3	27	14.4	4+	20	0	19.4	68	35	-40	15	4	4	0	0	2.8	17	13.4	NE	1	8	11	12	5.9	71
OREGON																																
ASTORIA	2	1018.0	1018.8	20.6	11.7	16.1	0.2	29.4	1	7.2	13	0	0	11.7	79	31	-1	13	7	0	0	0	2.5	27	10.3	32	5	5	12	14	6.6	
BURNS U	1265	874.4	1014.2	32.2	12.8	22.4	1.6	38.3	28	4.4	17	18	0	1.7	28	T	-9	T	0		0	0	1.5	31				21	9	1	2.7	
EUGENE	109	1003.7	1017.1	29.4	11.7	20.4	1.2	37.2	31	7.8	16+	10	0	11.7	63	1	-6	1	1	0	0	0	1.2	30	9.8	35	20	16	9	6	3.6	
MEACHAM	1234	879.1	1014.8	26.7	12.2	19.3	1.8	34.4	5	5.0	16	6	0			9	-4	7	2		0	0	1.3	31	8.9	29	11	23	6	2	2.1	
MEDFORD	396	968.5	1015.2	33.9	13.3	23.4	1.2	39.4	27	7.8	16	21	0	10.0	47	T	-5	T	0	0	0	0	2.1	31	8.9	30	19	26	2	3	1.6	
PENDLETON	452	962.1	1014.8	33.9	16.1	25.1	2.0	42.2	6	9.4	16	20	0	5.6	32	4	-1	2	2	2	0	0	1.6	29	20.6	28	19	21	9	1	2.3	
PORTLAND	6	1015.9	1017.0	27.2	13.3	20.3	0.8	37.2	31	8.9	13	5	0	11.1	61	4	-7	3	2	0	0	0	2.1	33	8.9	NW	28+	13	10	8	4.5	67
SALEM	60	1009.8	1017.2	28.3	9.4	18.9	0.0	37.2	31	5.6	23+	8	0	11.7	65	10	1	6	3	0	0	0	1.1	33	8.9	4	20	17	8	6	3.8	
SEXTON SUMMIT R	1169	886.2	1015.3	25.6	11.7	18.6	1.1	32.2	3	6.7	17+	1	0			2	-7	2	1		0	0			13.4	34	4	25	4	2	1.4	
PACIFIC AREA																																
JOHNSTON	2	1013.2	1013.8	30.0	25.6	27.8	0.5	30.6	30+	23.9	3+	0	0	22.2	73	18	-15	8	14	0	0	0	6.9	8	14.3	E	26	4	14	13	6.7	53
KOROR R	29	1006.1	1009.8	31.7	24.4	27.8	0.6	33.9	3	22.2	21	13	0	24.4	84	417	32	70	27	3	0	0	0.8	21	13.0	NW	22	0	4	27	9.1	60
KWAJALEIN	2	1009.1	1009.8	30.0	24.4	27.3	-0.3	31.7	30	22.8	25+	0	0	24.4	84	305	79	49	22	1	0	0	3.6	8	14.3	13	4	0	0	31	9.9	
MAJURO	3	1009.8	1010.1	30.0	24.4	27.2	0.4	31.1	31	22.8	20+	0	0	23.9	80	289	-29	49	25	1	0	0	3.0	8	15.2	E	6	0	7	24	8.5	56
PAGO PAGO	4	1012.2	1012.5	28.9	22.8	25.8		31.1	15	20.0	17+	0	0	22.8	83	90		39	19	0	0	0	4.8	11	13.0	SE	21+	8	16	7	5.6	67
PONAPE R	37	1004.1	1009.6	30.6	22.2	26.4	-0.1	32.8	27	21.1	19+	3	0	23.9	89	567	155	104	29	5	0	0	1.2	13	7.6	SW	18	0	6	25	8.8	42
TAGUAC GUAM R	110			30.0	22.8	26.3	-0.1	31.7	25	20.6	17	0	0			314	86	68	28		0	0			9.8	W	21	0	10	21	8.4	46
TRUK MOEN ISLAND	2	1009.1	1009.4	30.6	23.3	26.8	-0.2	31.7	29+	21.1	7	0	0	23.9	85	400	87	83	25	1	0	0	1.0	11	11.2	N	30	0	5	26	9.0	64
WAKE	3	1012.9	1013.3	31.1	25.0	28.2	0.4	31.7	31+	23.3	16	0	0	23.3	77	88	-28	13	22	0	0	0	5.5	10	11.6	E	17+	5	8	18	7.5	83
YAP R	13	1007.1	1009.1	30.6	23.3	27.0	-0.4	31.7	20+	21.7	10+	0	0	23.9	84	362	12	68	26	2	0	0	1.0	24	11.2	SW	23	0	3	28	9.5	59
PENNSYLVANIA																																
ALLENTOWN	118	1005.4	1019.1	30.0	17.2	23.6	0.2	35.6	18	9.4	7	6	0	16.1	65	41	-82	22	5	3	0	0	1.2	23	11.2	23	19	12	10	9	5.3	
ERIE	223	992.9	1019.3	26.1	16.1	21.2	-0.6	34.4	18	8.3	4	1	0	15.0	68	59	-34	28	6	5	0	0	1.6	24	11.6	27	1	8	15	8	5.3	
HARRISBURG	103	1006.4	1019.0	31.1	19.4	25.2	0.6	36.1	1	12.2	5	12	0	17.8	67	49	-40	28	6	6	0	0	0.8	23	14.8	N	19	11	9	11	5.4	83
PHILADELPHIA	2	1018.0	1018.8	30.0	20.0	25.1	0.8	35.6	1	12.8	7	8	0	18.9	71	51	-55	28	5	4	0	0	1.0	21	9.8	N	24	11	8	12	5.8	65
PITTSBURGH	347	976.0	1019.6	29.4	15.6	22.4	0.2	33.9	22	7.8	4	4	0	14.4	64	60	-39	43	7	7	0	0	1.4	26	13.0	28	24	4	18	9	6.0	71
READING U	81			30.6	20.0	25.3	0.3	36.1	1	13.3	5	9	0			38	-70	12	7		0	0			14.8	SW	19	8	14	9	5.2	67
SCRANTON	283	985.8	1019.7	28.9	17.2	23.2	0.7	34.4	18	10.0	7+	6	0	16.1	68	31	-90	15	5	4	0	0	1.1	22	11.2	W	19	9	13	9	5.3	72
WILLIAMSPORT	160	1000.3	1019.2	29.4	15.6	22.4	-0.7	34.4	17	8.3	7	6	0	17.2	74	35	-71	24	5	6	0	0	1.1	24	9.8	16	31	6	18	7	5.3	
RHODE ISLAND																																
BLOCK ISLAND	34			25.0	17.8	21.2	0.3	31.1	17	11.1	30	0	0			20	-49	10	5		0	0						8	11	12	6.1	
PROVIDENCE	16	1015.9	1018.4	28.3	17.2	22.8	0.6	35.0	16	11.7	30	5	0	16.1	68	38	-36	10	8	2	0	0	2.0	24	10.3	23	22	10	11	10	5.5	62
SOUTH CAROLINA																																
CHARLESTON	12	1018.0	1019.5	32.2	22.8	27.5	0.5	36.1	28+	19.4	23	19	0	21.1	72	197	2	44	14	11	0	0	1.3	21	19.2Y	NW	4	8	13	10	5.5	62
CHARLESTON U	3			31.1	24.4	27.8	0.3	36.7	28	21.7	6+	12	0			132	-66	24	13		0	0			15.6	E	8					
COLUMBIA	65	1011.5	1019.4	32.8	21.1	26.9	-0.6	37.2	28	17.2	7	21	0	21.7	78	236	81	61	10	12	0	0	0.2	16	10.3	27	18	7	14	10	6.0	62
GNVLE-SPARTANBURG	292	985.8	1019.7	30.0	20.0	25.0	-1.1	35.0	2+	16.7	7	10	0	19.4	77	176	58	61	12	12	0	0	0.3	2	9.8	N	11	4	10	17	7.0	59
SOUTH DAKOTA																																
ABERDEEN	395	969.2	1015.5	27.8	14.4	21.1	-2.0	36.1	15	7.2	3	8	0	13.3	63	56	-8	23	8	10	0	0	0.4	17	15.6	36	16	12	12	7	4.9	

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Date	Temperature: Lowest	Date	No. of days: Max 32.2 °C or above	No. of days: Min. 0 C or lower	Average dew point	Average relative humidity
	M.	Mb.	Mb.	C.	C.	C.	C.	C.		C.				C.	%
SOUTH DAKOTA															
HURON	391	969.5	1015.3	28.3	15.6	21.9	-2.0	37.2	20	8.3	22	5	0	15.6	71
RAPID CITY	964	906.9	1015.7	27.8	13.3	20.7	-2.6	32.8	20+	5.0	2	3	0	12.2	62
SIOUX FALLS	432	965.5	1016.0	28.9	15.6	22.1	-1.4	37.2	14	6.7	3	6	0	15.0	66
TENNESSEE															
BRISTOL	459	967.2	1020.5	31.1	17.8	24.3	-0.1	34.4	21+	12.8	5	11	0	17.8	74
CHATTANOOGA	203	994.9	1019.1	32.2	20.6	26.3	-0.8	36.1	27+	15.6	5	20	0	19.4	71
KNOXVILLE	299	984.8	1019.0	30.6	19.4	25.1	-0.7	33.9	18+	16.1	5	11	0	18.9	74
MEMPHIS	79	1008.8	1018.7	32.2	22.2	27.1	-0.3	35.0	27	15.0	4	15	0	20.0	67
NASHVILLE	180	997.6	1019.0	31.1	19.4	25.4	-1.3	35.6	1	12.2	5	16	0	20.0	75
OAK RIDGE R	276			31.1	19.4	25.2	0.1	34.4	18+	13.9	4	11	0		
TEXAS															
ABILENE	537	955.6	1015.9	32.2	21.7	27.1	-1.4	35.0	30+	17.8	7+	20	0	18.3	63
AMARILLO	1098	894.0	1014.2	31.7	18.3	25.0	-2.0	36.7	30	15.6	7+	17	0	15.0	59
AUSTIN	182	995.6	1017.2	33.3	22.8	27.9	-1.3	35.6	31	17.8	6	25	0	20.0	68
BROWNSVILLE	6	1015.6	1016.2	33.3	24.4	28.7	-0.2	34.4	31+	22.8	27+	28	0	23.3	76
CORPUS CHRISTI	12	1015.2	1016.8	31.7	23.9	27.8	-1.2	33.9	31+	22.8	29+	13	0	23.3	81
DALLAS	147	1000.3	1017.3	32.8	23.3	28.0	-1.4	36.1	31	19.4	5+	19	0	19.4	63
DEL RIO	313	979.7	1015.1	34.4	22.8	28.6	-1.5	37.8	22	20.0	6	28	0	20.0	64
EL PASO	1194	983.2	1012.3	32.2	20.0	26.2	-1.6	37.8	1	17.8	30+	19	0	13.9	52
FORT WORTH	164	997.3	1017.3	32.8	21.7	27.2	-2.4	36.1	28	16.7	5	21	0	21.1	72
GALVESTON U	2			30.6	25.6	27.9	-0.4	32.8	7	21.7	5+	1	0		
HOUSTON	15	1015.6	1017.8	32.2	23.9	28.1	-0.3	33.9	28+	20.6	6	23	0	22.2	76
LUBBOCK	992	906.2	1015.4	30.6	17.2	24.1	-2.3	35.6	30	14.4	10	15	0	15.6	65
MIDLAND	869	918.4	1014.8	32.2	19.4	25.8	-2.4	37.2	17	17.2	7+	21	0	15.0	56
PORT ARTHUR	5	1017.6	1018.3	32.2	22.2	27.4	-0.3	34.4	28	17.2	5	21	0	22.2	78
SAN ANGELO	580	949.9	1015.1	35.0	21.1	28.1	-1.3	38.9	17	14.4	6	27	0	18.3	62
SAN ANTONIO	240	989.5	1017.0	33.9	22.8	28.2	-0.7	36.1	31+	18.3	6	28	0	20.0	67
VICTORIA	32	1013.2	1017.2	32.8	23.9	28.2	-0.3	35.0	29	21.7	6+	23	0	22.8	79
WACO	153	999.3	1017.2	33.3	23.3	28.3	-1.3	36.7	31+	16.7	6+	23	0	20.0	65
WICHITA FALLS	303	980.4	1016.0	35.6	21.1	28.2	-1.6	40.0	28	16.7	9+	26	0	19.4	64
UTAH															
MILFORD	1533	848.3		32.8	13.9	23.5	0.3	37.2	19	4.4	1	24	0		
SALT LAKE CITY	1286	872.3	1012.7	35.0	16.7	25.7	0.8	38.9	1[illegible]	4.4	1	30	0	7.2	34
WENDOVER	1291	871.7	1013.4	33.3	19.4	26.5	0.2	38.3	19	11.7	1	26	0		
VERMONT															
BURLINGTON	101	1004.7	1017.1	26.7	14.4	20.4	-0.2	33.3	16	7.2	30	4	0	15.0	72
VIRGINIA															
LYNCHBURG	279			30.0	18.9	24.4	-0.2	36.1	1	15.0	6	12	0		
NORFOLK	7	1018.3	1019.4	29.4	21.7	25.6	-0.4	36.1	2	17.8	7	5	0	21.1	80
RICHMOND	50	1013.5	1019.4	31.1	20.6	26.1	0.4	37.2	2	16.1	5	14	0	20.0	74
ROANOKE	350	978.3	1019.7	30.0	18.3	24.2	-0.6	36.1	1	13.3	21	9	0	17.2	69
WALLOPS ISLAND	3			28.3	21.7	24.9		35.6	1	16.7	7	4	0		
WASHINGTON															
OLYMPIA	59	1010.5	1017.6	26.7	10.0	18.2	0.5	35.0	31	5.6	16+	4	0	12.2	71
QUILLAYUTE	55	1011.2	1018.5	21.7	10.0	15.9	0.5	31.1	30	6.1	13	0	0	11.7	91
SEATTLE TACOMA	122	1001.4	1017.7	25.6	13.3	19.4	1.2	33.3	2	10.0	16+	2	0	11.7	64
SPOKANE	718	932.3	1014.3	30.6	13.3	21.7	0.3	38.3	6	7.8	16+	12	0	5.0	37
STAMPEDE PASS R	1206	882.5		20.6	10.0	15.2	1.8	29.4	3	4.4	16+	0	0		
WALLA WALLA U	289			33.3	17.8	25.4	0.9	41.1	6	12.2	21+	18	0		
YAKIMA	321	976.3	1014.2	31.1	12.2	21.6	-0.1	38.3	6	5.0	13	12	0	7.8	42
WEST INDIES															
SAN JUAN P.R.	4	1016.3	1018.8	30.6	23.9	27.3	0.4	32.8	30	22.8	23+	3	0	24.4	85
SWAN ISLAND	9			30.6	25.6	28.1	0.0	31.7	29+	22.2	14	0	0		
WEST VIRGINIA															
BECKLEY	763	933.6	1020.1	26.7	15.0	20.9	-0.7	30.6	1	7.8	5	0	0	16.1	77

State and Station	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	No. of days: 25 mm or more	No. of days: With thunderstorms	Snow, Sleet: Total	Snow, Sleet: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Fastest mile (1.6 kilometers): Speed	Fastest mile: Direction	Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	Mm.	Mm.	Mm.			Mm	Mm.	M.p.s.		M.p.s.							%
SOUTH DAKOTA																	
HURON	52	6	22	6	8	0	0	0.9	16	20.1	NE	26	9	17	5	4.9	77
RAPID CITY	62	17	25	8	14	0	0	1.0	1	20.1	NW	30	15	10	6	4.2	71
SIOUX FALLS	60	- 12	25	9	11	0	0	1.2	19	14.3	34	16	12	12	7	4.8	
TENNESSEE																	
BRISTOL	73	- 68	36	11	11	0	0	0.3	1	12.5	30	2	5	11	15	6.7	
CHATTANOOGA	49	- 81	17	9	7	0	0	0.2	22	10.3	SW	2	3	15	13	6.7	51
KNOXVILLE	65	- 57	14	12	14	0	0	0.4	32	11.2	N	16	3	12	16	6.9	66
MEMPHIS	68	- 22	34	4	6	0	0	1.1	18	12.5	W	18	6	10	15	6.7	71
NASHVILLE	174	80	57	11	14	0	0	0.5	21	15.2	SW	1	4	11	16	6.8	54
OAK RIDGE R	71	- 80	25	12		0	0			19.7Y		12	4	10	17	6.8	
TEXAS																	
ABILENE	182	124	67	8	8	0	0	3.4	17	17.9	SE	19	11	9	11	5.4	82
AMARILLO	75	16	37	11	9	0	0	3.7	18	15.6	NW	17	9	14	8	5.5	73
AUSTIN	79	24	71	4	5	0	0	2.4	16	11.6	N	8	5	23	3	5.7	75
BROWNSVILLE	30	- 12	20	10	4	0	0	4.0	14	13.0	SE	13	5	20	6	5.7	77
CORPUS CHRISTI	138	79	59	10	7	0	0	3.1	14	11.6	SE	13+	2	19	10	6.5	66
DALLAS	39	- 10	11	9	5	0	0	3.1	16	13.0	NE	19	6	15	10	5.7	73
DEL RIO	78	45	56	6	8	0	0	4.3	13	13.0	6	27+	5	13	13	6.3	
EL PASO	140	108	67	11	14	0	0	1.1	15	15.6	NE	18	14	12	5	4.3	78
FORT WORTH	48	3	14	7	8	0	0	2.4	18	13.4	20	14	7	14	10	5.7	
GALVESTON U	57	- 64	23	10		0	0			12.1	S	12					54
HOUSTON	165	56	42	12	13	0	0	1.7	14	13.0	22	21	3	17	11	6.2	68
LUBBOCK	80	29	28	13	12	0	0	3.2	16	19.7	5	1	9	13	9	5.6	
MIDLAND	26	- 22	10	7	7	0	0	3.7	15	12.5	26	13	11	11	9	5.4	
PORT ARTHUR	156	4	33	11	12	0	0	1.0	15	21.0	SE	10	5	17	9	5.9	63
SAN ANGELO	31	- 5	20	6	4	0	0	3.1	17	11.2	18	30+	11	7	13	5.4	
SAN ANTONIO	39	- 14	34	8	4	0	0	2.9	15	11.6	SE	11	1	22	8	6.4	69
VICTORIA	95	4	32	10	9	0	0	2.4	15	14.8Y	SE	18	3	15	13	6.7	
WACO	25	- 26	22	3	3	0	0	3.1	15	11.2	14	14	8	16	7	5.4	
WICHITA FALLS	84	34	36	8	7	0	0	3.6	15	16.1	18	14	8	13	10	5.8	
UTAH																	
MILFORD	25	7	18	8		0	0						14	12	5	4.0	
SALT LAKE CITY	2	- 12	2	[illegible]	6	0	0	1.8	16	17.9	S	22	22	7	2	2.7	89
WENDOVER	10	2	6	3		0	0										
VERMONT																	
BURLINGTON	69	- 29	23	9	9	0	0	1.5	21	14.8	S	31	4	19	8	6.1	80
VIRGINIA																	
LYNCHBURG	66	- 41	28	9		0	0			11.6	SW	23	9	11	11	5.9	54
NORFOLK	107	- 43	43	17	7	0	0	0.7	13	15.2	W	3	8	10	13	5.7	76
RICHMOND	67	- 56	29	9	6	0	0	0.4	14	12.5	NW	19	6	14	11	6.1	65
ROANOKE	75	- 33	31	11	9	0	0	0.4	23	9.8	27	17	8	12	11	5.8	
WALLOPS ISLAND	103		40	8		0	0			12.5Y	NNE	25	5	11	15	6.5	
WASHINGTON																	
OLYMPIA	23	3	13	6	1	0	0	0.6	24	9.4	21	14	11	14	6	4.9	
QUILLAYUTE	44	- 14	26	6	0	0	0	1.1	25	8.5	S	11	6	13	12	6.1	49
SEATTLE TACOMA	[illegible]	1	14	5	0	0	0	1.0	3[illegible]	1[illegible].7	2[illegible]	19	10	15	[illegible]	5.[illegible]	73
SPOKANE	6	- 4	6	2	0	0	0	1.2	18	18.8	W	19	14	15	2	3.7	86
STAMPEDE PASS R	41	4	[illegible]	8		0	0						12	10	9	5.[illegible]	
WALLA WALLA U	[illegible]	7	7	2		0	0			11.6	NW	19	19	10	2	[illegible].8	89
YAKIMA	1	- 3	1	1	0	0	0	2.1	29	19.2	24	11	19	9	3	2.8	
WEST INDIES																	
SAN JUAN P.R.	133	- 25	26	19	5	0	0	3.1	9	11.2	E	24+	7	16	8	5.8	66
SWAN ISLAND	83	- 24	15	17		0	0						3	14	14	7.2	
WEST VIRGINIA																	
BECKLEY	81	- 36	28	16	8	0	0	0.8	22	12.5	34	2	6	8	17	6.6	

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	No. of days: Max 32.2 °C or above	No. of days: Min 0 °C or lower	Average dew point	Average relative humidity	Precipitation: Total	Departure from normal	Greatest in 24 hours	No. of days: .25 mm. or more	No. of days: With thunderstorms	Snow, Sleet: Total	Snow, Sleet: Maximum depth on ground	Wind: Resultant speed	Resultant direction	Fastest mile (1.6 kilometers): Speed	Direction	Date	No. of days (sunrise to sunset): Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	M.	Mb.	Mb.	C.	C.	C.	C.	C.		C.				C.	%	Mm.	Mm.	Mm.			Mm.	Mm.	M.p.s.		M.p.s.							%
WEST VIRGINIA																																
CHARLESTON	286	986.1	1019.6	30.0	17.2	23.4	-0.4	34.4	18	8.3	5	4	0	17.8	76	102	- 42	27	10	7	0	0	0.3	23	10.3	22	27	4	8	19	6.8	
ELKINS	600	950.6	1021.1	27.8	13.3	20.7	-0.5	31.1	18+	4.4	5	0	0			88	- 52	26	10	8	0	0			9.4	30	22	5	9	17	7.0	
HUNTINGTON	252	990.2	1019.9	30.6	17.2	24.0	0.0	34.4	18+	7.8	5	14	0	17.2	71	66	- 49	22	11	11	0	0	0.5	21	8.0	29	19	8	10	13	6.1	
PARKERSBURG U	187			29.4	17.8	23.8	-0.5	33.9	22+	9.4	5	5	0			96	- 8	46	10		0	0			18.3	W	22					65
WISCONSIN																																
GREEN BAY	208	991.9	1017.0	[illegible]	14.4	20.2	-1.2	31.7	16+	5.6	10	0	0	15.0	71	51	- 18	12	11	7	0	0	2.2	23	16.1	SW	21	8	13	10	5.5	66
LA CROSSE	198	993.2	1017.2	27.8	16.7	22.2	-1.1	35.0	16	9.4	3	4	0	16.1	71	103	8	45	11	8	0	0	1.3	20	15.6	28	21	10	11	10	5.4	
MADISON	262	986.5	1017.6	27.2	13.9	20.5	-1.2	33.3	15	5.6	3	4	0	15.0	71	65	- 26	39	9	5	0	0	1.6	23	14.8	NW	21	12	10	9	5.0	77
MILWAUKEE	205	993.2	1018.1	26.1	15.6	20.8	0.4	32.8	15+	9.4	3	2	0	15.6	71	91	16	50	10	7	0	0	1.5	22	13.0	W	21+	12	12	7	4.9	78
WYOMING																																
CASPER	1627	841.2	1015.3	30.0	11.1	20.6	-1.4	35.0	20+	2.8	1	10	0	6.7	47	26	1	8	8	8	0	0	0.4	25	14.3	30	22	14	12	5	4.0	
CHEYENNE	1867	817.1	1016.5	28.3	12.2	20.1	-1.0	33.9	20	3.9	1	5	0	6.1	46	32	- 14	12	11	9	0	0	1.3	26	16.1	NW	24	10	12	9	5.3	57
LANDER	1696	832.7	1014.9	29.4	12.8	20.9	-0.5	33.9	15	3.9	1	5	0	5.0	39	17	- 2	9	3	10	0	0	1.5	26	22.4	W	29	11	16	4	4.5	80
SHERIDAN	1208	881.5	1016.4	28.9	10.6	19.8	-2.1	35.0	14	2.8	31	7	0	8.9	53	8	- 22	5	6	10	0	0	0.4	29	19.2	NW	30	18	9	4	3.5	81

Data from airport unless otherwise specified. U indicates Urban, R indicates Rural, sites.

Precipitation data in column headed "Greatest in 24 hours" are computed on a 24-hour basis without regard to calendar day - data may include precipitation with a measurable amount from the last day of the previous month or the first day of the following month.

Wind directions under resultant direction are in tens of degrees.

Value entered in column "Fastest Mile" is the highest observed 1-minute wind speed when the direction is in tens of degrees. These stations are not equipped with a recording anemometer from which "Fastest Mile" data can be evaluated.

B Number of days maximum 21.1°C. or above for Alaskan Stations.
Y Peak Gust.
\+ And also on an earlier date or dates.
Ø Station pressures apply to elevations shown in the "Elevations - Station Pressure" table of the annual issue of this publication.

Data in this table are obtained by conversion from data in the English Units table.

HEATING DEGREE DAYS

(Base 65°F.)

JULY 1968

State and station	Current season: This month	Current season: Period July through this month	Normals: July through this month
ALABAMA			
BIRMINGHAM	0	0	0
HUNTSVILLE	0	0	0
MOBILE	0	0	0
MONTGOMERY	0	0	0
ALASKA			
ANCHORAGE	153	153	211
ANNETTE	136	136	242
BARROW	697	697	803
BARTER ISLAND	683	683	735
BETHEL	221	221	319
COLD BAY	368	368	474
FAIRBANKS	50	50	171
JUNEAU	248	248	301
KING SALMON	286	286	313
KOTZEBUE	247	247	381
MC GRATH	142	142	208
NOME	335	335	481
ST. PAUL ISLAND	589	589	605
SHEMYA	576	576	577
YAKUTAT	354	354	338
ARIZONA			
FLAGSTAFF	38	38	46
PHOENIX	0	0	0
TUCSON	0	0	0
WINSLOW	0	0	0
YUMA	0	0	0
ARKANSAS			
FORT SMITH	0	0	0
LITTLE ROCK	0	0	0
TEXARKANA	0	0	0
CALIFORNIA			
BAKERSFIELD	0	0	0
BISHOP	0	0	0
BLUE CANYON	6	6	34
EUREKA U	260	260	270
FRESNO	0	0	0
LONG BEACH	0	0	0
LOS ANGELES	3	3	19
LOS ANGELES U	0	0	0
MT SHASTA R	5	5	25
OAKLAND	72	72	53
RED BLUFF	0	0	0
SACRAMENTO	0	0	0
SANDBERG R	5	5	0
SAN DIEGO	0	0	6
SAN FRANCISCO	108	108	81
SAN FRANCISCO U	213	213	192
SANTA MARIA	34	34	99
STOCKTON	0	0	0
COLORADO			
ALAMOSA	49	49	65
COLORADO SPRINGS	22	22	9
DENVER	10	10	6
GRAND JUNCTION	0	0	0
PUEBLO	7	7	0
CONNECTICUT			
BRIDGEPORT	0	0	0
HARTFORD	0	0	0
NEW HAVEN	0	0	0
DELAWARE			
WILMINGTON	0	0	0
DIST.OF COLUMBIA			
WASH NATL AP	0	0	0
FLORIDA			
APALACHICOLA U	0	0	0
DAYTONA BEACH	0	0	0
FORT MYERS	0	0	0
JACKSONVILLE	0	0	0
KEY WEST	0	0	0
LAKELAND U	0	0	0
MIAMI	0	0	0
ORLANDO	0	0	0
PENSACOLA	0	0	0
TALLAHASSEE	0	0	0
TAMPA	0	0	0
WEST PALM BEACH	0	0	0
GEORGIA			
ATHENS	0	0	0
ATLANTA	0	0	0
AUGUSTA	0	0	0
COLUMBUS	0	0	0
MACON	0	0	0
ROME	0	0	0
SAVANNAH	0	0	0
IDAHO			
BOISE	0	0	0
LEWISTON	0	0	0
POCATELLO	9	9	0
ILLINOIS			
CAIRO U	0	0	0
CHICAGO O HARE	14	14	0
CHICAGO MIDWAY	4	4	0
MOLINE	8	8	0
PEORIA	5	5	0
ROCKFORD	15	15	6
SPRINGFIELD	1	1	0
INDIANA			
EVANSVILLE	0	0	0
FORT WAYNE	7	7	0
INDIANAPOLIS	4	4	0
SOUTH BEND	11	11	0
IOWA			
BURLINGTON	2	2	0
DES MOINES	2	2	0
DUBUQUE	13	13	12
SIOUX CITY	5	5	0
WATERLOO	14	14	12
KANSAS			
CONCORDIA	0	0	0
DODGE CITY	0	0	0
GOODLAND	5	5	0
TOPEKA	0	0	0
WICHITA	0	0	0
KENTUCKY			
COVINGTON	0	0	0
LEXINGTON	0	0	0
LOUISVILLE	0	0	0
LOUISIANA			
ALEXANDRIA	0	0	0
BATON ROUGE	0	0	0
LAKE CHARLES	0	0	0
NEW ORLEANS	0	0	0
SHREVEPORT	0	0	0
MAINE			
CARIBOU	48	48	78
PORTLAND	8	8	12
MARYLAND			
BALTIMORE	0	0	0
MASSACHUSETTS			
BLUE HILL OBS R	2	2	0
BOSTON	1	1	0
NANTUCKET	14	14	12
PITTSFIELD	24	24	25
WORCESTER	8	8	6
MICHIGAN			
ALPENA	82	82	68
DETROIT	4	4	0
DETROIT M WAYNE CO	3	3	0
DETROIT WILLOW RUN	13	13	0
FLINT	36	36	9
GRAND RAPIDS	30	30	8
HOUGHTON LAKE	71	71	54
LANSING	24	24	6
MARQUETTE U	81	81	59
MUSKEGON	35	35	12
SAULT STE MARIE	149	149	96
MINNESOTA			
DULUTH	90	90	71
INTERNATIONAL FALLS	70	70	71
MINNEAPOLIS	10	10	22
ROCHESTER	33	33	25
ST CLOUD	31	31	29
MISSISSIPPI			
JACKSON	0	0	0
MERIDIAN	0	0	0
MISSOURI			
COLUMBIA	0	0	0
KANSAS CITY	0	0	0
ST JOSEPH	1	1	0
ST LOUIS	0	0	0
SPRINGFIELD	0	0	0
MONTANA			
BILLINGS	16	16	6
GLASGOW	38	38	31
GREAT FALLS	38	38	28
HAVRE	42	42	28
HELENA	23	23	31
KALISPELL	80	80	50
MILES CITY	11	11	6
MISSOULA	10	10	34
NEBRASKA			
GRAND ISLAND	1	1	
LINCOLN U	0	0	0
NORFOLK	4	4	9
NORTH PLATTE	17	17	0
OMAHA	2	2	0
SCOTTSBLUFF	11	11	0
VALENTINE	15	15	9
NEVADA			
ELKO	3	3	9
ELY	10	10	28
LAS VEGAS	0	0	0
RENO	0	0	43
WINNEMUCCA	3	3	0
NEW HAMPSHIRE			
CONCORD	18	18	6
MT WASHINGTON OBS	484	484	493
NEW JERSEY			
ATLANTIC CITY	0	0	0
ATLANTIC CITY U	0	0	0
NEWARK	0	0	0
TRENTON U	0	0	0
NEW MEXICO			
ALBUQUERQUE	2	2	0
CLAYTON	11	11	0
RATON	21	21	9
ROSWELL	0	0	0
SILVER CITY	0	0	0
NEW YORK			
ALBANY	7	7	0
BINGHAMTON	29	29	22
BUFFALO	11	11	19
J.F. KENNEDY	0	0	0
NEW YORK U	0	0	0
NEW YORK LA GUARDIA	0	0	0
ROCHESTER	15	15	9
SYRACUSE	27	27	6
NORTH CAROLINA			
ASHEVILLE	0	0	0
CAPE HATTERAS R	0	0	0
CHARLOTTE	0	0	0
GREENSBORO	0	0	0
RALEIGH	0	0	0
WILMINGTON	0	0	0
NORTH DAKOTA			
BISMARCK	34	34	34
FARGO	31	31	28
WILLISTON	26	26	31
OHIO			
AKRON	9	9	0
CINCINNATI OBS	1	1	0
CLEVELAND	26	26	0
COLUMBUS	6	6	0
DAYTON	6	6	0
MANSFIELD	9	9	9
TOLEDO	8	8	0
YOUNGSTOWN	32	32	6
OKLAHOMA			
OKLAHOMA CITY	0	0	0
TULSA	0	0	0
OREGON			
ASTORIA	124	124	146
BURNS U	11	11	12
EUGENE	9	9	34
MEACHAM	90	90	84
MEDFORD	0	0	0
PENDLETON	0	0	0
PORTLAND	17	17	25
SALEM	47	47	37
SEXTON SUMMIT R	78	78	81
PENNSYLVANIA			
ALLENTOWN	0	0	0
ERIE	20	20	0
HARRISBURG	0	0	0
PHILADELPHIA	0	0	0
PITTSBURGH	8	8	0
PITTSBURGH U	1	1	0
READING U	0	0	0
SCRANTON	0	0	0
WILLIAMSPORT	4	4	0
RHODE ISLAND			
BLOCK ISLAND	7	7	0
PROVIDENCE	2	2	0
SOUTH CAROLINA			
CHARLESTON	0	0	0
CHARLESTON U	0	0	0
COLUMBIA	0	0	0
GNVLE-SPARTANBURG	0	0	0
SOUTH DAKOTA			
ABERDEEN	21	21	25
HURON	13	13	9
RAPID CITY	26	26	22
SIOUX FALLS	14	14	19
TENNESSEE			
BRISTOL	0	0	0
CHATTANOOGA	0	0	0
KNOXVILLE	0	0	0
MEMPHIS	0	0	0
NASHVILLE	0	0	0
OAK RIDGE R	0	0	0
TEXAS			
ABILENE	0	0	0
AMARILLO	0	0	0
AUSTIN	0	0	0
BROWNSVILLE	0	0	0
CORPUS CHRISTI	0	0	0
DALLAS	0	0	0
DEL RIO	0	0	0
EL PASO	0	0	0
FORT WORTH	0	0	0
GALVESTON U	0	0	0
HOUSTON	0	0	0
LUBBOCK	0	0	0
MIDLAND	0	0	0
PORT ARTHUR	0	0	0
SAN ANGELO	0	0	0
SAN ANTONIO	0	0	0
VICTORIA	0	0	0
WACO	0	0	0
WICHITA FALLS	0	0	0
UTAH			
MILFORD	1	1	0
SALT LAKE CITY		[illegible]	0
WENDOVER		0	0
VERMONT			
BURLINGTON	32	32	28
VIRGINIA			
LYNCHBURG	0	0	0
NORFOLK	0	0	0
RICHMOND	0	0	0
ROANOKE	0	0	0
WALLOPS ISLAND	0	0	
WASHINGTON			
OLYMPIA	64	64	68
QUILLAYUTE	147	147	170
SEATTLE TACOMA	33	33	56
SPOKANE	19	19	9
STAMPEDE PASS R	212	212	273
WALLA WALLA U	0	0	0
YAKIMA	20	20	0
WEST VIRGINIA			
BECKLEY	10	10	11
CHARLESTON	2	2	0
ELKINS	16	16	9
HUNTINGTON	0	0	0
PARKERSBURG U	0	0	0
WISCONSIN			
GREEN BAY	39	39	28
LA CROSSE	7	7	12
MADISON	34	34	25
MILWAUKEE	31	31	43
WYOMING			
CASPER	30	30	6
CHEYENNE	40	40	19
LANDER	18	18	6
SHERIDAN	35	35	25

Data from airport unless otherwise specified.
U indicates Urban, R indicates Rural, sites.

STORM SUMMARY

JULY 1968

STATE	TORNADOES					HAILSTORMS				WINDSTORMS				LIGHTNING				‡ HEAVY SNOWSTORMS AND BLIZZARDS				# ICE STORMS				ø ALL OTHER			
	NUMBER	DAYS	DEATHS	INJURIES	†DAMAGE	DEATHS	INJURIES	†DAMAGE PROPERTY	†DAMAGE CROPS	DEATHS	INJURIES	†DAMAGE PROPERTY	†DAMAGE CROPS	DEATHS	INJURIES	†DAMAGE PROPERTY	†DAMAGE CROPS	DEATHS	INJURIES	†DAMAGE PROPERTY	†DAMAGE CROPS	DEATHS	INJURIES	†DAMAGE PROPERTY	†DAMAGE CROPS	DEATHS	INJURIES	†DAMAGE PROPERTY	†DAMAGE CROPS
Alabama										0	0	4	0	0	1	3	0												
Alaska *																													
Arizona	3	2	0	2	4	0	0	2	0	0	9	5	0	1	0	4	0												
Arkansas														1	0	0	0												
California *																													
Colorado	2	2	0	0	4	0	0	3	4	0	0	3	3																
Connecticut														1	1	4	0												
Delaware						0	0	3	3					0	0	4	0												
Florida	6	6	2	1	4									4	2	2	0									0	0	4	0
Georgia	2	2	0	0	3					0	2	5	0	1	3	5	0									1	0	6	0
Hawaii																3													
Idaho								4	4			5	4		1	3	1												
Illinois	1	1	0	0	3	0	0	0	3					2	1	0	0									0	0	°4	C
Indiana						0	0	3	4	0	0	3	0	1	2	4	0									0	0	3	4
Iowa						0	0	5	6	0	0	5	5	0	0	4	0									4	0	7	6
Kansas	4	3	0	0	3	0	0	5	5	0	18	6	4	3	0	5	4									0	0	5	5
Kentucky								4	5	3	0	5	5	1	13	5												5	5
Louisiana										0	0	5	0	1	51	5	0												
Maine	2	1	0	0	4	0	0	0	2	1	2	4	0	0	1	4	0												
Maryland						0	0	5	4					1	0	4	0												
Massachusetts	3	3	0	100	5					0	0	5	0	0	0	4	0									0	0	3	2
Michigan	1	1	0	0	4	0	0	?	7	0	5	4	0	0	1	5	0									0	0	6	0
Minnesota	6	5	0	0	5	0	0	5	6	0	0	5	?	0	0	4	0									0	0	5	0
Mississippi										0	3	4	0	0	17	0	0									0	0	°5	C
Missouri	2	2	0	0	3	0	0	4	4	0	6	4	4	0	0	4	0												
Montana						0	0	4	6	1	1	5	0																
Nebraska	7	4	0	2	6	0	0	5	6	0	3	5	0																
Nevada *																													
New Hampshire	2	2	0	0	3	0	0	0	4	1	0	4	0	0	0	4	0												
New Jersey *																													
New Mexico						0	0	0	?	0	0	?	0	1	0	4	0									0	0	6	0
New York									5		88+	5		1	4	6												5	
North Carolina	2	2	0	0	5	0	0	4	6	0	0	5	4	3	3	5	0									0	0	3	4
North Dakota	2	2	0	0	4	0	0	0	6	0	0	5	0																
Ohio						0	0	°5	C	0	1	5		2	11	°6	C									1	2	5	
Oklahoma						0	0	0	1	0	0	4	0	0	0	5	0									0	0	4	0
Oregon										0	0	3	4	0	0	5	3												
Pacific Area *																													
Pennsylvania	1	1	0	0	5					0	6	6	0	0	3	6	0									0	0	4	2
Puerto Rico																										1	0	5	0
Rhode Island *																													
South Carolina						0	0	4	0	0	0	4	0	0	0	4	0												
South Dakota	2	2	0	0	0	0	0	5	6					0	0	4	0												
Tennessee						0	0	0	3	0	0	6	0	1	2	5	0									0	0	3	0
Texas	4	1	0	0	0	0	0	0	5	0	2	4	0	4	2	6	0									2	0	2	5
Utah										0	0	4	3													1	1	5	3
Vermont						0	0	0	4	0	0	4	0	0	0	3	0												
U.S. Virgin Is. *																													
Virginia						0	2	°5	C	0	1	4	0	0	0	?	0												
Washington N																													
West Virginia										0	0	4	0	0	0	4	0											4	
Wisconsin	2	2	0	0	4	0	1	5	5	0	50	6	0	0	3	5	0												
Wyoming						0	0	0	4					1	0	2	0									0	0	4	0

° Includes crop damage
C Crop damage
N No report received by printing deadline

* No occurrence of storms or unusual weather phenomena.
‡ Includes heavy sleet storm.
# Freezing drizzle and freezing rain, commonly known as glaze.
ø For breakdown of "All Others", and for detailed listing of other storms, see the Environmental Data Service, ESSA, monthly publication STORM DATA.

† Storm damages are placed in categories varying from 1 to 9 as follows:
1 Less than $50
2 $50 to $500
3 $500 to $5,000
4 $5,000 to $50,000
5 $50,000 to $500,000
6 $500,000 to $5,000,000
7 $5,000,000 to $50,000,000
8 $50,000,000 to $500,000,000
9 $500,000,000 to $5,000,000,000

GENERAL SUMMARY OF RIVER AND FLOOD CONDITIONS

JULY 1968

Elmer R. Nelson, Office of Hydrology

Record to near record flooding occurred on the Wapsipinicon River in Iowa during July. At Independence, Iowa, the previous 1947 record stage was exceeded by 2.4 feet. The total damage was estimated at nearly $600,000. The worst flooding in the memory of many residents occurred on Rock Creek at Louisville, Kans. Locally heavy damages resulted from flash flooding in the Kansas River Basin.

HUDSON BAY DRAINAGE

Red River of the North Basin.--Heavy rains on the 16th and 17th caused a sharp rise on some streams in the Red River of the North Basin. The Red Lake River at Crookston, Minn., rose above flood stage on the 18th and continued in flood to the 21st. It crested on the 19th, 2.1 feet above flood stage. The rainfall causing this overflow ranged from 4 to 6 inches. Damage was minor and confined mostly to small grain crops as water collected in low areas.

ST. LAWRENCE DRAINAGE

Lake Michigan.--Heavy rain in south-central Lower Michigan on June 21-26 caused extensive flooding on the Red Cedar and Grand Rivers in Michigan between June 26 and July 3. The crests on the Red Cedar ranged from 2.5 feet above flood stage at Williamston, Mich., to 1.8 feet above flood stage at East Lansing, Mich., on June 28. Crests on the upper Grand River were generally less than 1.5 feet above flood stage on June 28 and 29. The rainfall over the lower Grand River Basin on June 24-27 averaged around 4 inches. Additional rainfall of about 1 inch occurred on June 29 from Grand Rapids downstream. Much lowland flooding occurred throughout the Ionia, Mich., area and in the Comstock area, just north of Grand Rapids. The total estimated damage of $100,000 occurred mainly on the Red Cedar River in the East Lansing, Mich., area. Some streets and roads were damaged and adjacent parks were flooded on the Grand River in Lansing, Mich. No damages were reported in the lower Grand Basin.

ATLANTIC SLOPE DRAINAGE

The Saluda River at Chappells, S. C., rose 0.7 foot above flood stage on the 11th and receded within its banks on the 12th. The Broad River at Blair, S. C., rose to bankfull stage on the 13th but did not exceed flood stage. This rise was due to heavy showers and thunderstorms on the 9-13th. Rainfall of 1.5 inches occurred over Lake Greenwood in the Saluda Basin on the 10th. At Ware Shoals, the rainfall totaled 3.64 inches, causing Lake Greenwood to fill rapidly. Damage was limited to pastureland, with little or no actual damage occurring.

EAST GULF OF MEXICO DRAINAGE

Minor flooding occurred along the Alafia River below Lithia Springs, Fla., on the 6th, 7th, 10th, and 11th. The first crest on the 7th was nearly 2 feet above flood stage; the second crest on the 11th was 1.5 feet above flood stage. This flooding was due to heavy rains over the area. No damage was reported from the minor overflow.

MISSISSIPPI SYSTEM

Upper Mississippi Basin.--The flooding on the Kickapoo River at Steuben, Wis., on June 24 to July 2 was due to heavy precipitation on June 21-24 and June 25-27. Heavy rain on June 30 caused the Chippewa River at Durand, Wis., to rise 1 foot above flood stage on July 3. It receded within its banks on July 4. The runoff from these June rains caused a moderate rise along the Mississippi River. At Guttenberg, Iowa, the Mississippi crested at a stage of 13.7 feet (flood stage 15 feet) on July 5. Locally heavy rains of 2 to 6 inches on the 23d produced local flooding along the Maple River and the upper portion of the Le Sueur River in Minnesota. Thousands of acres of corn and soybeans were flooded. The Minnesota River at Mankato, Minn., crested at a stage of 14.7 feet (flood stage 19 feet) on the 27th. The Trempealeau River at Dodge, Wis., was out of its banks on the 27-29th. It crested on the 28th, 1.6 feet above flood stage.

Record flooding occurred on the Wapsipinicon River at Independence, Iowa, on the 17-19th. The crest of 21.15 ft. on the 18th was the highest crest since June 14, 1947 when it reached a stage of 18.74 feet. Flood stage at this point is 12 feet. This flooding was due to heavy showers ranging up to 15 inches in a 24-hour period in the Independence area on the 16-17th. Downstream at DeWitt, Iowa, the river reached a stage of 12.0 feet, 2 feet above flood stage on the 25th. This was slightly lower than the record crest of 12.07 feet reached at this point on June 27, 1944. Most of the urban damage occurred in the city of Independence where 150 homes and 47 commercial buildings were affected, mostly flooded-basement damage. In the Independence reach, 11,600 acres were flooded and in the DeWitt, Iowa, reach 37,500 acres. The total estimated flood damage in the Wapsipinicon Basin was estimated at nearly $600,000.

Very heavy rains during the night of the 16th and the morning of the 17th caused flash flood conditions in the Cedar River Basin in Iowa. The Cedar River at Janesville, Iowa, rose rapidly to nearly 2 feet above flood stage on the 17th. The West Fork of the Cedar River rose more slowly to a crest of 2.5 feet above flood stage on the 19th. The crest of 14.5 feet came within 0.5 foot of the June 1954 crest while the Cedar River exceeded the June 1954 crest at Janesville, Iowa. A bucket survey conducted after the flood showed an extreme amount of more than 16 inches of precipitation at Waverly, Iowa. Rainfall amounts in excess of 5 inches were common over an area averaging 25 miles wide and 120 miles in length from Clarion, Iowa, to Independence and Oelwein, Iowa. Amounts of 10 inches or more occurred over smaller areas. In Waterloo, Iowa, the principal losses were from the flash flooding of Virden Creek where 150 to 175 city blocks were flooded with one death reported. In Waverly, Iowa, 297 homes were damaged by flood waters with 2 deaths reported. In Dumont, Iowa, streets were flooded and railroad tracks were washed out. Widespread flooding of agricultural lands occurred along the West Fork of the Cedar River where flooding was more extensive.

A rise was in progress on the Illinois River in the beginning of the month. At La Salle, Ill., it rose above its banks on June 26 and receded within its banks on July 1. At Havana, Ill., it rose above flood stage on June 30 and crested on July 4, 1.2 feet above flood stage. It receded within its banks on July 11. Light flooding occurred at Beardstown, Ill. on the 3d-9th.

Missouri Basin.--Heavy rains during the late afternoon and evening of July 29 from Osmond, Nebr., to Pierce, Nebr., caused light to moderate lowland flooding along the North Branch of Elkhorn River and on Yankton Slough. Osmond, Nebr., reported 3.08 inches of rain and Pierce, Nebr., 1.94 inches. There were unofficial

reports of 2 to 5 inches of rain northeast and east of Pierce, Nebr. The North Branch crested 2.2 feet above flood stage near Pierce, Nebr., on the 30th. Downstream near Hadar, Nebr., the river rose 0.3 foot above flood stage on the 31st. Damage from the flooding was negligible.

Heavy rain on the 15th and 16th caused flooding on the Nemaha River at Falls City, Nebr. Many stations reported more than 3 inches of rain during the 24-hour period ending on the morning of the 16th. Falls City, Nebr., recorded 6.11 inches and Sabetha, Kans., 6.90 inches. Flooding also resulted on the Blackwater River at Valley City, Mo., on the 16th. Heavy rain (5.50 inches) was reported at Conception, Mo., on the 17th with lesser amounts over the rest of the region. Flooding occurred again at Valley City, Mo., on the 18th. Heavy rain occurred again in the Blackwater Basin on the morning of the 25th, causing additional flooding at Valley City on the 25-27th. The crest on the 26th was 6.7 feet above flood stage. Flooding also accurred on the Lamine River at Clifton City, Mo., on the 25th and 26th.

Moderate to local heavy tributary flooding occurred in the Kansas River and lower Big Blue River basins in Kansas between July 24 and Aug. 2. Minor flooding occurred on the Marais des Cygnes River at Reading, Kans., on the 24th and 26th. The heavy flooding on Rock Creek at Louisville, Kans., on the 24th was the worst in the memory of many residents. An estimated crest of 35.7 feet on the 24th exceeded the previous record crest of 34.15 feet on June 28, 1965 (10-year record). Flood waters entered nearly all homes but receded rapidly. Heavy agricultural damage resulted. Heavy rains during the night of the 15-16th caused considerable flash flooding in Nemaha, Brown, Jackson, and Shawnee Counties in northeast Kansas. Heavy rain ranging up to 6.5 inches in less than 3 hours early on the 25th caused heavy flash flooding on Wolf Creek, Half Day Creek, and Indian Creek. Local highway travel was disrupted for a brief time. Field crops sustained damage as creeks spread out to widths of as much as a half mile along parts of Indian Creek. A heavy brief overflow occurred on Fancy Creek at Winkler, Kans., on the 24th and moderate flooding on the 27th. Locally heavy damages resulted from the flash flooding in the Kansas River Basin.

White Basin.--Heavy rains on June 25-26 caused the Cache River at Patterson, Ark., to rise above flood stage on June 30. It continued in flood until July 4. The crest on July 1-2 was 0.7 foot above flood stage.

Arkansas Basin.--Heavy rains on the 24-26th caused minor flooding on the Whitewater, Walnut, and the Neosho Rivers in Kansas. The Whitewater River at Towanda, Kans., crested 2.4 feet above flood stage on the 26th. The Walnut River rose nearly 3 feet above flood stage on the 26th and receded within its banks on the 27th. The Neosho River was out of its banks in the reach from Iola to Oswego, Kans., between the 26th and 29th. The crests ranged from 0.5 to 1.8 feet above flood stage. The total damages were estimated at $145 thousand.

A brief minor overflow occurred on the Illinois River at Tahlequah, Okla., on the 3d. This flooding was due to heavy rainfall on the 2d. Above Watts, Okla., the basin average rainfall was 1.57 inches with Bentonville, Ark., reporting 3.13 inches.

Red Basin.--Heavy rains of 2 to 4.5 inches resulted in minor flooding along creeks and tributaries of the Washita River near Mountain View, Okla., during the evening of the 14th. Minor brief lowland flooding occurred near Carnegie, Okla., on the 15-16th. Very heavy local rains in the early morning hours of the 15th near Wellington, Tex., resulted in flooding of the Salt Fork of the Red River. At Mangum, Okla., the Salt Fork crested 3.75 feet above flood stage on the 15th. Prairie Dog Town Fork at Quanah, Okla., rose to about two-thirds bankfull during the evening of the 15th.

The Sulphur River at Naples, Tex., continued in flood from June 29 to July 6. It crested on the 1st, 4.7 feet above flood stage on July 1. There were three periods of flooding on the Sulphur River at Hagansport, Tex., during July. The first occurred on the 5th, the second on the 23d-25th, and the third on July 30-Aug. 2. The flooding during July was minor.

WEST GULF OF MEXICO DRAINAGE

The Sabine River at Logansport, La., rose above flood stage on June 28 and continued in flood to July 5. The crest on July 1-3 was 0.3 foot above flood stage. The river continued rather high at Logansport during July due to the new Toledo Lake.

Flooding was in progress in the beginning of the month on the Neches and lower Trinity Rivers due to heavy rains during the last half of June. Torrential rains fell over eastern and central Texas in connection with the passage of a tropical storm northward from Corpus Christi on June 23-26. Minor flooding occurred on the Neches River at Beaumont, Tex., from June 27 to July 4. Extensive flooding occurred on the lower Trinity River below Liberty, Tex. At Moss Bluff, Tex., flooding continued from Mar. 14 to July 11. Considerable damage occurred to crops and agricultural property. The San Jacinto at Lake Houston, Tex., continued above flood stage from Apr. 9 to Aug. 4, a period of 117 calendar days. Major flooding occurred on the San Jacinto during the latter part of June and the first part of July. It crested on June 26, 3 feet over the top of the spillway. The crest of 47.5 feet was the second highest stage of record (47.87 feet) which resulted from Hurricane Carla on Sept. 12, 1961. The Little River at Cameron, Tex., rose 2.1 feet above flood stage on the 10th.

Minor flooding occurred on the Frio River at Calliham, Tex., on the 13-14th. The crest on the 13th was 6.8 feet above flood stage on the 13th. Flash flooding occurred on the extreme upper Frio and the extreme upper Nueces River on the 13th and 14th. Bankfull stages occurred on the Nueces River from Three Rivers to Lake Corpus Christi, Tex., through the 16th. Minor flooding occurred below Wesley Seale Dam on the 13th and below Wesley Seale Dam on Nueces Bay on the 14th through the 17th. Heavy rains of 2 to 4 inches in the Coastal Bend on the 12th caused flash flooding on Gulf drainage streams with considerable street and highway flooding.

Heavy flow from the Conchos River in Mexico caused the Rio Grande River at Presidio, Tex., to rise above flood stage on the 6th. It crested on the 7th, 5.6 feet above flood stage on the 7th. It receded within its banks on the 8th. The total damages were estimated at $300,000.

GREAT BASIN

Flooding occurred in Pole Canyon in Utah from the heavy rain on the 10th in the mountains, 2.5 miles east of Echo Junction. A section of Highway I-80 was under water for several hours. No damage resulted to the highway.

Minor flooding occurred in the Midvale-Sandy area in southern Salt Lake County, Utah, on the 22d. The

highway was closed temporarily by flooded underpasses. This minor overflow was due to precipitation ranging from about 1 to 1.75 inches. No damage of any consequence resulted from the flooding.

Flash floods resulted from severe thunderstorms on the 24th to minor tributaries of the Sevier River near Monroe, Utah. Damages were minor.

Some homes in Kenilworth, Utah, were flooded with 3 to 4 feet of water during the evening of the 29th. This resulted from heavy thundershowers over the steep cliffs northeast of the city.

A series of heavy local thunderstorms on the 30th in Sevier County, Utah, caused heavy flood flows out of Monroe Canyon. Considerable debris and mud poured into the Monrovian Park and around the Power House. This was in the same general area as the storms on the 24th. Other tributaries were flooded also, causing varying degrees of crop and miscellaneous damages.

About 30 to 40 acres of newly-seeded alfalfa were flooded along the Reese River, south of Battle Mountain, Nev., on the 31st. Some minor flooding occurred at Austin, Nev.

FLOOD STAGE DATA

(All dates in July unless otherwise specified)

River and station	Flood stage	Above flood stages -dates		Crest *	
		From–	To–	Stage	Date
HUDSON BAY DRAINAGE	Ft.			Ft.	
Red Lake: Crookston, Minn.	15	18	21	17.1	19
ST. LAWRENCE DRAINAGE					
Lake Michigan					
Red Cedar: Williamston, Mich.	7	June 26	3	9.5	June 27
East Lansing, Mich.	7	June 26	2	8.8	June 28
Grand: Eaton Rapids, Mich.	6	June 27	1	6.8	June 28
Lansing, Mich.	11	June 27	1	12.45	June 29
ATLANTIC SLOPE DRAINAGE					
Saluda: Chappells, S. C.	14	11	12	14.7	11
Broad: Blair, S. C.	14	13	13	14.0	13
EAST GULF OF MEXICO DRAINAGE					
Alafia: Lithia Springs, Fla.	13	6	7	14.85	7
		10	11	14.5	11
MISSISSIPPI SYSTEM					
Upper Mississippi Basin					
Chippewa: Durand, Wis.	11	3	4	12.0	3
Trempealeau: Dodge, Wis.	7	27	29	8.6	28
Kickapoo: Steuben, Wis.	8	June 24	2	9.3	June 26
				9.2	June 30
Wapsipinicon: Independence, Iowa	12	17	19	21.15	18
De Witt, Iowa	10	24	27	12.0	31
		30	Aug. 2	10.4	31
West Fork Cedar: Finchford, Iowa	12	17	21	14.5	19
Cedar: Janesville, Iowa	11	17	17	12.8	17
Illinois: LaSalle, Ill.	20	June 26	1	24.7	June 27
Havana, Ill.	14	June 30	11	15.2	4
Beardstown, Ill.	14	3	9	14.3	5
Missouri Basin					
North Branch Elkhorn: Pierce(nr), Nebr.	12	30	30	14.2	30
Hadar(nr), Nebr.	12	31	31	12.3	31
Nemaha: Falls City, Nebr.	20	16	16	26.4	16
Fancy Creek: Winkler, Kans	11	24	24	17.2	24
		27	27	13.9	27
Rock Creek: Louisville, Kans.	20	24	24	35.7E	24
Vermillion Creek: Wamego 11NE, Kans.	24	24	24	24.7	24
Soldier Creek: Delia 6SE, Kans.	17	24	25	#18.3	25
		26	26	#17.9	26
Topeka 4NW, Kans.	12	25	25	11.95	25
Wakarusa: Lawrence 4S, Kans.	23	26	27	#27.8	26
		30	31	#25.9	31
MISSISSIPPI SYSTEM	Ft.			Ft.	
Stranger Creek: Easton, Kans.	15	31	Aug. 2	19.4	Aug. 1
Lamine: Clifton City, Mo.	19	25	26	22.2	26
Blackwater: Valley City, Mo.	20	16	16	#22.5	16
		18	18	#22.5	18
		25	27	#26.7	26
Marais des Cygnes: Reading, Kans.	18	24	24	19.2	24
		26	26	19.5	26
White Basin					
Cache: Patterson, Ark.	7	June 30	4	7.7	1-2
Arkansas Basin					
Whitewater: Towanda, Kans.	22	26	26	24.4	26
Walnut: Augusta, Kans.	23	26	27	25.85	26
Neosho: Iola, Kans.	20	26	27	#20.8	27
Chanute, Kans.	24	26	27	#25.7	27
Oswego, Kans.	17	28	29	#17.5	29
Illinois: Tahlequah, Okla.	11	3	3	11.1	3
Red Basin					
Salt Fork Red: Mangum, Okla.	9	15	15	12.75	15
Sulphur: Hagansport, Tex.	38	5	5	38.1	5
		23	25	43.6	24
		30	Aug. 2	44.0	30
Naples, Tex.	22	June 29	6	26.7	1
WEST GULF OF MEXICO DRAINAGE					
Sabine: Logansport, La.	25	June 28	5	25.3	1-3
Neches: Beaumont, Tex.	5	June 27	4	6.8	June 30
Trinity: Liberty, Tex.	24	June 23	5	#28.5	June 29
Moss Bluff, Tex.	4	Mar. 14	11	7.15	Mar.27-28
				8.3	Apr.15-16
				7.9	May 27-29
				8.1	June 30
San Jacinto: Lake Houston, Tex.	44.5	Apr. 9	Aug. 4	45.45	Apr. 13
				47.0	May 13
				47.5	June 26
Little: Cameron, Tex.	30	10	10	32.1	10
Frio: Calliham, Tex.	12	13	14	18.8	13
Nueces: Mathis, 4SW, Tex.	20	13	13	21.4	13
		15	15	20.9	15
Calallen, Tex.	7	14	14	7.3	14
		16	17	7.2	16
Rio Grande Presidio, Tex.	13	6	8	18.6	7

* Provisional
\# Highest stage observed
E Estimated
__ Exceeded previous maximum stage of record

RAWINSONDE DATA

Average monthly values

JULY 1968

ALBANY, N. Y. 1009 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	86	18.9	15.1	20	1.5
1000	31	163	18.6	14.4	22	1.6
950	31	604	18.2	11.4	27	4.7
900	31	1,066	16.2	8.8	28	6.7
850	31	1,550	13.2	5.[illegible]	28	7.7
800	31	2,059	10.5	-.1	28	8.4
750	31	2,595	8.1	-6.8	28	9.6
700	31	3,161	5.5	-10.7	27	10.9
650	31	3,762	2.2	-13.8	27	12.3
600	31	4,405	-1.2	-18.1	27	13.5
550	31	5,086	-5.2	-23.1	27	14.4
500	31	5,837	-9.9	-27.6	27	16.1
450	31	6,642	-15.2	-31.7	27	17.5
400	31	7,522	-21.1	-37.4	27	18.2
350	31	8,494	-28.3	-43.5	27	19.4
300	31	9,581	-36.4	-50.4	27	21.7
250	31	10,820	-45.7		27	22.2
200	31	12,274	-55.1		27	22.6
175	31	13,118	-58.8		27	22.1
150	31	14,081	-60.7		27	20.5
125	31	15,214	-60.8		27	15.4
100	31	16,602	-60.0		27	[illegible].0
80	31	18,002	-57.6		28	3.4
70	31	18,847	-55.8		30	.2
60	31	19,832	-54.0		09	1.7
50	30	21,004	-52.2		09	3.9
40	29	22,453	-50.0		09	6.1
30	29	24,343	-47.3		09	7.7
25	29	25,552	-45.5		09	8.4
20	27	27,044	-43.1		09	10.0
15	25	28,988	-40.2		09	12.[illegible]
10	22	31,779	-35.1		10	13.2
7	9	34,236	-31.5			
5						

ALBUQUERQUE, N. MEX. 842 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1,619	18.5	10.8	09	1.9
1000	31	112				
950	31	558				
900	31	1,034				
850	31	1,536				
800	31	2,058	18.2	6.9	14	.5
750	31	2,599	14.8	4.[illegible]	22	1.9
700	31	3,188	10.6	1.6	26	1.3
650	31	3,793	6.2	-1.7	33	.6
600	31	4,452	1.6	-5.7	03	.3
550	31	5,138	-3.3	-10.1	34	.7
500	31	5,896	-8.4	-17.0	29	1.3
450	31	6,700	-13.0	-24.7	29	2.2
400	31	7,597	-18.6	-31.7	28	3.2
350	31	8,581	-25.5	-38.9	27	4.6
300	31	9,682	-33.7	-45.4	27	5.0
250	31	10,936	-43.3		26	6.2
200	31	12,404	-54.0		26	6.5
175	31	13,251	-59.6		26	5.8
150	31	14,202	-64.9		28	[illegible].2
125	30	15,306	-68.4		32	3.3
100	30	16,641	-68.3		06	3.2
80	30	17,988	-65.4		08	4.[illegible]
70	30	18,804	-63.2		09	5.9
60	30	19,759	-60.2		08	7.8
50	30	20,906	-56.8		09	9.5
40	29	22,328	-53.6		09	9.7
30	29	24,192	-49.9		09	12.4
25	27	25,390	-47.5		09	12.8
20	23	26,865	-45.4		08	13.9
15	22	28,792	-42.2		08	16.4
10	17	31,547	-38.1		09	18.3
7	9	34,033	-33.5			
5						

AMARILLO, TEXAS 894 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1,095	18.8	14.1	20	3.1
1000	31	121				
950	31	566				
900	31	1,048				
850	31	1,534	19.6	12.3	22	8.5
800	31	2,055	17.2	8.9	22	6.3
750	31	2,600	14.0	5.4	23	2.7
700	31	3,183	9.9	2.4	25	1.5
650	31	3,791	5.8	-3.2	23	.5
600	31	4,446	1.2	-7.8	17	.7
550	31	5,132	-3.3	-12.4	12	.3
500	31	5,890	-7.8	-17.[illegible]	36	.2
450	31	6,702	-12.4	-24.8	31	1.0
400	31	7,595	-18.1	-30.7	30	2.2
350	31	8,580	-25.1	-37.2	28	4.2
300	31	9,682	-33.3	-45.2	28	4.7
250	31	10,938	-43.0		28	7.3
200	31	12,407	-53.7		28	7.6
175	31	13,255	-59.3		29	7.4
150	31	14,208	-64.4		31	[illegible].9
125	31	15,312	-68.2		34	5.5
100	31	16,650	-67.7		02	4.8
80	31	18,002	-64.6		06	5.2
70	31	18,821	-62.2		07	6.4
60	31	19,781	-59.3		07	8.1
50	30	20,929	-56.2		09	9.4
40	30	22,359	-52.6		09	10.0
30	30	24,232	-49.1		08	11.9
25	27	25,434	-47.1		09	13.1
20	27	26,919	-44.5		09	14.3
15	26	28,859	-41.3		08	16.1
10	17	31,613	-36.0		09	19.2
7	5	34,052	-32.8			
5						

* ANCHORAGE, ALASKA 1011 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	45	13.7	8.9	18	2.4
1000	31	138	13.4	8.5	18	3.1
950	31	571	11.3	6.4	17	3.4
900	31	1,019	8.9	5.1	18	2.2
850	31	1,491	6.3	3.3	15	1.9
800	31	1,986	3.5	-.1	13	3.4
750	31	2,507	.5	-3.8	12	4.2
700	31	3,058	-2.8	-7.8	12	4.5
650	31	3,637	-6.4	-12.0	13	4.7
600	31	4,264	-10.1	-17.6	12	4.8
550	31	4,927	-14.2	-24.9	12	5.0
500	31	5,647	-18.8	-30.6	12	5.0
450	31	6,421	-24.3	-36.2	13	5.2
400	31	7,273	-30.7	-41.3	12	5.5
350	31	8,208	-38.0	-47.3	12	5.5
300	31	9,251	-46.3		12	5.4
250	31	10,439	-54.4		12	4.9
200	30	11,872	-51.6		12	2.4
175	30	12,743	-49.5		12	2.0
150	30	13,755	-48.7		13	1.7
125	30	14,954	-48.4		14	1.7
100	30	16,423	-48.3		13	1.8
80	30	17,893	-47.9		12	2.0
70	30	18,774	-47.6		11	2.3
60	30	19,793	-47.4		10	3.2
50	29	20,999	-46.9		10	4.3
40	29	22,480	-45.9		09	6.0
30	29	24,400	-44.2		09	7.3
25	29	25,625	-43.0		09	9.1
20	29	27,135	-41.1		09	9.8
15	29	29,103	-37.8		09	10.9
10	23	31,918	-33.3		09	12.7
7	8	34,497	-26.7			
5						

* ANNETTE, ALASKA 1015 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	37	12.7	10.1	11	.2
1000	31	150	12.9	9.3	10	.1
950	31	587	11.2	6.8	15	1.4
900	31	1,039	8.7	4.4	17	2.6
850	31	1,511	6.0	1.5	18	3.5
800	31	2,006	3.4	-2.4	18	4.4
750	31	2,523	.8	-5.5	19	5.2
700	31	3,080	-2.2	-9.1	20	5.5
650	31	3,662	-5.6	-13.5	20	6.0
600	31	4,290	-9.2	-18.3	20	6.4
550	31	4,954	-13.3	-21.9	21	7.0
500	31	5,678	-18.0	-26.4	21	7.6
450	31	6,451	-23.5	-31.8	22	7.6
400	31	7,310	-29.6	-36.9	22	8.7
350	31	8,248	-36.9	-42.9	22	9.6
300	31	9,297	-44.8		22	10.7
250	31	10,495	-52.2		23	11.4
200	30	11,937	-53.4		24	10.0
175	30	12,799	-51.7		24	9.2
150	30	13,802	-50.8		24	6.9
125	29	14,986	-50.6		24	6.3
100	29	16,441	-50.3		25	4.2
80	29	17,898	-50.2		22	2.1
70	29	18,769	-50.2		21	1.4
60	29	19,776	-50.0		13	1.0
50	29	20,968	-49.5		10	2.1
40	29	22,433	-48.4		09	3.4
30	29	24,333	-46.5		09	5.9
25	29	25,547	-44.9		09	7.6
20	28	27,045	-43.0		09	8.0
15	26	28,992	-39.7		08	9.9
10	24	31,801	-34.7		08	12.9
7	21	34,306	-30.6		09	14.7
5	15	36,702	-26.8			

ATHENS, GEORGIA 991 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	246	21.0	19.[illegible]	31	.5
1000	31	169				
950	31	611	22.0	18.3	28	2.0
900	31	1,084	19.5	15.2	28	2.2
850	31	1,575	16.3	12.1	27	2.2
800	31	2,089	13.2	7.7	26	1.5
750	31	2,626	10.3	2.7	25	2.5
700	31	3,202	7.2	-2.0	24	3.0
650	31	3,802	3.9	-6.5	24	3.3
600	31	4,455	.3	-11.3	23	3.8
550	31	5,140	-3.9	-16.2	23	4.0
500	31	5,895	-8.1	-21.9	22	3.4
450	31	6,702	-13.1	-26.7	22	2.6
400	31	7,595	-18.6	-33.1	23	3.2
350	31	8,576	-25.7	-39.4	23	3.4
300	31	9,674	-34.2	-47.4	22	3.4
250	31	10,923	-44.2		23	3.6
200	31	12,379	-55.9		24	3.2
175	31	13,218	-61.2		24	3.7
150	31	14,164	-65.5		25	2.6
125	31	15,267	-67.1		31	1.4
100	31	16,616	-65.9		04	1.5
80	31	17,980	-62.9		06	3.7
70	31	18,805	-61.1		07	6.3
60	31	19,768	-58.2		08	9.1
50	31	20,924	-55.0		09	10.5
40	31	22,360	-52.0		09	11.1
30	30	24,238	-49.2		09	12.8
25	29	25,438	-47.1		09	14.6
20	28	26,923	-44.9		09	16.5
15	26	28,846	-42.3		09	19.0
10	21	31,615	-37.5		09	23.0
7	13	34,109	-32.9		09	26.3
5						

* BARROW, ALASKA 1014 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	20	8	3.8	2.3	08	5.1
1000	20	123	5.3	1.7	10	6.6
950	20	549	10.3	2.1	12	8.0
900	20	995	8.9	-1.[illegible]	12	7.6
850	20	1,466	6.3	-3.8	13	6.7
800	20	1,960	3.3	-6.5	13	6.5
750	20	2,477	.0	-7.7	15	6.2
700	20	3,030	-3.2	-13.3	15	6.5
650	20	3,608	-6.6	-18.1	15	7.1
600	20	4,234	-10.3	-22.2	15	[illegible].5
550	20	4,895	-14.6	-26.6	15	[illegible].5
500	20	5,615	-19.7	-31.5	15	[illegible].7
450	20	6,382	-25.5	-36.1	15	5.3
400	20	7,232	-31.9	-41.4	15	5.[illegible]
350	20	8,161	-39.2	-46.2	15	5.2
300	20	9,200	-46.9		14	5.2
250	20	10,390	-52.3		13	3.7
200	20	11,837	-50.4		10	2.7
175	20	12,713	-48.2		10	2.8
150	19	13,736	-47.3		09	2.1
125	18	14,946	-46.7		10	1.[illegible]
100	18	16,428	-46.0		09	2.7
80	17	17,910	-44.9		10	3.1
70	17	18,803	-44.2		10	3.6
60	17	19,838	-43.4		08	4.5
50	17	21,066	-42.7		08	5.9
40	17	22,575	-41.8		09	6.4
30	16	24,526	-40.7		09	7.6
25	16	25,769	-39.5		09	8.2
20	15	27,298	-37.8		08	[illegible].7
15	8	29,297	-34.7			
10						
7						
5						

BARTER IS., ALASKA 1016 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	15	4.5	2.9	10	5.9
1000	31	144	7.2	4.0	10	8.1
950	31	571	12.4	2.1	11	10.0
900	31	1,023	10.7	-1.8	11	6.2
850	31	1,497	7.9	-4.4	12	3.7
800	31	1,995	4.7	-7.4	12	2.2
750	31	2,515	1.4	-9.8	13	1.4
700	31	3,070	-2.2	-13.3	10	1.1
650	31	3,650	-5.9	-17.0	07	.8
600	31	4,277	-10.0	-21.1	08	1.2
550	31	4,937	-14.3	-27.0	07	.9
500	31	5,659	-19.1	-31.8	05	.8
450	31	6,427	-24.8	-36.4	33	.9
400	31	7,280	-31.2	-42.1	32	1.6
350	31	8,213	-38.4	-47.1	31	2.5
300	31	9,255	-46.0		31	3.7
250	31	10,450	-52.1		31	3.4
200	31	11,892	-50.8		34	2.5
175	31	12,767	-48.3		35	1.9
150	31	13,784	-47.4		36	1.4
125	31	14,990	-46.9		02	1.3
100	31	16,471	-46.3		05	2.0
80	31	17,956	-45.3		05	2.2
70	31	18,847	-44.7		07	3.0
60	30	19,881	-44.0		07	4.2
50	30	21,106	-43.2		08	5.1
40	30	22,611	-42.3		08	6.3
30	30	24,560	-41.2		09	7.2
25	30	25,801	-40.1		08	7.6
20	29	27,330	-38.3		08	8.4
15	26	29,330	-34.5		08	9.3
10	15	32,217	-29.2			
7						
5						

BETHEL, ALASKA 1010 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	39	11.9	10.4	21	1.1
1000	31	118	12.2	8.9	20	2.0
950	31	546	10.6	6.3	18	3.5
900	31	997	8.1	4.3	17	4.8
850	31	1,467	5.3	.[illegible]	16	5.2
800	31	1,960	2.4	-2.2	16	5.3
750	31	2,476	-.5	-5.8	15	5.6
700	31	3,029	-3.5	-10.3	14	5.2
650	31	3,608	-6.7	-12.8	14	4.7
600	31	4,233	-10.1	-17.9	14	3.9
550	30	4,896	-13.9	-23.4	15	3.1
500	30	5,618	-18.6	-27.9	15	2.5
450	30	[illegible],391	-23.9	-33.1	17	1.3
400	30	7,245	-29.9	-39.1	19	.3
350	30	8,182	-36.9	-45.6	30	1.2
300	30	9,231	-44.4		32	3.0
250	30	10,430	-52.3		33	4.8
200	29	11,868	-52.8		34	4.2
175	29	12,734	-50.5		33	2.6
150	29	13,741	-49.5		33	1.4
125	29	14,935	-49.2		02	.2
100	29	16,398	-48.7		12	1.0
80	29	17,866	-48.1		09	2.3
70	29	18,746	-47.7		10	3.2
60	29	19,764	-47.3		10	4.0
50	27	20,970	-46.8		10	4.8
40	27	22,451	-45.9		09	5.7
30	26	24,371	-44.4		09	6.8
25	26	25,595	-43.2		08	8.3
20	24	27,107	-41.3		09	9.0
15	19	29,066	-38.2		09	9.6
10	11	31,874	-34.0			
7						
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* BISMARCK, N. DAK. 957 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	505	13.5	11.9	36	1.0
1000	31	130				
950	31	566			30	1.0
900	31	1,027	16.7	9.[illegible]	28	3.3
850	31	1,513	15.2	6.2	30	5.2
800	31	2,025	12.5	1.7	29	5.6
750	31	2,560	9.1	-1.8	29	7.9
700	31	3,132	5.5	-5.[illegible]	28	9.2
650	31	3,729	1.4	-10.0	26	10.3
600	31	4,373	-2.7	-15.0	29	11.8
550	31	5,050	-7.1	-20.8	29	13.3
500	31	5,795	-11.9	-25.2	28	14.3
450	31	6,589	-17.2	-31.4	28	15.4
400	31	7,467	-23.4	-37.2	28	16.7
350	31	8,431	-30.7	-43.3	28	19.2
300	31	9,508	-39.1	-49.8	28	21.3
250	31	10,734	-48.0		28	23.1
200	31	12,181	-54.9		28	27.1
175	31	13,030	-56.5		28	25.9
150	31	14,008	-56.9		28	23.8
125	31	15,161	-57.4		28	19.1
100	31	16,569	-57.7		29	13.4
80	31	17,979	-56.7		30	7.4
70	31	18,826	-55.6		30	4.2
60	30	19,813	-53.9		31	2.4
50	29	20,990	-51.6		03	2.2
40	29	22,444	-49.8		07	3.3
30	29	24,335	-47.1		08	5.4
25	29	25,546	-45.2		08	6.9
20	29	27,042	-43.0		09	7.8
15	29	28,992	-40.0		09	8.5
10	29	31,789	-34.3		09	11.7
7	19	34,295	-29.4		09	12.0
5	8	36,666	-25.4			

BOISE, IDAHO 916 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	867	17.8	6.0	15	1.9
1000	31	102				
950	31	547				
900	31	1,016	20.8	4.9	15	1.3
850	31	1,511	21.6	1.2	05	.2
800	31	2,034	18.4	-1.3	26	1.0
750	31	2,581	14.5	-3.9	25	2.2
700	31	3,161	10.0	-6.1	25	4.8
650	31	3,770	5.1	-9.1	25	7.0
600	31	4,420	.1	-13.0	25	9.5
550	31	5,103	-4.7	-19.3	25	11.1
500	31	5,856	-10.0	-24.2	25	11.8
450	31	6,660	-15.8	-30.0	26	12.4
400	31	7,539	-22.1	-36.0	26	13.9
350	31	8,507	-29.3	-42.5	26	16.0
300	31	9,589	-37.9	-49.8	26	17.6
250	31	10,821	-46.9		25	19.5
200	31	12,271	-55.2		25	22.6
175	31	13,119	-57.8		25	23.4
150	30	14,089	-59.8		26	20.0
125	30	15,222	-61.6		26	14.6
100	30	16,604	-62.2		26	7.8
80	30	17,986	-60.4		26	2.9
70	30	18,822	-58.5		35	.5
60	30	19,794	-56.6		06	1.9
50	30	20,956	-54.5		09	3.5
40	29	22,394	-51.9		08	5.1
30	27	24,270	-48.7		08	6.7
25	27	25,474	-46.7		08	8.0
20	25	26,963	-43.9		09	8.2
15	25	28,909	-40.4		09	9.0
10	18	31,700	-35.8		08	10.9
7	6	34,192	-32.4			

BOOTHVILLE, LA. 1018 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1	24.8	23.4	31	.3
1000	31	158	25.2	23.1	25	.5
950	31	606	22.2	20.2	21	1.1
900	31	1,078	19.6	15.6	18	1.4
850	31	1,569	16.7	11.4	17	2.1
800	31	2,083	13.7	7.3	16	2.0
750	31	2,624	10.8	3.1	17	1.9
700	31	3,198	7.7	-.7	19	1.2
650	31	3,803	4.3	-5.4	21	.5
600	31	4,453	.7	-10.0	26	.6
550	31	5,140	-3.6	-14.4	28	.9
500	31	5,893	-8.2	-18.9	30	1.0
450	31	6,702	-13.4	-24.3	33	.8
400	31	7,591	-19.0	-30.2	01	1.1
350	31	8,572	-26.0	-37.7	06	.9
300	31	9,669	-34.3	-46.4	08	1.5
250	31	10,919	-43.9		07	2.9
200	31	12,380	-55.1		05	5.2
175	31	13,221	-60.7		05	4.7
150	31	14,169	-65.3		03	4.7
125	31	15,271	-67.7		04	5.4
100	31	16,611	-68.2		06	5.4
80	31	17,958	-65.4		08	7.0
70	31	18,774	-63.2		08	9.5
60	31	19,728	-60.0		08	11.8
50	31	20,875	-56.6		09	14.8
40	31	22,299	-53.2		09	16.0
30	29	24,163	-49.7		09	16.2
25	29	25,361	-48.1		09	17.2
20	28	26,833	-46.4		09	18.4
15	24	28,753	-43.1		08	22.4
10	15	31,518	-35.8		09	26.3
7						

* BROWNSVILLE, TEXAS 1015 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	7	24.7	23.1	13	1.7
1000	31	141	25.0	23.5	15	4.3
950	31	590	22.4	20.2	16	8.5
900	31	1,063	20.0	15.[illegible]	17	8.9
850	31	1,556	17.5	10.3	17	7.8
800	31	2,072	14.6	6.7	16	7.1
750	31	2,610	11.6	2.[illegible]	15	5.7
700	31	3,191	8.4	-1.8	15	4.9
650	31	3,795	4.9	-5.7	14	4.5
600	31	4,450	.9	-9.7	13	3.[illegible]
550	31	5,137	-3.3	-14.8	12	3.6
500	31	5,893	-7.9	-19.1	11	3.1
450	30	6,698	-13.0	-26.1	10	3.1
400	30	7,596	-18.8	-31.9	08	3.5
350	30	8,578	-25.8	-38.5	06	4.1
300	30	9,677	-34.0	-46.4	04	4.7
250	30	10,930	-43.6		03	5.8
200	30	12,394	-55.0		02	5.8
175	30	13,235	-61.1		03	6.2
150	30	14,179	-66.5		04	7.4
125	29	15,274	-69.6		05	8.2
100	29	16,600	-70.2		07	9.5
80	29	17,933	-67.7		08	11.6
70	28	18,742	-64.9		08	12.6
60	28	19,690	-61.6		08	13.6
50	26	20,830	-58.4		09	16.0
40	26	22,244	-55.0		09	18.5
30	25	24,096	-51.3		09	19.8
25	25	25,283	-49.4		09	20.7
20	23	26,760	-46.9		09	22.5
15	23	28,680	-43.3		09	24.0
10	17	31,426	-39.2		09	28.3
7	10	33,911	-35.0		09	[illegible]

BUFFALO, N. Y. 994 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	218	18.0	14.4	22	2.6
1000	31	163				
950	31	605	18.0	10.7	26	5.9
900	31	1,065	15.6	8.5	27	7.5
850	31	1,549	12.6	4.6	27	8.2
800	31	2,056	9.9	-1.5	27	9.0
750	31	2,593	7.6	-7.1	27	10.0
700	31	3,157	4.8	-11.0	27	11.4
650	31	3,756	1.7	-15.2	27	11.6
600	31	4,399	-2.0	-18.[illegible]	27	12.3
550	31	5,081	-5.9	-22.[illegible]	27	13.5
500	31	5,827	-10.4	-26.2	27	15.2
450	31	6,631	-15.6	-31.8	27	16.3
400	31	7,510	-21.8	-37.4	27	17.2
350	31	8,481	-28.9	-43.4	27	19.1
300	31	9,566	-37.3	-49.8	27	21.1
250	31	10,802	-46.0		27	20.0
200	31	12,256	-55.4		28	17.8
175	31	13,101	-58.7		28	16.2
150	31	14,065	-60.3		27	15.0
125	31	15,198	-61.1		27	12.7
100	31	16,587	-59.8		28	7.5
80	31	17,988	-57.4		28	3.5
70	31	18,834	-55.4		33	1.0
60	30	19,822	-53.7		07	1.6
50	30	20,999	-52.0		08	3.4
40	27	22,450	-50.2		08	6.7
30	25	24,341	-47.3		09	7.4
25	24	25,550	-45.4		09	9.4
20	23	27,051	-42.6		09	9.4
15	20	29,010	-39.1		09	12.1
10	13	31,602	-35.3			
7	5	34,267	-30.7			

CAPE HATTERAS, N. C. 1019 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	4	24.0	22.2	26	.9
1000	31	170	24.0	20.9	26	2.4
950	31	616	22.0	16.[illegible]	27	4.4
900	31	1,088	19.3	13.3	27	4.1
850	31	1,579	16.5	8.8	26	4.0
800	31	2,093	13.8	4.0	26	4.8
750	31	2,634	10.8	.5	26	5.5
700	31	3,208	7.9	-3.2	26	5.7
650	31	3,814	4.5	-7.0	26	6.0
600	31	4,465	.8	-10.6	25	6.3
550	31	5,152	-3.3	-14.8	25	6.3
500	31	5,909	-7.7	-19.4	25	5.6
450	31	6,716	-12.7	-26.8	25	5.3
400	31	7,613	-18.6	-32.4	25	5.4
350	31	8,596	-25.2	-39.0	25	5.1
300	31	9,698	-33.6	-46.6	25	5.6
250	31	10,951	-43.5		26	5.6
200	30	12,412	-55.0		27	6.1
175	30	13,254	-60.7		25	6.2
150	30	14,201	-65.9		26	5.3
125	30	15,303	-67.0		26	4.2
100	30	16,653	-65.5		27	2.0
80	30	18,021	-62.1		06	2.2
70	30	18,850	-59.8		07	4.7
60	30	19,817	-57.7		08	7.4
50	30	20,975	-54.8		09	10.4
40	30	22,414	-51.2		09	11.5
30	29	24,301	-47.7		09	11.8
25	27	25,511	-46.2		09	12.9
20	24	27,001	-43.9		08	14.2
15	15	28,957	-41.0		09	16.6
10	5	31,724	-35.9			
7						

See reference note at end of table

RAWINSONDE DATA

Average monthly values

JULY 1968

* CARIBOU, MAINE 993 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	191	16.1	12.8	25	2.4
1000	31	133				
950	31	572	15.4	8.6	27	5.5
900	31	1,027	13.4	5.3	28	7.3
850	31	1,506	10.4	2.4	28	8.3
800	31	2,009	7.6	-1.9	28	10.6
750	31	2,538	5.3	-6.6	28	11.9
700	31	3,100	2.5	-10.2	27	13.0
650	31	3,693	-.5	-15.0	27	14.5
600	31	4,333	-3.8	-20.0	27	16.2
550	31	5,009	-8.0	-24.0	27	16.8
500	31	5,750	-12.9	-28.9	27	18.9
450	31	6,539	-18.2	-33.7	27	20.9
400	31	7,417	-24.2	-39.6	27	22.2
350	31	8,377	-31.2	-46.3	27	23.4
300	31	9,452	-39.1	-51.2	27	24.7
250	31	10,679	-47.3		27	25.2
200	31	12,128	-54.5		27	23.9
175	31	12,980	-56.2		27	22.8
150	31	13,957	-56.8		27	20.9
125	31	15,113	-56.4		27	15.7
100	30	16,534	-55.2		27	9.7
80	30	17,960	-54.3		27	4.6
70	29	18,819	-53.3		27	2.0
60	29	19,815	-51.9		06	.9
50	29	20,999	-50.5		08	2.1
40	29	22,459	-48.8		09	4.7
30	25	24,358	-46.6		09	6.7
25	27	25,571	-45.3		09	7.8
20	21	27,069	-43.1		09	9.5
15	14	29,028	-39.8		09	10.2
10	10	31,819	-34.6			
7						
5						
4						

CHARLESTON, S. C. 1018 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	13	23.4	20.4	27	1.2
1000	31	170	23.7	20.5	26	2.3
950	31	616	22.8	17.6	26	3.3
900	31	1,090	20.0	14.7	25	3.1
850	31	1,581	17.0	10.9	25	3.2
800	31	2,097	14.1	6.0	25	3.5
750	31	2,635	11.1	2.2	24	3.4
700	31	3,213	8.0	-3.0	23	3.2
650	31	3,818	4.5	-6.6	23	3.8
600	31	4,470	.8	-10.7	23	4.2
550	31	5,162	-3.0	-16.5	22	4.1
500	31	5,915	-7.6	-20.8	21	3.0
450	31	6,723	-12.5	-26.2	21	3.1
400	31	7,621	-18.2	-32.5	20	2.5
350	31	8,604	-25.2	-39.6	20	2.1
300	31	9,706	-33.5	-47.0	18	2.6
250	31	10,959	-43.7		17	2.8
200	31	12,421	-55.2		15	2.4
175	31	13,263	-60.9		15	3.1
150	30	14,206	-65.9		19	2.1
125	30	15,308	-66.8		24	1.1
100	30	16,657	-66.1		08	.2
80	30	18,018	-63.3		07	4.0
70	30	18,842	-61.3		08	6.8
60	30	19,803	-58.6		08	9.5
50	30	20,956	-55.4		09	11.5
40	30	22,390	-51.8		09	12.9
30	26	24,270	-48.4		09	13.0
25	27	25,471	-47.0		09	13.7
20	23	26,955	-45.6		09	16.2
15	20	28,887	-42.4		09	18.9
10	9	31,677	-37.1			
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CHIHUAHUA, MEXICO 859 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	1,428	18.3	15.2	31	.3
1000	30	104				
950	30	548				
900	30	1,018				
850	30	1,522	18.2	13.8	30	.3
800	30	2,041	16.8	9.2	18	.7
750	30	2,586	13.6	6.8	15	1.8
700	30	3,168	9.9	4.1	14	3.0
650	29	3,776	6.0	.4	13	2.9
600	29	4,432	1.6	-3.4	11	2.8
550	29	5,118	-2.8	-7.1	11	4.0
500	29	5,881	-6.9	-12.4	11	3.5
450	29	6,690	-11.8	-20.4	11	3.1
400	29	7,590	-17.3	-27.0	11	2.4
350	29	8,577	-24.3	-35.8	08	2.3
300	29	9,681	-32.7	-43.6	05	1.6
250	29	10,936	-43.0		02	1.9
200	27	12,402	-55.1		01	3.5
175	25	13,242	-61.1		04	3.9
150	25	14,186	-66.3		05	4.6
125	24	15,280	-69.9		07	5.8
100	20	16,603	-69.6		07	6.5
80	17	17,940	-67.1		08	9.7
70	17	18,748	-64.7		09	10.7
60	15	19,701	-60.9		09	12.2
50	13	20,845	-57.9		09	13.9
40	13	22,263	-54.5		09	17.4
30	11	24,121	-50.8		09	17.6
25	9	25,318	-47.6			
20	7	26,801	-45.4			
15						
10						
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4						

* COLD BAY, ALASKA 1010 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	30	9.5	7.4	19	2.6
1000	31	114			18	[illegible]
950	31	536	7.2	4.3	16	3.3
900	31	982	5.9	1.4	15	3.6
850	31	1,450	4.4	-1.6	15	2.7
800	31	1,942	2.8	-6.0	15	1.7
750	31	2,461	.4	-8.7	19	1.5
700	31	3,014	-2.5	-11.5	20	1.0
650	31	3,592	-5.5	-14.8	27	.7
600	31	4,225	-8.6	-18.8	26	1.4
550	31	4,887	-13.0	-22.9	29	1.9
500	31	5,615	-17.4	-28.5	31	2.6
450	31	6,391	-22.3	-32.6	31	3.9
400	31	7,254	-28.5	-38.7	31	[illegible]
350	31	8,198	-35.4	-45.3	32	7.8
300	31	9,254	-43.4		32	10.1
250	31	10,457	-51.5		31	12.5
200	31	11,896	-53.3		31	10.6
175	31	12,759	-51.5		30	8.6
150	31	13,762	-50.7		31	6.6
125	31	14,950	-50.6		30	4.3
100	31	16,404	-50.2		30	1.8
80	31	17,862	-49.8		13	.5
70	31	18,735	-49.5		11	1.3
60	31	19,744	-49.3		10	3.1
50	31	20,940	-48.8		11	3.4
40	31	22,408	-48.2		09	5.1
30	30	24,310	-46.7		09	7.5
25	30	25,523	-45.3		09	8.0
20	29	27,017	-43.5		09	8.9
15	28	28,963	-41.1		09	10.7
10	23	31,740	-36.7		08	13.0
7	15	34,240	-32.0		08	16.2
5	11	36,639	-28.5		08	17.3
4	6	38,226	-28.3			

COLUMBIA, MO. 990 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	238	20.2	17.4	17	1.8
1000	31	150				
950	31	595	21.6	15.7	23	4.5
900	31	1,064	19.2	13.1	25	5.8
850	31	1,554	16.5	8.5	27	6.2
800	31	2,069	13.7	4.2	27	5.7
750	31	2,606	10.6	.5	27	5.6
700	31	3,182	6.9	-3.5	27	5.2
650	31	3,785	3.1	-8.1	27	5.6
600	31	4,432	-.5	-12.5	27	6.9
550	31	5,114	-4.4	-17.8	27	6.3
500	31	5,868	-9.1	-23.1	28	6.6
450	31	6,667	-14.1	-27.5	28	7.2
400	31	7,559	-20.0	-33.2	29	7.2
350	31	8,537	-26.7	-38.4	29	9.4
300	31	9,632	-34.8	-46.3	30	11.5
250	31	10,879	-44.4		29	13.1
200	31	12,337	-55.2		29	15.2
175	31	13,181	-59.9		29	15.5
150	31	14,134	-63.7		30	13.3
125	31	15,246	-65.9		31	10.4
100	31	16,602	-65.0		32	6.7
80	31	17,970	-62.3		35	3.7
70	31	18,798	-60.1		03	3.1
60	31	19,764	-57.7		05	4.3
50	31	20,920	-55.3		07	6.1
40	29	22,349	-52.7		09	7.7
30	28	24,218	-49.1		09	8.2
25	26	25,429	-47.6		09	8.7
20	24	26,910	-45.6		08	10.5
15	20	28,840	-42.2		09	13.8
10	9	31,599	-36.9			
7						
5						
4						

DAYTON, OHIO 985 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	297	18.2	16.5	13	.7
1000	31	169				
950	31	610	20.4	14.7	24	3.5
900	31	1,077	17.9	10.8	27	4.7
850	31	1,565	14.9	6.6	27	5.4
800	31	2,076	12.1	1.5	27	6.0
750	31	2,610	9.0	-2.9	27	6.8
700	31	3,183	5.9	-7.3	27	7.4
650	31	3,783	2.6	-11.1	27	7.6
600	31	4,430	-1.1	-15.3	27	8.6
550	31	5,115	-5.0	-21.3	27	8.2
500	31	5,864	-9.5	-24.9	27	9.4
450	31	6,665	-14.9	-31.0	27	9.7
400	31	7,553	-20.9	-36.1	27	10.3
350	31	8,526	-27.6	-42.5	26	12.5
300	31	9,615	-35.7	-49.5	27	13.8
250	29	10,860	-45.3		27	14.8
200	29	12,315	-55.5		28	15.6
175	29	13,157	-60.0		28	15.4
150	29	14,112	-62.9		28	13.7
125	29	15,230	-64.2		28	[illegible]
100	29	16,599	-62.8		28	7.9
80	29	17,983	-60.2		31	3.3
70	29	18,819	-58.3		02	2.0
60	29	19,793	-56.4		06	3.8
50	29	20,957	-53.8		08	5.7
40	28	22,400	-50.9		09	7.5
30	27	24,286	-47.8		09	9.0
25	27	25,494	-45.8		08	9.6
20	26	26,984	-43.7		08	11.7
15	24	28,934	-40.1		09	13.8
10	17	31,730	-35.1		09	14.5
7	7	34,265	-31.0			

DEL RIO, TEXAS 980 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	314	23.8	20.8	11	4.0
1000	31	138				
950	31	587	22.3	20.2	14	7.9
900	31	1,058	19.9	18.0	16	9.7
850	31	1,551	17.9	14.0	16	8.8
800	31	2,068	15.2	9.7	16	7.7
750	31	2,610	12.8	3.3	16	6.2
700	31	3,191	9.5	-1.8	16	3.5
650	31	3,797	5.6	-5.1	17	2.5
600	31	4,453	1.4	-8.3	17	2.2
550	31	5,143	-2.9	-13.2	15	1.9
500	31	5,899	-7.4	-19.1	14	3.3
450	31	6,707	-12.4	-23.0	12	3.2
400	31	7,605	-18.1	-30.8	08	2.9
350	31	8,591	-24.6	-36.4	06	2.2
300	31	9,695	-32.9	-45.7	04	2.7
250	31	10,952	-42.9		36	2.9
200	31	12,419	-54.6		36	4.0
175	31	13,263	-60.4		02	4.4
150	30	14,210	-66.1		05	6.5
125	28	15,304	-68.9		06	7.0
100	28	16,635	-69.4		06	8.2
80	28	17,975	-67.1		08	8.9
70	28	18,786	-64.1		08	10.5
60	28	19,737	-60.5		08	11.6
50	28	20,883	-57.4		09	12.9
40	28	22,301	-54.7		09	15.4
30	27	24,156	-50.1		09	17.4
25	27	25,353	-47.8		09	18.0
20	26	26,632	-45.5		09	18.7
15	23	28,758	-42.3		09	21.1
10	19	31,520	-37.9		09	25.3
7	10	33,983	-33.2			

DENVER, COLO. 842 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1,611	15.2	8.7	21	2.1
1000	31	121				
950	31	566				
900	31	1,036				
850	31	1,529				
800	31	2,047	17.3	5.4	25	2.2
750	31	2,597	14.6	2.5	28	1.4
700	31	3,176	11.0	-.7	25	1.7
650	31	3,788	6.7	-3.9	25	2.2
600	31	4,442	1.8	-8.3	29	3.3
550	31	5,133	-3.3	-13.0	29	4.1
500	31	5,885	-8.7	-17.4	29	5.6
450	31	6,691	-14.0	-24.9	29	6.9
400	31	7,579	-19.9	-30.2	28	8.9
350	31	8,597	-26.3	-38.5	28	10.3
300	31	9,653	-34.7	-46.3	27	12.7
250	31	10,901	-43.9		27	15.9
200	31	12,367	-53.5		27	18.6
175	31	13,216	-58.3		27	18.4
150	30	14,176	-62.3		28	16.2
125	30	15,292	-65.6		29	12.0
100	29	16,650	-65.2		30	5.1
80	29	18,017	-62.4		33	2.3
70	29	18,845	-59.9		06	1.9
60	29	19,813	-57.8		08	4.3
50	29	20,971	-54.5		08	6.1
40	29	22,410	-51.6		09	7.4
30	28	24,290	-48.4		09	8.4
25	28	25,496	-46.2		08	9.4
20	25	26,990	-43.9		09	10.2
15	23	28,928	-41.2		09	12.6
10	15	31,728	-34.4			
7						

DODGE CITY, KANS. 927 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	791	19.9	15.6	18	1.7
1000	31	125				
950	31	573				
900	31	1,042	20.8	14.1	20	4.7
850	31	1,536	19.6	11.3	22	[illegible]
800	31	2,056	16.8	8.2	23	4.8
750	31	2,602	13.1	4.7	23	4.3
700	31	3,181	9.1	.4	22	3.3
650	31	3,790	5.1	-4.2	23	3.2
600	31	4,440	.8	-8.1	24	3.0
550	31	5,130	-3.7	-13.9	26	3.4
500	31	5,882	-7.7	-20.4	28	4.2
450	31	6,692	-12.9	-26.2	29	4.3
400	31	7,583	-18.9	-34.4	29	5.3
350	31	8,565	-25.8	-39.1	29	7.2
300	31	9,664	-34.0	-46.0	29	9.4
250	31	10,916	-43.8		28	12.0
200	31	12,382	-54.0		28	14.1
175	31	13,230	-58.8		29	13.8
150	31	14,187	-63.5		30	11.5
125	31	15,296	-67.1		31	8.7
100	31	16,642	-66.9		33	4.8
80	31	17,999	-63.6		03	3.5
70	31	18,823	-60.9		06	4.4
60	31	19,787	-58.5		07	5.4
50	31	20,940	-55.4		08	7.4
40	30	22,373	-52.4		09	[illegible]
30	30	24,245	-49.3		09	[illegible]
25	29	25,444	-47.3		09	[illegible]
20	28	26,924	-44.7		09	11.6
15	27	28,863	-41.3		08	14.1
10	18	31,646	-36.7		09	18.0
7	6	34,152	-33.4			

EL PASO, TEXAS 884 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1,193	21.3	13.9	13	1.1
1000	31	108				
950	31	562				
900	31	1,036				
850	31	1,533	20.8	12.5	12	1.4
800	31	2,056	18.2	9.3	16	1.9
750	31	2,602	14.7	6.4	20	1.2
700	31	3,186	10.5	3.4	13	1.5
650	31	3,793	6.1	-.4	10	1.8
600	31	4,451	1.4	-4.7	09	2.2
550	31	5,139	-3.1	-9.7	08	3.1
500	31	5,897	-7.7	-14.0	10	2.9
450	31	6,706	-12.4	-20.3	11	1.6
400	31	7,603	-17.8	-28.3	11	.7
350	31	8,588	-24.8	-35.3	30	.7
300	31	[illegible],692	-33.3	-43.5	29	1.9
250	31	10,948	-43.1		28	3.3
200	31	12,416	-54.4		29	3.4
175	31	13,260	-60.3		32	2.3
150	31	14,208	-65.7		03	2.1
125	31	15,304	-69.2		06	3.9
100	31	16,633	-69.6		07	7.1
80	31	17,972	-66.8		08	7.3
70	31	18,784	-64.2		08	8.8
60	31	19,733	-61.2		08	11.4
50	31	20,874	-57.6		09	13.0
40	31	22,297	-53.9		09	13.0
30	29	24,158	-50.6		09	14.6
25	27	25,348	-48.6		08	16.1
20	27	26,826	-45.6		09	17.7
15	25	28,752	-43.1		09	19.0
10	16	31,500	-38.7		09	25.4
7	7	33,978	-34.3			

ELY, NEV. 812 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1,906	11.9	3.1	21	3.5
1000	31	124				
950	31	569				
900	31	1,032				
850	31	1,525				
800	31	2,040	16.1	4.9	19	3.4
750	31	2,584	15.5	1.6	19	3.3
700	31	3,171	11.9	-1.8	21	3.8
650	31	3,779	7.2	-5.4	23	3.2
600	31	4,440	1.8	-8.2	20	2.1
550	31	5,127	-3.9	-11.2	20	2.1
500	31	5,881	-9.2	-18.6	24	3.5
450	31	6,684	-14.5	-27.1	25	4.2
400	31	7,573	-20.5	-35.2	26	5.3
350	31	8,548	-27.6	-40.6	25	7.6
300	31	9,640	-35.7	-48.2	25	10.8
250	31	10,684	-45.1		24	14.8
200	30	12,342	-54.8		24	17.6
175	29	13,187	-58.8		25	16.8
150	29	14,145	-62.8		25	14.1
125	29	15,261	-65.5		25	10.0
100	29	16,616	-65.7		23	4.2
80	29	17,974	-63.9		18	1.9
70	29	18,796	-61.4		12	2.2
60	29	19,759	-58.3		09	4.0
50	29	20,911	-56.1		09	6.3
40	29	22,338	-53.3		08	7.0
30	29	24,203	-49.6		09	8.7
25	29	25,403	-47.3		08	9.8
20	[illegible]	26,897	-44.7		09	11.1
15	25	28,829	-41.2		09	12.7
10	16	31,613	-37.1		10	14.9
7						
5						

EMPALME, MEXICO 1012 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	12	26.5	22.1	08	1.1
1000	31	121	26.8	22.1	12	1.8
950	31	569	25.4	18.1	15	3.1
900	31	1,050	23.6	14.1	15	3.2
850	31	1,547	20.8	12.1	13	2.0
800	31	2,069	17.4	9.8	10	2.0
750	31	2,615	14.0	6.2	08	3.3
700	31	3,197	10.3	2.9	08	3.3
650	31	3,808	6.3	-1.4	08	2.8
600	31	4,462	1.7	-4.5	07	1.9
550	31	5,155	-2.7	-10.1	08	2.2
500	31	5,908	-6.8	-16.1	06	1.5
450	31	6,721	-11.6	-23.4	10	2.1
400	31	7,618	-17.0	-30.3	10	1.8
350	31	8,606	-23.7	-36.5	14	1.6
300	31	9,713	-32.3	-44.5	16	2.1
250	31	10,971	-42.5		16	3.4
200	29	12,438	-54.8		14	3.2
175	28	13,277	-61.3		14	2.8
150	27	14,221	-67.1		10	2.4
125	26	15,311	-69.9		09	5.5
100	26	16,636	-70.0		08	8.1
80	24	17,971	-67.6		09	12.7
70	24	18,780	-64.1		09	14.1
60	24	19,733	-60.6		09	15.0
50	24	20,877	-57.2		09	15.8
40	24	22,298	-54.1		09	16.7
30	23	24,153	-50.8		09	18.3
25	21	25,343	-48.3		09	18.5
20	19	26,812	-45.8		09	18.4
15	17	28,738	-43.4		09	19.2
10						
7						
5						

* FAIRBANKS, ALASKA 998 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	135	13.9	8.3	01	2.1
1000	31	117			02	2.3
950	31	553	15.7	5.9	09	2.0
900	31	1,010	12.7	3.3	14	2.0
850	31	1,487	9.0	.9	14	1.7
800	31	1,986	5.0	-1.3	14	1.1
750	31	2,505	1.1	-3.8	19	1.3
700	31	3,062	-2.6	-8.6	18	1.3
650	31	3,642	-6.2	-13.9	16	1.6
600	31	4,269	-10.1	-18.1	18	2.3
550	31	4,932	-14.0	-24.5	18	2.5
500	31	5,654	-18.8	-29.8	19	3.4
450	31	6,424	-24.5	-35.3	20	3.2
400	31	7,279	-31.0	-41.6	20	3.5
350	31	8,212	-38.6	-46.9	19	3.8
300	31	9,253	-46.7		19	4.0
250	31	10,440	-54.1		18	4.2
200	31	11,871	-52.5		18	2.3
175	31	12,740	-49.6		17	1.3
150	31	13,751	-48.5		12	1.4
125	31	14,952	-48.3		11	1.2
100	31	16,423	-47.7		09	1.8
80	31	17,898	-46.9		09	2.1
70	31	18,783	-46.4		08	3.3
60	31	19,809	-45.7		09	4.2
50	31	21,024	-45.0		09	5.3
40	30	22,517	-44.3		09	6.5
30	29	24,451	-42.7		08	8.7
25	29	25,684	-41.2		09	9.5
20	28	27,207	-39.3		09	9.9
15	23	29,188	-36.3		08	9.9
10	27	32,026	-31.3		08	13.1
7	13	34,565	-26.9		09	14.9
5	13	36,991	-22.8			

FLINT, MICH. 991 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	234	15.9	13.8	22	1.9
1000	31	156				
950	31	594	17.6	10.0	26	5.7
900	31	1,056	15.6	7.5	27	6.5
850	31	1,539	12.8	3.0	27	7.2
800	31	2,047	10.4	-2.9	27	8.1
750	31	2,577	7.8	-6.1	27	9.7
700	31	3,148	5.0	-10.7	27	10.5
650	31	3,745	1.9	[illegible]	27	11.8
600	31	4,391	-1.9	-17.4	27	12.1
550	31	5,071	-6.0	-21.1	27	12.5
500	31	5,819	-10.6	-26.6	27	13.0
450	31	6,616	-16.0	[illegible]	27	14.3
400	30	7,503	-21.8	-37.1	27	14.8
350	30	8,473	-28.5	[illegible]	27	16.1
300	30	[illegible],560	-36.5	[illegible]	28	18.0
250	30	10,800	-45.6		28	19.5
200	30	12,256	-54.9		29	18.6
175	30	13,101	-59.0		29	19.8
150	29	14,058	-60.7		29	[illegible]
125	29	15,190	-61.3		28	12.3
100	28	16,582	-59.8		29	[illegible]
80	27	17,980	-58.0		29	4.6
70	27	18,823	-56.3		31	2.1
60	27	19,807	-54.4		06	1.6
50	25	20,980	-52.4		08	3.7
40	23	22,429	-50.0		08	6.4
30	22	24,321	-47.5		09	7.6
25	22	25,530	-45.8		09	8.8
20	19	27,020	-43.1		08	9.0
15	16	28,973	-39.6		09	11.5
10	12	31,770	-36.4			
7	5	34,277	-30.2			
5						

FORT WORTH, TEXAS 997 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	180	22.6	20.6	17	1.7
1000	31	153				
950	31	602	22.4	18.0	20	6.8
900	31	1,070	20.2	15.0	20	7.1
850	31	1,562	17.6	10.5	21	5.2
800	31	2,079	14.8	5.4	21	3.4
750	31	2,615	11.7	.6	21	2.8
700	31	3,197	8.3	-2.7	20	2.1
650	31	3,801	4.5	-6.3	18	1.8
600	31	4,453	.8	-11.0	20	2.0
550	30	5,136	-3.2	-14.9	21	2.5
500	29	5,896	-7.6	-19.7	22	2.6
450	29	6,703	-12.4	-24.8	27	1.5
400	29	7,599	-18.0	-32.5	34	2.1
350	29	8,584	-24.9	-39.4	36	3.5
300	29	9,687	-33.1	-46.7	01	4.6
250	29	10,944	-42.9		01	6.0
200	29	12,413	-54.2		36	7.3
175	29	13,258	-60.1		01	7.5
150	29	14,207	-65.3		02	7.5
125	29	15,306	-68.5		03	6.6
100	29	16,642	-68.1		04	6.6
80	29	17,992	-65.0		06	6.7
70	29	18,811	-62.2		07	8.2
60	29	19,771	-59.5		09	9.5
50	29	20,919	-56.4		09	10.5
40	28	22,345	-53.5		09	11.4
30	28	24,208	-50.2		09	14.2
25	26	25,407	-47.4		09	15.5
20	24	26,887	-44.8		09	16.7
15	21	26,823	-41.8		09	18.1
10	15	31,594	-37.5		09	24.6
7	5	34,039	-34.0			
5						

See reference note at end of table

RAWINSONDE DATA

Average monthly values

JULY 1968

Columns for each station: Standard pressure surface (mb.) | No. of observations | Dynamic height | Temperature | Dew Point | Resultant Wind: Direction | Resultant Wind: Speed M.p.s.

GLASGOW, MONT. 935 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s
SURFACE	31	696	13.6	8.5	10	1.2
1000	31	125				
950	31	562				
900	31	1,023	17.9	5.8	21	1.8
850	31	1,511	15.9	2.7	27	3.9
800	31	2,023	12.5	.0	28	5.2
750	31	2,557	8.7	-3.4	28	6.9
700	31	3,127	4.6	-5.9	28	8.5
650	31	3,720	.4	-9.4	28	9.3
600	31	4,365	-3.7	-15.1	28	11.7
550	31	5,038	-7.9	-21.7	28	13.9
500	31	5,782	-12.5	-26.4	28	15.6
450	31	6,570	-18.2	-31.5	28	16.7
400	31	7,448	-24.5	-38.9	27	19.1
350	31	8,406	-31.6	-45.0	27	20.6
300	31	9,477	-39.9	-50.8	27	22.8
250	31	10,698	-48.8		27	24.2
200	31	12,140	-55.1		27	27.6
175	31	12,991	-55.4		28	27.7
150	31	13,974	-55.3		28	25.3
125	31	15,135	-55.7		28	18.4
100	31	16,551	-56.3		29	13.8
80	31	17,970	-55.8		30	7.4
70	31	18,821	-54.7		31	4.5
60	31	19,809	-53.4		36	2.3
50	31	20,987	-51.7		05	2.3
40	31	22,440	-49.8		08	4.5
30	30	24,334	-47.0		08	5.5
25	29	25,548	-45.2		08	6.9
20	26	27,043	-42.6		09	8.3
15	23	29,001	-39.6		09	10.5
10	19	31,805	-33.7		08	12.2
7	12	34,315	-29.9			

GRAND JUNCTION, COLO. 854 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s
SURFACE	31	1,474	19.5	6.2	12	2.8
1000	31	91				
950	31	541				
900	31	1,017				
850	31	1,518	19.7	6.1	13	3.0
800	31	2,041	19.3	3.8	14	4.2
750	31	2,592	16.1	1.4	18	2.4
700	31	3,176	12.1	-.8	23	3.1
650	31	3,790	7.4	-3.4	26	3.2
600	31	4,446	1.9	-6.2	26	3.2
550	31	5,135	-3.7	-9.5	27	3.4
500	31	5,888	-8.9	-16.1	27	4.3
450	31	6,695	-13.6	-23.3	27	4.8
400	31	7,585	-19.3	-30.8	27	6.9
350	31	8,564	-26.2	-38.0	27	9.3
300	31	9,660	-34.5	-46.2	26	10.9
250	31	10,909	-43.9		26	14.3
200	31	12,374	-53.8		26	16.9
175	31	13,222	-58.5		26	16.7
150	31	14,180	-63.1		26	14.3
125	31	15,292	-66.3		26	9.9
100	31	16,641	-66.3		27	4.1
80	31	17,999	-63.9		01	.3
70	31	18,821	-61.5		08	1.9
60	31	19,782	-58.7		08	4.4
50	30	20,936	-55.2		08	6.0
40	29	22,368	-52.2		08	7.9
30	28	24,245	-49.0		09	9.6
25	28	25,446	-47.0		09	10.2
20	28	26,931	-44.5		09	11.2
15	26	28,877	-41.1		09	13.1
10	15	31,659	-36.4			

* GREAT FALLS, MONT. 890 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s
SURFACE	31	1,123	13.2	6.4	22	2.3
1000	31	124				
950	31	565				
900	31	1,031				
850	31	1,512	15.6	3.5	23	3.5
800	31	2,024	12.4	.9	25	3.0
750	31	2,563	8.6	-1.7	27	4.4
700	31	3,130	5.1	-6.3	27	6.7
650	31	3,732	1.2	-10.5	27	9.3
600	31	4,370	-3.3	-16.3	27	12.3
550	31	5,049	-8.0	-22.2	2[illegible]	13.6
500	31	5,787	-13.1	-26.6	26	14.1
450	31	6,581	-18.4	-31.7	27	16.1
400	31	7,451	-24.8	-37.4	26	18.3
350	31	8,409	-32.0	-43.4	26	20.1
300	31	9,480	-40.1	-49.[illegible]	26	22.4
250	31	10,703	-48.5		26	25.2
200	31	12,148	-54.5		26	26.7
175	31	13,002	-55.0		27	25.3
150	31	13,986	-55.6		27	22.3
125	31	15,144	-56.5		27	18.0
100	31	16,558	-56.8		27	10.7
80	31	17,972	-56.7		29	6.0
70	31	18,820	-55.3		30	3.6
60	31	19,806	-53.7		36	1.7
50	31	20,983	-52.0		06	2.3
40	31	22,433	-50.2		08	3.9
30	31	24,324	-47.3		08	5.7
25	31	25,534	-45.6		09	6.0
20	30	27,027	-43.2		08	8.0
15	28	28,976	-40.1		03	9.6
10	26	31,772	-34.1		09	12.1
7	20	34,288	-29.3		09	14.4

GREEN BAY, WIS. 992 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s
SURFACE	30	210	15.9	13.5	24	1.9
1000	30	139				
950	30	577	17.5	11.2	26	5.9
900	30	1,037	15.5	7.7	27	7.4
850	30	1,521	12.9	4.5	27	8.1
800	30	2,029	10.2	.9	27	9.5
750	30	2,561	7.4	-3.3	27	11.0
700	30	3,129	4.4	-7.4	27	11.3
650	30	3,725	1.2	-11.5	27	11.8
600	30	4,370	-2.8	-14.0	28	12.7
550	30	5,045	-7.0	-16.3	28	13.4
500	30	5,793	-11.8	-23.4	27	14.[illegible]
450	30	6,586	-16.8	-29.9	27	16.5
400	30	7,470	-22.5	-37.0	28	16.6
350	30	8,437	-29.4	-43.0	26	18.2
300	30	9,521	-37.4	-49.4	28	22.0
250	30	10,758	-46.4		26	24.2
200	30	12,212	-55.0		28	24.6
175	30	13,058	-58.4		28	23.7
150	30	14,024	-59.3		28	18.6
125	30	15,164	-59.7		28	15.3
100	30	16,560	-59.1		29	11.7
80	30	17,963	-57.8		29	6.9
70	30	18,808	-56.3		31	3.9
60	30	19,793	-54.1		35	2.1
50	30	20,969	-52.0		07	3.3
40	29	22,419	-49.8		08	4.2
30	26	24,307	-48.0		09	6.6
25	26	25,514	-46.1		09	8.3
20	25	27,006	-43.7		09	8.1
15	23	28,954	-40.0		08	9.7
10	19	31,756	-35.3		09	12.4
7	8	34,255	-31.5			

GREENSBORO, N. C. 9[illegible]9 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s
SURFACE	31	273	20.5	18.8	34	.3
1000	31	173				
950	31	619	21.3	16.0	32	1.7
900	31	1,086	19.2	12.9	31	2.4
850	31	1,576	16.4	9.4	30	2.7
800	31	2,090	13.4	6.3	29	3.5
750	31	2,633	10.4	1.1	27	3.[illegible]
700	31	3,203	7.3	-3.0	27	4.7
650	31	3,810	3.9	-8.2	26	5.2
600	31	4,457	.2	-11.5	26	5.4
550	31	5,148	-3.9	-17.2	25	5.4
500	31	5,896	-8.2	-23.2	25	5.3
450	31	6,706	-12.9	-29.7	25	5.7
400	31	7,597	-18.8	-34.3	25	7.1
350	31	8,578	-25.7	-42.0	25	7.7
300	31	9,677	-34.3	-49.5	25	8.5
250	31	10,926	-44.3		25	9.2
200	31	12,384	-55.7		25	9.2
175	31	13,225	-60.9		25	9.5
150	31	14,173	-64.9		26	7.2
125	31	15,279	-66.7		27	5.0
100	31	16,631	-64.9		28	1.6
80	31	18,002	-62.1		06	2.8
70	31	18,830	-60.1		08	4.2
60	31	19,797	-57.8		09	6.6
50	31	20,954	-55.1		09	8.4
40	31	22,391	-51.4		10	9.4
30	30	24,270	-48.4		09	10.8
25	29	25,476	-46.6		09	11.8
20	20	26,963	-44.6		09	13.7
15	14	28,890	-42.8		09	15.3

* GUAM, MARIANA IS. 997 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s
SURFACE	31	111	25.3	24.1	11	1.6
1000	31	88				
950	31	543	23.6	21.6	12	3.9
900	31	1,009	20.9	18.3	12	3.9
850	31	1,506	18.4	15.0	12	3.3
800	31	2,025	15.6	11.7	13	2.6
750	31	2,569	12.7	8.2	12	2.6
700	31	3,147	9.6	3.7	12	2.9
650	31	3,759	6.1	-.1	11	2.4
600	31	4,411	2.3	-4.4	10	2.2
550	31	5,106	-1.6	-8.9	09	3.3
500	31	5,863	-5.8	-13.1	09	3.6
450	31	6,681	-10.4	-19.1	09	4.7
400	31	7,580	-16.0	-25.5	08	5.3
350	31	8,573	-22.9	-32.5	08	5.6
300	31	9,684	-31.2	-41.2	07	6.5
250	31	10,948	-41.3	-45.7	07	6.6
200	31	12,421	-53.9		06	9.5
175	30	13,263	-61.2		06	10.2
150	30	14,201	-69.1		06	13.1
125	30	15,267	-77.2		06	14.0
100	23	16,535	-79.5		07	14.6
80	22	17,824	-72.9		08	15.2
70	22	18,614	-69.2		09	15.8
60	22	19,544	-66.3		09	18.0
50	22	20,660	-62.1		09	19.7
40	22	22,055	-57.6		09	25.2
30	22	23,893	-53.3		09	31.4
25	22	25,075	-50.9		09	33.0
20	21	26,537	-48.2		09	32.5
15	20	28,446	-46.1		09	30.4
10	19	31,165	-42.2		09	28.5
7	17	33,604	-38.8		09	24.0
5	11	35,944	-32.9		09	30.6
4	9	37,533	-30.8			

HILO, HAWAII 1016 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s
SURFACE	31	11	22.0	19.3	22	2.0
1000	31	146	23.1	20.0	23	1.6
950	31	594	20.0	17.8	10	2.1
900	31	1,059	16.9	14.8	10	3.7
850	31	1,545	14.3	11.8	09	4.1
800	31	2,056	11.8	6.6	09	4.1
750	31	2,598	9.7	-.1	09	5.2
700	31	3,166	8.2	-8.1	09	4.6
650	31	3,774	5.4	-11.5	10	4.2
600	31	4,427	1.8	-16.5	11	3.2
550	31	5,118	-2.4	-19.7	11	3.1
500	31	5,872	-7.1	-24.1	13	2.1
450	31	6,682	-13.0	-27.4	18	1.5
400	31	7,573	-19.6	-31.4	23	2.0
350	31	8,552	-26.6	-39.3	26	4.5
300	31	9,646	-35.3	-46.8	27	7.8
250	31	10,890	-45.3		27	12.1
200	31	12,344	-56.4		26	16.8
175	31	13,181	-61.8		27	15.7
150	31	14,125	-66.0		27	13.3
125	31	15,224	-67.8		25	6.2
100	31	16,563	-69.5		11	3.0
80	31	17,893	-68.9		09	9.6
70	31	18,695	-66.3		09	12.9
60	31	19,636	-62.9		09	15.8
50	31	20,767	-59.7		09	19.2
40	31	22,174	-56.0		09	21.8
30	31	24,019	-52.6		09	24.2
25	31	25,202	-50.6		09	24.7
20	30	26,666	-47.8		09	26.4
15	27	28,579	-44.9		09	26.3
10	20	31,309	-40.8		09	27.2

HUNTINGTON W. VA. 992 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s
SURFACE	31	246	18.5	16.7	19	.6
1000	31	174				
950	31	614	21.2	14.1	26	1.9
900	31	1,085	18.7	12.4	29	3.2
850	31	1,574	15.5	9.5	28	4.1
800	31	2,086	12.6	[illegible].2	27	5.0
750	31	2,622	9.8	-1.2	28	5.6
700	31	3,197	6.8	-5.7	27	5.8
650	31	3,796	3.5	-9.1	27	6.3
600	31	4,447	-.4	-14.9	27	7.0
550	31	5,130	-4.3	-19.1	26	7.7
500	31	5,885	-8.5	-24.1	26	7.6
450	31	6,694	-13.5	-28.[illegible]	26	8.6
400	31	7,582	-19.4	-35.1	26	9.3
350	31	8,561	-26.6	-40.7	26	10.1
300	31	9,657	-35.0	-47.6	26	12.5
250	31	10,903	-44.7		26	13.1
200	31	12,362	-55.2		27	12.1
175	31	13,205	-59.8		27	12.3
150	30	14,164	-62.3		28	10.1
125	30	15,282	-64.9		29	6.8
100	29	16,647	-63.4		30	3.7
80	29	18,029	-60.2		35	1.5
70	29	18,865	-58.1		05	2.4
60	28	19,841	-56.1		07	4.2
50	27	21,006	-53.7		08	6.6
40	27	22,450	-50.5		09	7.6
30	27	24,341	-47.2		09	8.8
25	27	25,551	-45.6		09	9.8
20	26	27,046	-43.3		09	11.9
15	25	28,995	-40.1		09	13.7
10	16	31,801	-34.7		09	15.1
7	5	34,326	-33.8			

* INTERNATIONAL FALLS, MINN. 972 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s
SURFACE	31	360	13.6	10.7	21	1.9
1000	31	119				
950	31	553	15.3	10.3	24	4.3
900	31	1,011	13.8	6.9	27	7.3
850	31	1,491	11.1	2.7	27	8.5
800	31	1,995	8.1	-2.1	28	8.8
750	31	2,518	5.2	-7.0	29	9.3
700	31	3,086	2.0	-11.1	29	11.1
650	31	3,674	-1.3	-14.0	29	12.1
600	31	4,314	-5.1	-17.9	29	14.6
550	31	4,982	-9.3	-22.1	29	16.1
500	31	5,724	-13.8	-27.1	29	18.4
450	31	6,510	-19.1	-31.9	29	19.3
400	31	7,385	-25.1	-38.3	29	21.1
350	31	8,342	-31.8	-44.8	29	24.0
300	31	9,413	-39.8	-50.2	29	26.9
250	31	10,636	-48.4		28	28.9
200	31	12,083	-53.9		28	27.6
175	31	12,938	-55.0		28	25.5
150	31	13,924	-54.7		28	23.0
125	31	15,089	-54.9		28	17.1
100	31	16,515	-54.9		29	12.9
80	31	17,942	-54.3		29	7.3
70	31	18,799	-53.2		30	4.7
60	31	19,795	-51.9		33	2.3
50	31	20,990	-50.5		05	1.5
40	31	22,440	-48.9		08	3.1
30	31	24,338	-46.4		08	4.8
25	30	25,552	-44.6		09	6.6
20	27	27,050	-42.2		09	7.5
15	26	29,005	-39.4		09	9.2
10	25	31,797	-34.9		09	11.3
7	17	34,320	-29.3		09	11.6
5	6	36,716	-24.4			

JACKSON, MISS. 1008 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s
SURFACE	31	94	21.9	20.6	17	.8
1000	31	163	22.1	20.4	18	1.0
950	31	609	22.0	17.7	22	2.1
900	31	1,080	19.6	13.8	19	2.[illegible]
850	31	1,571	16.6	10.5	20	2.4
800	31	2,086	13.4	6.9	21	2.0
750	31	2,625	10.4	2.9	23	1.7
700	31	3,200	7.1	-1.2	24	1.8
650	31	3,802	3.7	-5.9	26	1.4
600	31	4,453	-.2	-10.0	28	1.7
550	31	5,137	-4.1	-14.3	30	1.7
500	31	5,891	-8.4	-20.0	30	1.9
450	31	6,697	-13.7	-24.7	30	1.8
400	31	7,588	-19.3	-30.8	31	1.6
350	31	8,568	-26.2	-39.3	32	1.3
300	31	9,665	-34.5	-47.3	33	1.7
250	31	10,912	-44.5		01	3.2
200	31	12,369	-55.6		01	6.5
175	31	13,209	-60.9		01	6.7
150	31	14,157	-65.3		02	6.8
125	31	15,259	-67.6		02	5.6
100	31	16,603	-66.6		05	4.5
80	31	17,961	-63.9		06	5.8
70	31	18,783	-61.8		08	8.0
60	31	19,743	-59.1		08	9.8
50	31	20,895	-55.5		09	11.7
40	31	22,328	-52.2		09	12.3
30	29	24,196	-49.6		09	13.4
25	28	25,393	-47.9		09	15.0
20	28	26,871	-45.4		09	17.3
15	22	28,799	-41.8		09	20.8
10	11	31,569	-37.0			

JACKSONVILLE, FLA. 1020 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s
SURFACE	31	5	23.7	22.4	23	.9
1000	31	176	23.8	21.3	20	1.6
950	31	618	22.4	17.9	23	3.0
900	31	1,096	19.8	14.8	22	2.4
850	31	1,588	16.9	11.1	20	2.1
800	31	2,103	14.0	7.6	19	2.4
750	31	2,640	10.9	3.5	18	2.7
700	31	3,218	7.5	-2.2	20	2.7
650	31	3,816	3.9	-5.7	20	3.2
600	31	4,472	.2	-11.1	20	2.9
550	31	5,154	-3.6	-15.7	20	3.0
500	31	5,913	-8.0	-21.4	19	2.7
450	31	6,716	-13.0	-27.0	18	2.5
400	31	7,614	-18.9	-33.2	17	2.2
350	31	8,594	-26.0	-40.4	15	1.8
300	31	9,693	-34.0	-48.4	11	2.6
250	31	10,944	-43.9		10	3.1
200	31	12,404	-55.3		08	4.2
175	31	13,245	-60.8		10	4.5
150	31	14,194	-65.3		09	2.2
125	31	15,297	-67.3		05	1.4
100	31	16,640	-67.4		10	2.6
80	31	17,991	-64.9		07	5.6
70	31	18,808	-62.9		08	9.1
60	31	19,764	-59.5		08	12.1
50	31	20,915	-55.2		09	14.4
40	31	22,347	-52.4		10	15.1
30	31	24,218	-49.5		09	14.8
25	30	25,419	-47.3		09	15.9
20	27	26,902	-45.4		09	18.2
15	24	28,827	-42.3		09	21.2
10	15	31,598	-37.2		09	23.7
7						
5						

JOHN F. KENNEDY INT. AP NY 1019 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s
SURFACE	31	5	22.1	18.0	28	1.8
1000	31	171	21.5	16.4	29	2.4
950	31	617	19.9	12.9	31	2.9
900	31	1,080	17.1	9.8	30	3.0
850	31	1,567	14.3	6.2	28	3.3
800	31	2,077	11.8	-.5	28	5.5
750	31	2,613	9.6	-5.2	27	7.0
700	31	3,184	6.5	-9.0	27	9.0
650	31	3,787	3.5	-12.8	27	10.0
600	31	4,434	-.4	-16.4	27	11.2
550	31	5,119	-4.5	-22.5	27	11.5
500	31	5,870	-8.9	-27.3	27	12.5
450	31	6,672	-13.9	-31.9	27	13.8
400	31	7,564	-20.0	-36.1	27	14.8
350	31	8,541	-27.0	-41.9	26	17.0
300	31	9,634	-35.5	-48.7	26	18.2
250	31	10,878	-45.1		27	19.9
200	31	12,334	-55.3		27	21.4
175	31	13,176	-59.8		27	21.9
150	31	14,131	-62.6		27	17.2
125	31	15,250	-63.8		27	12.9
100	31	16,625	-61.4		28	7.6
80	31	18,016	-58.9		29	2.0
70	31	18,857	-56.8		08	.8
60	31	19,838	-55.1		09	3.4
50	31	21,008	-52.6		09	5.5
40	31	22,459	-49.6		10	7.1
30	29	24,352	-46.9		09	9.0
25	29	25,566	-44.8		09	9.9
20	27	27,064	-42.3		09	10.7
15	18	29,043	-38.6		09	12.9
10	5	31,633	-34.4			

KEY WEST, FLA. 1017 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s
SURFACE	28	3	26.1	21.1	11	2.5
1000	28	153	24.9	20.8	11	3.5
950	28	598	21.4	19.0	12	4.8
900	28	1,070	18.7	14.6	12	5.8
850	28	1,559	16.2	9.7	12	5.1
800	28	2,073	13.3	5.4	11	4.8
750	28	2,610	10.4	.6	11	3.9
700	28	3,185	7.1	-3.4	12	3.7
650	28	3,786	3.5	-7.1	11	3.4
600	28	4,435	-.5	-10.7	13	2.7
550	28	5,119	-4.6	-16.2	12	2.3
500	28	5,869	-9.4	-20.2	11	2.9
450	28	6,668	-14.5	-25.[illegible]	09	2.5
400	28	7,559	-20.5	-31.5	08	2.5
350	28	8,533	-27.6	-38.[illegible]	06	2.9
300	28	9,623	-36.1	-46.3	04	3.5
250	28	10,862	-45.9		03	3.7
200	28	12,309	-56.9		03	4.4
175	28	13,145	-62.1		04	3.9
150	27	14,090	-65.9		06	3.4
125	27	15,189	-68.5		08	4.5
100	27	16,520	-69.8		08	6.8
80	27	17,852	-68.4		0[illegible]	10.2
70	27	18,656	-65.9		0[illegible]	13.4
60	27	19,599	-62.4		08	17.0
50	27	20,736	-58.8		09	19.3
40	26	22,153	-55.2		09	20.5
30	26	24,006	-51.1		09	20.3
25	25	25,192	-48.8		09	20.7
20	24	26,665	-47.4		08	21.1
15	23	28,579	-44.9		08	23.1
10	19	31,321	-40.2		09	28.9
7	10	33,736	-37.6			
5	5	36,053	-37.1			

KING SALMON, ALASKA 1012 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s
SURFACE	31	15	10.4	4.9	16	2.1
1000	31	115	10.9	5.4	16	2.9
950	31	542	9.7	4.4	15	4.2
900	31	991	7.3	3.6	11	3.9
850	31	1,460	4.7	1.5	11	5.0
800	31	1,952	1.7	-1.5	10	5.4
750	31	2,466	-1.0	-6.1	10	5.5
700	31	3,018	-3.9	-10.3	10	4.7
650	31	3,598	-6.9	-15.2	10	4.7
600	31	4,223	-10.4	-19.2	10	4.7
550	31	4,884	-14.1	-24.3	09	4.7
500	31	5,606	-18.6	-27.9	09	4.6
450	31	6,380	-23.8	-33.1	08	4.3
400	31	7,236	-29.9	-38.5	06	4.1
350	31	8,173	-37.1	-44.3	04	4.7
300	31	9,222	-44.8		02	5.0
250	31	10,420	-52.4		01	5.3
200	31	11,860	-50.8		35	4.2
175	31	12,734	-49.3		33	3.2
150	31	13,745	-48.8		34	1.7
125	31	14,943	-48.9		33	.6
100	30	16,410	-48.3		09	.3
80	30	17,679	-48.1		09	1.6
70	29	18,760	-47.9		11	2.0
60	28	19,779	-47.7		11	2.3
50	27	20,943	-47.3		09	3.4
40	26	22,463	-46.8		09	5.0
30	26	24,375	-45.2		09	6.4
25	25	25,596	-43.8		09	8.2
20	19	27,099	-41.8		09	9.0
15	13	29,076	-3[illegible].9		09	9.0
10	9	31,887	-34.9			

+ KOROR, CAROLINE IS. 1007 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s
SURFACE	31	30	28.3	24.6	21	.8
1000	31	91	27.7	23.9	21	1.0
950	31	538	23.6	20.0	22	1.[illegible]
900	31	1,016	20.9	16.3	22	1.9
850	31	1,510	18.2	12.8	22	1.6
800	31	2,028	15.3	9.3	19	.7
750	31	2,570	12.5	6.2	11	.7
700	31	3,151	9.6	2.5	10	1.7
650	31	3,760	6.3	-1.4	10	2.9
600	31	4,416	2.5	-5.5	1[illegible]	4.5
550	31	5,112	-1.3	-9.3	10	5.3
500	31	5,871	-5.5	-14.6	1[illegible]	5.5
450	31	6,686	-10.1	-20.8	09	5.6
400	31	7,592	-15.6	-28.3	09	5.7
350	31	8,586	-22.3	-35.3	09	6.1
300	31	9,701	-30.7	-43.4	0[illegible]	7.1
250	31	10,969	-41.0		08	9.0
200	31	12,445	-53.6		08	12.2
175	31	13,289	-60.8		07	14.0
150	31	14,231	-68.2		07	15.2
125	31	15,305	-75.4		07	15.2
100	31	16,579	-78.6		08	13.5
80	31	17,874	-70.9		08	13.0
70	31	18,67[illegible]	-68.1		09	11.9
60	31	19,600	-65.6		09	13.3
50	31	20,718	-62.3		09	18.[illegible]
40	31	22,1[illegible]6	-59.1		09	28.0
30	30	23,930	-53.8		0[illegible]	35.3
25	3[illegible]	25,111	-50.1		09	36.3
20	28	26,581	-45.7		09	32.8
15	23	2[illegible],528	-41.9		09	19.0
10	1[illegible]	31,283	-36.2		09	11.0
7	8	33,759	-34.2			

See reference note at end of table

RAWINSONDE DATA

Average monthly values

KOTZEBUE, ALASKA — 1013 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	28	5	12.1	9.0	16	.2
1000	28	110	12.4	6.9	17	1.2
950	28	538	11.4	3.9	18	3.6
900	28	990	8.5	2.2	18	5.1
850	28	1,460	5.5	-.3	19	6.1
800	28	1,953	2.3	-3.9	19	6.8
750	28	2,471	-.9	-7.7	19	7.3
700	28	3,019	-4.1	-11.2	19	6.8
650	28	3,599	-7.4	-15.8	19	7.1
600	28	4,220	-10.7	-20.9	19	6.5
550	28	4,883	-14.9	-25.9	19	6.9
500	28	5,599	-19.7	-31.6	19	6.9
450	28	6,368	-25.3	-36.9	20	6.7
400	28	7,218	-31.4	-41.4	21	7.1
350	28	8,150	-38.3	-45.4	21	7.6
300	28	9,194	-45.4		21	6.[illegible]
250	28	10,394	-50.8		22	3.3
200	28	11,841	-50.9		22	3.0
175	28	12,714	-49.1		21	2.1
150	28	13,727	-48.3		17	1.8
125	28	14,929	-47.9		14	1.7
100	28	16,404	-46.9		13	2.2
80	28	17,884	-46.4		11	3.1
70	28	18,770	-46.0		10	3.4
60	28	19,797	-45.4		09	4.3
50	28	21,015	-44.8		09	5.3
40	27	22,511	-44.0		08	6.7
30	26	24,448	-42.5		08	[illegible].2
25	25	25,684	-41.1		08	8.9
20	22	27,202	-39.4		09	9.9
15	18	29,178	-36.4		08	10.9
10	7	31,970	-31.7			
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KWAJALEIN, MARSHALL IS. — 1010 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	4	27.3	24.4	08	3.8
1000	31	95	26.7	23.6	08	4.1
950	31	548	23.5	20.8	09	5.2
900	31	1,020	21.0	17.0	09	6.0
850	31	1,514	18.3	14.0	09	6.1
800	31	2,032	15.6	11.0	09	6.7
750	31	2,579	12.9	7.5	09	7.1
700	31	3,157	9.9	2.4	09	7.5
650	31	3,770	6.0	-.3	09	7.5
600	31	4,472	2.2	-3.5	09	6.8
550	31	5,121	-1.5	-9.2	09	6.3
500	31	5,875	-5.7	-12.5	09	[illegible]
450	31	6,694	-10.6	-18.1	08	4.3
400	31	7,591	-16.2	-25.0	10	3.9
350	31	8,584	-23.0	-33.[illegible]	11	2.5
300	31	9,694	-31.5	-42.1	14	2.3
250	31	10,958	-41.6	-50.2	18	1.8
200	31	12,429	-54.3	-61.1	23	2.6
175	31	13,271	-61.5	-68.0	25	3.3
150	31	14,210	-68.9		25	[illegible].3
125	31	15,280	-76.1		24	7.1
100	31	16,558	-77.8		26	2.4
80	31	17,848	-73.0		09	8.1
70	31	18,638	-69.7		09	10.2
60	31	19,564	-66.2		09	12.7
50	31	20,677	-63.1		08	18.9
40	29	22,060	-59.7		09	27.7
30	29	23,879	-54.9		09	33.8
25	29	25,051	-52.4		09	35.3
20	29	26,507	-48.3		09	34.4
15	27	28,418	-44.3		09	23.9
10	24	31,161	-40.8		09	14.4
7	22	33,602	-37.8		08	15.4
5	8	35,950	-33.9			
4						

LAKE CHARLES, LA. — 1017 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	5	23.2	22.3	04	1.1
1000	31	157	24.3	21.9	12	1.[illegible]
950	31	601	21.9	18.6	18	2.5
900	31	1,075	19.2	14.6	19	3.4
850	31	1,566	16.4	9.8	19	3.1
800	31	2,080	13.6	5.5	19	2.7
750	31	2,618	10.8	.5	18	1.6
700	31	3,195	7.7	-2.8	18	1.4
650	31	3,798	4.3	-6.5	22	.8
600	30	4,451	.5	-10.4	27	.6
550	30	5,138	-3.5	-15.0	31	.6
500	30	5,892	-7.9	-19.7	36	1.0
450	30	6,697	-13.2	-25.1	35	1.7
400	30	7,591	-19.0	-31.7	02	1.9
350	30	8,572	-25.9	-39.6	01	3.5
300	30	9,670	-34.0	-47.6	02	5.0
250	30	10,921	-43.6		02	6.5
200	30	12,385	-54.4		02	8.0
175	30	13,230	-59.8		03	7.[illegible]
150	30	14,181	-64.8		03	7.3
125	30	15,284	-67.8		03	6.8
100	30	16,625	-67.6		06	6.7
80	29	17,978	-65.1		08	7.5
70	29	18,794	-63.1		08	9.[illegible]
60	29	19,749	-59.9		08	11.4
50	29	20,898	-56.3		09	13.4
40	29	22,324	-53.5		09	14.5
30	27	24,189	-49.9		09	15.9
25	27	25,384	-48.5		09	18.0
20	25	26,856	-46.1		09	19.9
15	24	28,779	-42.9		09	22.2
10	18	31,535	-37.8		09	25.0
7	7	33,948	-35.6			
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4						

LANDER, WYO. — 833 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1,696	14.6	4.0	24	1.9
1000	31	115				
950	31	562				
900	31	1,026				
850	31	1,523				
800	31	2,039	16.6	1.9	29	1.3
750	31	2,583	13.9	-1.1	25	2.1
700	31	3,165	9.9	-4.0	25	3.[illegible]
650	31	3,773	5.6	-7.8	27	6.7
600	31	4,426	.6	-11.9	28	[illegible].5
550	31	5,112	-4.8	-15.8	27	9.5
500	31	5,861	-10.4	-20.8	27	9.3
450	31	6,663	-15.6	-28.3	27	9.7
400	31	7,546	-21.4	-35.7	28	11.3
350	31	8,517	-28.8	-42.6	27	13.6
300	31	9,603	-37.1	-49.0	27	17.7
250	31	10,839	-46.2		27	21.2
200	31	12,292	-54.7		27	24.2
175	31	13,140	-57.9		27	24.0
150	30	14,104	-60.6		27	20.3
125	30	15,232	-62.7		27	16.[illegible]
100	30	16,604	-62.8		27	9.1
80	30	17,985	-61.2		28	3.5
70	30	18,816	-59.3		27	.7
60	30	19,789	-57.0		09	2.7
50	30	20,949	-54.9		08	4.6
40	30	22,384	-51.9		08	5.8
30	28	24,254	-48.8		09	7.6
25	27	25,461	-46.7		08	8.4
20	27	26,950	-43.9		09	9.8
15	25	28,888	-40.7		09	10.6
10	20	31,679	-35.3		09	13.2
7						
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* LIHUE KAUAI, HAWAII — 1014 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	36	23.7	21.4	06	3.5
1000	31	153	24.0	20.8	06	5.0
950	31	599	20.9	18.7	07	7.3
900	31	1,068	17.6	14.9	08	7.3
850	31	1,555	14.6	11.3	08	7.0
800	31	2,067	12.8	5.3	08	6.5
750	31	2,603	10.9	-1.0	09	5.8
700	31	3,181	8.1	-6.6	09	4.7
650	31	3,787	5.0	-11.2	09	3.6
600	31	4,439	1.2	-14.5	11	3.0
550	31	5,127	-3.1	-19.1	12	2.6
500	31	5,882	-8.3	-23.0	13	1.7
450	31	6,687	-14.1	-26.7	17	1.5
400	31	7,575	-20.5	-31.8	19	1.5
350	31	8,549	-27.8	-38.0	23	2.5
300	31	9,637	-36.5	-46.6	25	5.2
250	31	10,874	-46.4		26	8.0
200	31	12,319	-57.2		26	11.4
175	31	13,154	-62.2		26	11.1
150	31	14,098	-65.1		26	8.3
125	31	15,203	-67.0		24	3.7
100	31	16,545	-68.6		11	3.2
80	31	17,884	-67.5		10	8.3
70	31	18,691	-65.3		09	11.6
60	31	19,633	-62.7		09	14.8
50	31	20,766	-59.4		09	17.7
40	31	22,174	-56.1		09	20.4
30	31	24,017	-52.7		09	23.8
25	31	25,199	-50.9		09	24.1
20	31	26,659	-48.3		09	24.2
15	31	28,566	-45.3		09	25.9
10	28	31,279	-42.4		09	28.2
7	23	33,701	-38.6		09	31.7
5	20	36,041	-34.0		09	36.0
4	8	37,616	-31.7			

LITTLE ROCK, ARK. — 1009 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	79	20.8	19.8	22	.[illegible]
1000	31	157	21.5	19.5	22	1.5
950	31	599	21.9	17.3	24	3.9
900	31	1,074	19.5	14.4	24	3.5
850	31	1,565	16.8	10.1	24	3.7
800	31	2,081	13.8	6.3	24	3.5
750	31	2,612	10.8	.5	24	[illegible].8
700	31	3,196	7.6	-3.5	25	2.9
650	31	3,793	3.8	-6.9	25	2.2
600	31	4,450	.0	-10.4	26	2.6
550	31	5,134	-3.9	-14.4	26	2.8
500	31	5,891	-8.1	-19.6	28	2.4
450	31	6,695	-13.3	-25.5	28	2.4
400	31	7,591	-19.0	-31.3	31	2.9
350	31	8,572	-25.8	-38.3	32	3.6
300	31	9,671	-33.8	-45.7	34	4.1
250	31	10,923	-43.6		33	6.4
200	31	12,388	-54.7		33	9.5
175	31	13,232	-59.9		34	9.6
150	31	14,184	-64.4		34	8.7
125	31	15,290	-67.4		35	5.1
100	30	16,635	-66.4		01	5.2
80	30	17,997	-63.1		05	5.4
70	30	18,821	-61.0		07	6.2
60	30	19,785	-58.7		08	8.4
50	30	20,938	-56.0		09	9.5
40	28	22,365	-52.6		09	10.2
30	28	24,234	-49.9		09	11.6
25	28	25,430	-48.1		09	13.4
20	27	26,910	-44.7		09	15.9
15	25	28,847	-41.7		09	16.8
10	11	31,587	-38.6			
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MCGRATH, ALASKA — 1002 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	103	12.2	8.6	26	1.2
1000	29	123			29	1.5
950	29	557	14.2	6.3	22	1.8
900	29	1,011	11.3	3.9	19	2.0
850	29	1,486	7.9	1.5	17	2.7
800	29	1,984	4.2	-.6	17	3.3
750	29	2,503	.4	-3.2	16	4.1
700	29	3,056	-3.2	-8.6	16	4.4
650	29	3,636	-6.8	-14.8	16	4.7
600	29	4,260	-10.4	-20.9	16	4.6
550	29	4,921	-14.3	-25.4	16	5.4
500	29	5,641	-18.8	-30.2	15	5.2
450	29	6,412	-24.1	-35.9	15	5.1
400	28	7,269	-30.4	-41.1	16	5.2
350	28	8,204	-37.7	-47.3	16	4.7
300	28	9,249	-45.5		17	4.4
250	28	10,443	-52.4		16	1.6
200	28	11,879	-52.0		08	1.2
175	28	12,750	-49.2		11	.8
150	28	13,762	-48.5		13	1.1
125	27	14,966	-48.2		14	1.2
100	27	16,436	-47.8		11	2.2
80	27	17,911	-47.2		11	2.7
70	27	18,795	-46.9		10	3.1
60	26	19,818	-46.4		09	3.9
50	26	21,030	-45.9		09	4.9
40	26	22,517	-45.1		09	5.9
30	25	24,443	-43.7		09	7.8
25	24	25,672	-42.5		09	8.[illegible]
20	23	27,183	-40.5		09	9.4
15	15	29,173	-37.8		09	10.0
10	5	32,022	-32.7			
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+ MAJURO, MARSHALL IS. — 1011 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	[illegible]	28.5	24.9	08	3.4
1000	31	97	26.9	21.8	09	4.1
950	31	544	23.2	18.8	09	5.[illegible]
900	31	1,021	20.6	15.3	10	6.6
850	31	1,514	18.0	12.3	10	6.4
800	31	2,032	15.3	8.8	10	7.3
750	31	2,579	12.8	4.6	10	7.2
700	31	3,156	9.7	.6	10	7.7
650	31	3,766	6.2	-2.2	10	8.2
600	31	4,421	2.5	-5.6	10	7.1
550	31	5,112	-1.2	-10.2	09	5.9
500	31	5,877	-5.4	-14.9	09	5.4
450	31	6,694	-10.0	-20.8	10	5.9
400	31	7,600	-15.1	-27.4	11	4.6
350	31	8,597	-21.9	-35.2	11	4.[illegible]
300	31	9,713	-30.1	-43.7	12	3.8
250	31	10,985	-40.3	-50.9	13	3.2
200	31	12,468	-52.9		19	[illegible].2
175	31	13,316	-59.9		22	3.5
150	31	14,263	-67.4		24	4.4
125	31	15,342	-74.7		24	5.5
100	31	16,626	-77.3		21	1.5
80	30	17,921	-71.9		09	5.5
70	28	18,719	-67.9		09	[illegible].3
60	28	19,653	-64.2		09	11.8
50	28	20,777	-61.0		09	17.9
40	27	22,174	-57.6		09	26.4
30	26	24,008	-52.7		09	32.7
25	25	25,196	-49.2		09	35.4
20	23	26,676	-44.8		09	30.5
15	21	28,616	-40.9		09	19.4
10	7	31,359	-38.0			
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* MEDFORD, OREG. — 970 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	401	15.3	9.9	26	.6
1000	31	137				
950	31	580	17.6	8.7	28	1.1
900	31	1,038	16.5	7.1	29	1.4
850	31	1,524	15.0	[illegible].5	12	.2
800	31	2,037	14.0	-2.9	18	1.0
750	31	2,580	11.6	-6.1	22	4.5
700	31	3,152	8.1	-10.1	22	6.3
650	31	3,758	4.4	-14.7	22	7.6
600	31	4,407	.2	-17.8	22	[illegible]
550	31	5,091	-4.6	-21.2	23	10.2
500	31	5,843	-9.4	-24.8	24	11.4
450	31	6,645	-15.2	-30.3	24	11.[illegible]
400	31	7,529	-21.8	-37.1	25	13.7
350	31	8,499	-29.3	-43.3	25	15.1
300	31	9,581	-37.8	-50.7	25	16.3
250	31	10,813	-47.1		25	18.6
200	31	12,260	-55.4		25	21.8
175	31	13,107	-57.7		24	22.0
150	31	14,075	-59.5		24	19.0
125	31	15,210	-61.3		25	14.5
100	31	16,591	-61.8		24	7.7
80	31	17,980	-59.8		21	[illegible].0
70	31	18,816	-58.3		13	1.7
60	31	19,789	-56.6		09	2.9
50	31	20,950	-54.8		09	4.0
40	31	22,384	-52.4		08	5.4
30	30	24,255	-49.3		09	7.2
25	30	25,456	-47.1		09	8.2
20	29	26,944	-44.7		09	9.4
15	29	28,884	-41.1		09	10.9
10	27	31,671	-36.0		09	12.9
7	20	34,175	-31.0		09	15.6
5	10	36,600	-25.8			

MERIDA, MEXICO — 1017 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	11	22.5	22.2	10	3.3
1000	30	157	24.3	23.5	10	5.9
950	30	606	23.2	18.9	12	7.1
900	30	1,079	20.8	13.7	11	7.2
850	30	1,572	18.0	9.6	11	6.8
800	30	2,089	15.2	4.0	11	[illegible].3
750	30	2,626	12.0	.4	11	5.3
700	30	3,207	8.4	-4.0	11	5.6
650	30	3,809	5.0	-7.5	10	5.5
600	30	4,464	1.1	-11.9	10	5.5
550	30	5,151	-2.9	-16.0	09	5.5
500	30	5,909	-7.5	-21.0	08	4.5
450	30	6,715	-12.7	-24.4	08	4.5
400	30	7,612	-18.6	-30.2	06	4.4
350	29	8,593	-25.4	-38.5	05	3.6
300	29	9,693	-33.7	-47.5	01	2.6
250	29	10,947	-43.3		36	3.4
200	29	12,411	-54.7		33	3.8
175	29	13,253	-60.7		32	5.0
150	28	14,198	-65.9		35	4.1
125	28	15,295	-68.8		03	4.1
100	28	16,628	-69.5		06	9.0
80	28	17,963	-68.0		09	12.8
70	27	18,765	-65.3		09	14.7
60	27	19,713	-61.7		08	16.7
50	27	20,853	-57.7		08	20.2
40	27	22,268	-54.8		09	22.1
30	27	24,127	-50.6		09	23.0
25	27	25,321	-48.1		08	22.2
20	26	26,803	-45.3		08	20.9
15	20	28,741	-42.9		08	22.6
10						
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MIAMI, FLA. — 1019 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	4	25.3	22.5	10	1.3
1000	31	166	26.0	23.0	11	3.4
950	31	612	22.6	20.1	13	5.5
900	31	1,088	19.9	15.4	13	5.0
850	31	1,580	17.2	10.6	13	4.9
800	31	2,096	14.3	6.2	12	4.6
750	31	2,638	11.2	2.7	12	3.7
700	31	3,213	8.1	-2.2	11	3.1
650	31	3,816	4.6	-6.8	12	2.7
600	31	4,470	.8	-11.5	13	2.6
550	31	5,158	-3.4	-15.7	13	2.5
500	31	5,913	-8.0	-20.3	12	2.7
450	31	6,719	-13.0	-25.3	12	3.0
400	31	7,613	-18.9	-31.5	10	2.8
350	31	8,595	-25.8	-38.2	10	2.4
300	31	9,693	-34.2	-47.1	08	2.9
250	31	10,943	-44.1		07	3.4
200	31	12,405	-55.0		06	[illegible].0
175	30	13,248	-60.2		07	4.[illegible]
150	29	14,202	-64.5		07	3.[illegible]
125	29	15,309	-66.8		07	4.3
100	29	16,651	-68.4		09	6.4
80	29	17,992	-66.7		08	9.5
70	29	18,802	-64.6		08	12.4
60	27	19,749	-61.2		09	16.1
50	27	20,892	-57.1		09	18.8
40	27	22,317	-53.2		10	19.3
30	26	24,185	-49.8		09	19.0
25	24	25,376	-47.7		09	18.7
20	23	26,861	-45.0		09	20.2
15	18	28,796	-42.6		09	22.5
10	16	31,547	-39.0		09	27.1
7	7	33,983	-35.2			
5						

MIDLAND, TEXAS — 919 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	874	20.7	16.6	14	3.2
1000	31	130				
950	31	578				
900	31	1,050	20.8	15.9	16	6.7
850	31	1,545	19.4	13.3	18	8.6
800	31	2,066	16.9	9.5	18	4.4
750	31	2,608	13.4	6.1	16	2.3
700	31	3,192	10.0	1.2	12	1.9
650	31	3,798	6.1	-2.0	10	1.8
600	31	4,456	1.9	-5.8	12	1.7
550	31	5,143	-2.6	-10.4	14	1.1
500	31	5,904	-7.3	-15.7	14	.9
450	31	6,710	-12.2	-22.7	17	.5
400	31	7,611	-17.4	-28.1	07	.7
350	31	8,598	-24.4	-35.5	35	1.4
300	31	9,703	-32.9	-43.8	35	1.5
250	31	10,961	-42.8		34	2.[illegible]
200	31	12,429	-54.3		34	2.5
175	31	13,273	-60.1		36	2.4
150	31	14,222	-65.5		03	3.[illegible]
125	31	15,320	-69.0		04	6.4
100	31	16,652	-69.3		06	7.3
80	30	17,994	-66.0		08	7.2
70	29	18,808	-63.1		08	8.0
60	29	19,761	-60.5		08	10.4
50	26	20,905	-57.1		09	12.0
40	25	22,329	-53.8		09	13.2
30	25	24,194	-49.5		09	15.6
25	23	25,393	-47.7		09	16.4
20	21	26,877	-45.5		09	17.9
15	21	28,806	-42.3		09	19.8
10	11	31,570	-37.4			
7						
5						

MONTERREY, MEXICO — 970 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	423	22.4	21.0	14	1.2
1000	29	155				
950	29	598	21.2	19.2	12	2.9
900	29	1,071	18.6	17.0	13	5.6
850	29	1,562	17.8	12.0	13	7.9
800	29	2,080	15.8	7.0	14	6.2
750	29	2,617	13.0	2.6	15	4.4
700	29	3,203	9.4	-.7	14	2.[illegible]
650	29	3,807	5.2	-3.8	14	2.[illegible]
600	29	4,464	.9	-7.0	13	1.6
550	29	5,151	-3.5	-12.6	10	2.5
500	29	5,906	-8.1	-18.2	09	3.1
450	29	6,713	-12.9	-23.6	08	4.0
400	29	7,608	-18.6	-30.4	07	4.1
350	29	8,592	-25.5	-38.4	07	4.4
300	29	9,692	-34.1	-46.4	06	4.6
250	28	10,945	-44.1		03	4.5
200	28	12,404	-56.0		02	4.[illegible]
175	28	13,241	-62.1		03	6.2
150	28	14,182	-67.2		04	6.7
125	28	15,274	-69.6		06	8.3
100	28	16,602	-69.6		07	10.1
80	27	17,939	-67.3		08	11.7
70	27	18,749	-64.1		08	12.4
60	27	19,699	-60.9		08	13.7
50	27	20,840	-58.3		08	16.5
40	27	22,255	-54.7		08	18.4
30	27	24,112	-50.8		08	20.1
25	27	25,306	-48.2		08	20.1
20	26	26,785	-45.3		08	20.8
15	22	28,720	-42.3		08	22.5
10	13	31,492	-38.0			
7						
5						

MONTGOMERY, ALA. — 1012 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	61	21.9	20.5	23	.4
1000	31	167	22.6	20.7	26	1.1
950	31	614	22.5	18.7	27	1.5
900	31	1,086	19.8	15.8	24	1.4
850	31	1,578	16.8	12.5	23	2.0
800	31	2,094	13.8	8.6	22	2.2
750	31	2,633	10.7	4.2	23	2.2
700	31	3,209	7.4	.4	22	2.4
650	31	3,809	3.8	-4.5	23	2.9
600	31	4,463	.1	-10.3	23	2.7
550	31	5,151	-3.7	-15.0	23	2.5
500	31	5,903	-7.9	-20.6	22	2.3
450	31	6,712	-12.8	-26.2	20	1.9
400	31	7,605	-18.6	-32.4	20	1.8
350	31	8,587	-25.6	-39.4	23	1.4
300	31	9,686	-33.8	-47.2	25	1.3
250	31	10,937	-43.8		24	2.1
200	31	12,399	-55.3		34	.4
175	31	13,240	-60.7		34	1.4
150	31	14,188	-65.3		36	1.6
125	31	15,291	-67.0		03	2.8
100	31	16,638	-66.1		05	2.7
80	31	17,997	-63.8		07	4.9
70	31	18,820	-61.4		07	7.3
60	31	19,783	-58.6		08	9.2
50	30	20,936	-55.7		09	10.9
40	30	22,366	-52.8		09	12.3
30	29	24,236	-49.2		09	14.1
25	28	25,437	-47.3		09	15.5
20	28	26,920	-44.6		09	16.[illegible]
15	28	28,860	-41.1		09	19.6
10	24	31,640	-36.9		09	23.0
7	14	34,126	-32.9			
5	5	36,518	-28.9			

* NANTUCKET, MASS. — 1019 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	14	19.1	17.2	26	1.8
1000	31	174	19.7	15.1	26	3.7
950	31	614	19.1	10.8	28	4.6
900	31	1,081	17.0	7.4	28	5.4
850	31	1,566	13.9	3.9	28	6.7
800	31	2,075	10.8	1.4	28	7.5
750	31	2,611	8.7	-5.6	28	8.3
700	31	3,179	6.1	-10.5	27	9.3
650	31	3,781	3.0	-15.0	27	10.9
600	31	4,428	-.6	-18.3	27	11.6
550	31	5,113	-4.8	-22.3	27	12.8
500	31	5,861	-9.3	-27.3	27	12.9
450	31	6,665	-14.6	-31.7	27	15.0
400	31	7,550	-20.6	-36.3	27	16.2
350	31	8,525	-27.6	-41.5	27	17.8
300	31	9,617	-35.8	-48.5	27	19.9
250	31	10,859	-45.3		27	21.4
200	31	12,313	-55.9		27	22.0
175	30	13,156	-60.0		26	21.2
150	30	14,111	-63.2		26	17.6
125	30	15,231	-62.9		27	12.8
100	30	16,609	-61.2		27	7.7
80	30	18,001	-58.6		27	3.1
70	30	18,843	-56.9		22	.4
60	30	19,874	-55.2		08	2.1
50	28	20,993	-53.1		09	4.5
40	28	22,439	-50.7		09	5.3
30	25	24,327	-47.7		09	8.3
25	24	25,537	-45.9		09	9.8
20	24	27,029	-43.6		09	10.8
15	22	28,985	-40.4		09	12.4
10	18	31,790	-34.9		09	13.5
7	13	34,313	-29.7			
5						

See reference note at end of table

RAWINSONDE DATA

Average monthly values

JULY 1968

Columns: Standard pressure surface (mb.) | No. of observations | Dynamic height | Temperature | Dew Point | Resultant Wind: Direction | Resultant Wind: Speed M.p.s.

NASHVILLE, TENN. 999 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	180	20.5	19.2	14	.8
1000	31	172			10	.9
950	31	616	22.0	15.9	26	2.2
900	31	1,087	19.4	12.6	26	2.9
850	31	1,577	16.2	9.4	26	3.1
800	31	2,091	13.1	4.9	26	3.0
750	31	2,629	10.1	-.8	26	3.4
700	31	3,202	6.8	-4.1	26	3.1
650	31	3,804	3.4	-8.8	26	3.2
600	31	4,453	-.4	-11.2	26	3.6
550	31	5,137	-4.3	-15.9	25	4.0
500	31	5,890	-8.7	-21.0	26	4.4
450	31	6,692	-13.6	-27.7	27	4.6
400	31	7,586	-19.2	-33.7	27	5.4
350	31	8,566	-26.2	-39.6	27	5.7
300	31	9,663	-34.6	-47.6	27	6.2
250	31	10,910	-44.4		27	6.8
200	31	12,370	-55.0		29	7.9
175	31	13,212	-60.0		30	7.4
150	31	14,166	-63.8		31	6.8
125	31	15,277	-66.0		32	4.8
100	31	16,630	-65.5		32	2.6
80	31	17,997	-62.7		04	3.2
70	31	18,824	-60.1		05	4.7
60	31	19,791	-57.5		07	6.9
50	30	20,949	-54.9		09	7.8
40	29	22,384	-51.8		09	8.7
30	29	24,257	-49.1		09	10.2
25	27	25,469	-47.0		09	11.5
20	26	26,952	-44.7		08	12.7
15	26	28,887	-42.2		09	15.5
10	12	31,643	-37.9		09	16.1
7	5	34,094	-37.1			

* NOME, ALASKA 1012 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	5	10.1	5.0	10	.5
1000	31	103	11.2	5.3	14	.8
950	31	531	10.4	4.9	16	2.8
900	31	981	8.2	2.5	17	4.2
850	31	1,451	5.5	.4	18	4.8
800	31	1,944	2.4	-2.4	18	5.2
750	31	2,464	-.6	-6.0	17	5.9
700	31	3,013	-3.8	-10.1	17	5.7
650	31	3,593	-7.0	-14.5	18	5.6
600	31	4,217	-10.4	-19.5	19	5.2
550	31	4,877	-14.3	-25.5	19	5.1
500	31	5,600	-19.1	-31.0	19	3.9
450	31	6,373	-24.5	-35.1	20	3.3
400	31	7,226	-30.6	-39.9	22	3.1
350	31	8,161	-37.6	-44.7	24	2.8
300	31	9,207	-45.4		27	2.6
250	31	10,404	-52.1		27	2.1
200	30	11,846	-51.2		27	2.5
175	30	12,717	-49.7		22	1.3
150	30	13,728	-48.9		17	.8
125	30	14,927	-48.7		12	1.1
100	30	16,397	-47.8		13	2.2
80	30	17,871	-47.3		11	2.8
70	30	18,753	-47.0		10	3.0
60	30	19,776	-46.6		09	4.0
50	30	20,987	-46.0		09	4.9
40	30	22,474	-45.1		09	6.5
30	30	24,400	-43.8		09	8.1
25	30	25,628	-42.3		08	9.3
20	30	27,142	-40.4		09	9.8
15	26	29,121	-37.2		08	10.9
10	17	31,936	-33.4		09	11.1
7	12	34,443	-29.5			

NORTH PLATTE, NEBR. 920 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	848	16.5	13.0	10	.8
1000	31	128				
950	31	570				
900	31	1,035	18.4	12.9	16	2.3
850	31	1,526	18.6	9.8	22	3.7
800	31	2,044	16.4	5.8	24	3.8
750	31	2,588	13.0	1.6	26	3.0
700	31	3,167	9.1	-2.9	27	2.8
650	31	3,771	4.8	-6.8	28	3.6
600	31	4,424	.3	-10.9	29	5.6
550	31	5,110	-4.2	-15.2	28	6.7
500	31	5,861	-8.9	-21.4	28	8.1
450	31	6,666	-14.2	-26.3	28	9.2
400	31	7,553	-20.3	-32.3	28	10.9
350	31	8,529	-27.0	-40.0	28	14.0
300	31	9,621	-35.4	-46.9	28	16.5
250	31	10,866	-44.7		28	17.5
200	31	12,325	-54.9		28	20.7
175	30	13,169	-58.2		28	20.7
150	30	14,130	-61.7		29	19.6
125	30	15,252	-63.8		29	14.4
100	30	16,619	-64.0		30	8.4
80	30	17,993	-61.6		32	3.4
70	30	18,823	-59.8		02	2.4
60	30	19,793	-57.3		06	3.8
50	30	20,953	-54.5		07	4.8
40	30	22,392	-51.4		08	6.3
30	29	24,273	-48.5		09	7.6
25	29	25,478	-46.5		09	8.6
20	29	26,967	-43.7		09	9.9
15	28	28,908	-40.7		09	11.0
10	19	31,684	-36.6		08	12.7
7	6	34,171	-34.0			

OAKLAND, CALIF. 1014 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	6	13.5	11.7	26	1.3
1000	31	126	13.0	11.2	25	1.7
950	31	569	16.5	6.0	25	3.1
900	31	1,025	22.3	-3.1	28	4.5
850	31	1,520	21.1	-5.0	27	2.8
800	31	2,041	18.0	-6.9	24	2.4
750	31	2,588	14.5	-8.8	22	2.2
700	31	3,167	10.8	-10.8	21	2.7
650	31	3,775	6.6	-14.0	20	3.6
600	31	4,431	2.1	-17.1	20	4.3
550	31	5,115	-2.7	-20.8	20	4.3
500	31	5,875	-7.9	-25.5	22	4.2
450	31	6,681	-13.8	-30.5	23	4.9
400	31	7,570	-20.5	-37.1	23	6.2
350	31	8,544	-27.7	-44.0	24	7.5
300	31	9,633	-36.2	-50.9	23	8.5
250	31	10,873	-45.4		23	10.8
200	31	12,331	-54.1		23	12.4
175	31	13,179	-58.2		23	13.8
150	31	14,141	-62.1		23	12.0
125	31	15,259	-64.9		23	8.7
100	31	16,618	-65.2		22	4.0
80	31	17,984	-62.8		16	2.1
70	31	18,809	-60.9		11	3.1
60	31	19,773	-58.3		10	4.7
50	31	20,926	-55.9		09	6.3
40	31	22,354	-53.1		09	7.8
30	30	24,221	-50.2		08	10.2
25	30	25,418	-47.9		09	11.0
20	29	26,898	-45.4		09	12.1
15	28	28,834	-41.8		09	13.9
10	15	31,579	-38.1			

OMAHA, NEBR. 970 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	403	19.3	16.0	18	1.5
1000	31	138				
950	31	580	20.3	14.0	20	3.1
900	31	1,049	19.4	10.3	23	5.6
850	31	1,540	17.0	8.4	26	6.4
800	31	2,056	14.1	4.6	26	6.6
750	31	2,594	10.6	-.1	27	5.9
700	31	3,170	6.9	-3.2	28	5.3
650	31	3,769	3.0	-8.5	27	6.4
600	31	4,419	-.9	-14.6	27	6.9
550	31	5,101	-4.9	-20.3	27	7.4
500	31	5,853	-9.3	-24.9	28	7.9
450	31	6,653	-14.9	-30.2	29	9.5
400	31	7,541	-21.0	-35.4	29	11.6
350	31	8,516	-27.5	-41.1	29	14.4
300	31	9,608	-35.6	-47.9	28	15.8
250	30	10,846	-45.1		28	19.3
200	30	12,303	-54.8		28	19.6
175	30	13,148	-59.0		28	20.0
150	30	14,107	-62.0		29	18.5
125	30	15,228	-63.7		29	13.2
100	30	16,596	-63.1		31	8.2
80	30	17,974	-60.9		33	3.9
70	30	18,807	-59.2		36	2.7
60	29	19,776	-56.7		05	3.1
50	28	20,937	-54.3		06	4.8
40	28	22,376	-51.6		09	6.5
30	27	24,255	-48.6		09	7.5
25	26	25,460	-46.6		08	8.9
20	26	26,948	-44.1		09	10.1
15	23	28,894	-40.8		08	11.2
10	17	31,686	-34.9		09	13.0

+ PAGO PAGO, AMERICAN SAMOA 1013 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	5	27.9	23.3	10	5.4
1000	31	117	26.2	20.3	10	6.2
950	31	568	22.1	17.2	09	6.7
900	31	1,036	18.8	13.2	09	6.8
850	31	1,525	16.1	8.9	08	6.7
800	31	2,039	14.4	3.3	08	5.4
750	31	2,577	13.2	-4.1	08	4.0
700	30	3,161	10.3	-7.9	08	3.0
650	30	3,770	7.4	-11.6	09	3.1
600	30	4,429	3.7	-16.0	09	3.0
550	30	5,120	-.7	-21.0	09	2.5
500	30	5,885	-5.6	-24.4	10	1.2
450	30	6,694	-10.8	-29.3	28	.1
400	30	7,601	-16.9	-34.7	24	3.6
350	30	8,590	-24.0	-41.0	24	7.5
300	30	9,697	-32.1	-47.9	24	11.5
250	30	10,959	-42.0		24	14.7
200	30	12,434	-53.6		24	16.3
175	30	13,280	-60.0		24	15.3
150	30	14,228	-66.5		24	12.5
125	30	15,314	-72.7		25	9.8
100	30	16,609	-76.5		26	6.4
80	30	17,905	-72.0		28	2.5
70	30	18,701	-66.2		23	1.1
60	30	19,649	-61.7		11	1.2
50	30	20,787	-58.6		09	6.1
40	30	22,198	-56.1		08	9.8
30	29	24,042	-52.8		09	12.1
25	29	25,228	-49.4		09	12.7
20	28	26,701	-46.8		09	11.5
15	24	28,607	-45.6		08	4.5
10	15	31,344	-40.5		26	11.7

* PEORIA, ILL. 995 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	200	18.2	16.2	18	1.0
1000	31	155				
950	31	598	20.2	13.3	24	3.7
900	31	1,063	17.4	10.1	27	5.3
850	31	1,550	14.8	5.6	28	6.0
800	31	2,062	12.4	-.3	28	6.5
750	31	2,599	9.5	-3.2	27	6.7
700	31	3,171	6.2	-6.9	27	6.9
650	31	3,770	2.5	-10.9	27	7.4
600	31	4,418	-1.1	-15.5	27	8.3
550	31	5,101	-5.0	-19.9	27	8.9
500	31	5,850	-9.7	-22.9	27	9.1
450	31	6,655	-14.8	-28.2	28	9.2
400	31	7,538	-20.8	-34.7	28	9.6
350	31	8,512	-27.9	-41.2	28	10.6
300	31	9,602	-36.1	-46.8	29	12.3
250	31	10,843	-45.4		29	14.4
200	31	12,298	-55.5		29	16.6
175	31	13,139	-60.1		29	16.7
150	31	14,094	-62.9		29	15.1
125	31	15,212	-64.2		29	11.4
100	31	16,578	-63.1		30	6.9
80	31	17,959	-60.6		34	3.8
70	31	18,792	-58.7		01	2.9
60	31	19,766	-56.4		06	3.1
50	31	20,930	-54.1		08	4.8
40	31	22,370	-51.4		08	6.1
30	30	24,253	-48.7		09	7.5
25	30	25,455	-47.0		08	8.9
20	30	26,939	-44.7		09	10.1
15	30	28,879	-40.8		09	12.1
10	29	31,665	-36.3		09	14.5
7	25	34,159	-32.7		09	17.0
5	13	36,565	-26.7			

* PITTSBURGH, PA. 978 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	359	17.6	15.5	24	.8
1000	31	168				
950	31	610	19.5	13.4	26	3.0
900	31	1,073	17.1	10.9	28	4.4
850	31	1,559	14.1	7.3	28	5.5
800	31	2,069	11.5	1.3	27	6.5
750	31	2,602	8.9	-4.1	27	7.9
700	31	3,174	5.8	-7.2	27	8.6
650	31	3,776	2.5	-11.1	27	8.9
600	31	4,421	-1.1	-16.4	27	10.0
550	31	5,105	-4.9	-21.0	27	10.0
500	31	5,854	-9.5	-25.9	26	10.9
450	31	6,657	-14.6	-30.4	26	12.3
400	31	7,543	-20.7	-36.6	26	13.0
350	31	8,517	-27.9	-42.3	27	14.5
300	31	9,606	-36.1	-48.9	26	15.9
250	31	10,847	-45.5		27	17.1
200	31	12,303	-55.5		27	18.0
175	31	13,145	-59.8		27	16.9
150	31	14,102	-62.2		28	14.6
125	31	15,223	-63.2		28	10.6
100	31	16,598	-62.3		28	6.4
80	31	17,986	-59.0		29	2.6
70	31	18,826	-57.0		03	.8
60	31	19,806	-54.9		08	2.3
50	31	20,976	-52.8		08	3.5
40	31	22,422	-50.5		09	4.7
30	31	24,309	-47.6		09	5.9
25	31	25,517	-45.9		09	6.7
20	31	27,009	-43.6		09	8.0
15	29	28,953	-40.2		09	9.9
10	25	31,749	-35.3		09	12.2
7	13	34,259	-31.2		09	13.7

+ PONAPE, CAROLINE IS. 1005 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	39	27.4	24.1	07	1.0
1000	31	85	26.9	23.4	07	1.1
950	31	531	23.7	19.5	11	2.4
900	31	1,009	20.9	16.2	11	3.7
850	31	1,503	18.2	12.9	11	4.3
800	31	2,021	15.4	9.4	10	4.8
750	31	2,566	12.5	5.8	10	5.1
700	31	3,143	9.5	2.7	10	5.3
650	31	3,752	6.2	-1.1	10	5.9
600	31	4,408	2.5	-5.4	10	7.0
550	31	5,106	-1.1	-10.0	10	7.0
500	31	5,864	-5.1	-15.0	09	6.3
450	31	6,685	-9.6	-21.3	09	6.5
400	31	7,588	-15.0	-28.2	09	6.0
350	31	8,585	-21.9	-35.4	09	5.1
300	31	9,701	-30.2	-43.1	09	4.4
250	31	10,972	-40.4	-50.9	06	4.1
200	31	12,452	-52.9		04	3.5
175	31	13,300	-60.0		01	3.9
150	31	14,245	-67.1		36	3.9
125	31	15,325	-74.3		35	2.5
100	31	16,609	-77.4		35	.1
80	31	17,905	-71.5		08	8.7
70	31	18,699	-68.1		09	9.9
60	31	19,630	-64.9		09	11.3
50	31	20,752	-61.8		09	17.6
40	30	22,143	-58.8		09	27.5
30	29	23,973	-53.5		09	33.2
25	27	25,154	-49.9		09	35.5
20	27	26,627	-45.8		09	33.7
15	26	28,560	-42.5		09	18.7
10	21	31,326	-38.9		09	13.3
7	8	33,774	-36.1			

PORTLAND, MAINE 1016 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	20	18.4	14.3	26	1.6
1000	31	154	18.8	12.7	27	2.7
950	31	594	19.0	10.0	28	4.5
900	31	1,059	16.3	7.7	27	5.4
850	31	1,543	12.9	4.9	27	6.0
800	31	2,050	9.8	-.5	27	7.9
750	31	2,578	7.0	-4.4	27	9.4
700	31	3,146	4.3	-10.1	27	11.3
650	31	3,744	1.4	-14.7	27	13.3
600	31	4,389	-2.1	-18.5	27	14.7
550	31	5,067	-6.3	-23.1	27	15.1
500	31	5,814	-10.9	-27.7	27	16.3
450	31	6,607	-16.2	-33.2	27	16.6
400	31	7,493	-22.3	-38.6	27	18.4
350	31	8,460	-29.5	-43.5	27	20.4
300	31	9,542	-37.5	-50.1	27	22.3
250	31	10,776	-46.5		27	21.6
200	31	12,225	-55.4		27	21.6
175	31	13,069	-58.7		27	20.4
150	31	14,032	-60.4		27	18.5
125	31	15,168	-60.8		27	14.2
100	31	16,560	-59.3		27	9.4
80	31	17,966	-56.9		27	3.1
70	31	18,813	-55.5		27	.7
60	30	19,800	-53.9		09	1.3
50	29	20,973	-52.2		09	3.8
40	27	22,425	-49.9		09	6.0
30	24	24,321	-47.0		09	6.9
25	23	25,532	-45.5		08	8.1
20	19	27,038	-43.2		09	9.1
15	18	28,994	-39.7		09	10.1
10	10	31,767	-34.0			
7	7	34,291	-30.2			

* QUILLAYUTE, WASH. 1012 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	58	11.2	10.7	07	.4
1000	31	152	12.0	10.5	05	.5
950	31	587	13.8	5.5	33	2.0
900	31	1,039	12.7	2.5	31	1.6
850	31	1,517	10.5	.0	25	1.2
800	31	2,020	8.2	-5.4	22	2.3
750	31	2,547	5.6	-11.2	23	3.3
700	31	3,111	2.6	-14.2	22	4.7
650	31	3,703	-.6	-17.7	24	5.8
600	31	4,342	-4.3	-20.2	24	7.4
550	31	5,015	-8.6	-22.8	24	8.7
500	31	5,755	-13.9	-26.6	24	10.1
450	31	6,540	-19.4	-33.2	24	11.8
400	31	7,411	-25.8	-38.2	24	13.3
350	31	8,363	-33.1	-44.2	25	15.0
300	31	9,427	-41.3	-49.3	25	16.8
250	31	10,640	-50.2		24	18.5
200	31	12,075	-55.5		25	20.4
175	31	12,927	-54.6		25	19.6
150	31	13,914	-54.3		25	17.3
125	31	15,080	-55.3		25	13.4
100	31	16,502	-55.5		25	8.8
80	31	17,926	-55.1		24	4.6
70	31	18,778	-54.6		24	1.6
60	31	19,765	-53.8		12	.5
50	31	20,939	-52.7		09	2.2
40	31	22,385	-50.9		08	3.7
30	31	24,269	-48.2		09	5.3
25	31	25,475	-46.3		09	6.8
20	31	26,965	-43.9		09	7.7
15	29	28,909	-40.6		09	9.8
10	25	31,702	-35.7		09	11.2
7	17	34,214	-31.0		09	13.1
5	9	36,619	-27.0			
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RAPID CITY, S. DAK. 907 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	966	14.7	10.6	33	2.3
1000	31	125				
950	31	568				
900	31	1,029			31	1.5
850	31	1,516	17.6	7.8	29	3.0
800	31	2,034	15.8	4.7	26	2.9
750	31	2,572	12.6	1.8	27	3.4
700	31	3,155	8.8	-2.3	27	4.9
650	31	3,756	4.4	-6.8	27	5.8
600	31	4,410	-.4	-11.0	27	6.5
550	31	5,088	-5.5	-15.3	28	8.7
500	31	5,841	-10.7	-20.5	28	9.9
450	31	6,642	-15.9	-27.9	28	11.0
400	31	7,522	-22.1	-34.8	28	12.9
350	31	8,489	-29.3	-41.3	28	15.7
300	31	9,572	-37.4	-47.1	28	19.5
250	31	10,806	-46.5		28	21.4
200	31	12,257	-55.0		28	24.3
175	31	13,105	-57.6		28	23.6
150	31	14,073	-59.7		28	22.8
125	31	15,208	-61.0		28	17.4
100	31	16,594	-60.6		28	10.5
80	31	17,984	-59.5		30	4.0
70	31	18,822	-58.2		33	2.0
60	31	19,797	-56.0		04	2.0
50	31	20,962	-54.0		07	2.6
40	31	22,403	-51.0		08	4.5
30	29	24,288	-47.3		08	6.5
25	29	25,499	-45.3		09	7.5
20	28	26,994	-43.4		09	7.9
15	25	28,946	-39.7		08	10.6
10	11	31,748	-35.8			

ST CLOUD, MINN. 978 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	316	16.0	14.0	21	1.2
1000	31	129				
950	31	567	17.5	12.6	25	3.0
900	31	1,030	16.2	8.9	27	4.8
850	31	1,514	14.0	5.2	29	6.0
800	31	2,024	11.1	1.9	29	7.1
750	31	2,558	8.2	-2.4	29	8.7
700	31	3,128	5.0	-6.3	29	9.8
650	31	3,725	1.7	-12.1	29	11.8
600	31	4,371	-2.0	-16.9	29	12.6
550	31	5,047	-6.1	-21.1	29	13.9
500	31	5,798	-11.2	-26.0	29	15.0
450	31	6,591	-16.7	-31.7	29	16.4
400	31	7,475	-22.8	-37.7	29	18.6
350	31	8,441	-29.9	-44.0	29	19.9
300	31	9,521	-38.0	-50.0	28	22.7
250	30	10,755	-46.7		28	24.6
200	30	12,208	-54.7		28	26.4
175	30	13,057	-57.4		28	24.8
150	30	14,030	-58.1		28	22.2
125	30	15,176	-58.8		29	17.9
100	30	16,577	-58.5		29	11.7
80	30	17,983	-57.1		30	6.7
70	30	18,829	-55.7		31	3.6
60	30	19,816	-54.0		35	2.2
50	30	20,990	-52.3		05	2.6
40	30	22,440	-50.0		08	5.2
30	30	24,332	-46.8		09	6.1
25	30	25,544	-45.3		09	7.5
20	29	27,037	-42.6		09	8.5
15	29	28,990	-39.6		09	9.7
10	14	31,794	-34.5			

* ST PAUL IS., ALASKA 1011 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	10	6.8	6.6	16	2.1
1000	31	95	6.6	6.2	18	3.2
950	31	513	6.6	4.3	18	4.9
900	31	961	6.6	1.6	18	5.3
850	31	1,430	5.6	.1	18	5.2
800	31	1,925	3.8	-1.7	18	4.4
750	31	2,441	1.3	-5.6	19	4.3
700	31	3,001	-1.5	-7.4	19	3.8
650	31	3,581	-4.9	-12.5	19	3.3
600	31	4,215	-7.9	-16.7	20	3.3
550	31	4,880	-11.8	-22.5	21	2.7
500	31	5,612	-16.1	-26.6	20	2.6
450	31	6,385	-21.5	-31.5	23	3.1
400	31	7,255	-27.6	-37.1	25	3.4
350	31	8,201	-34.8	-45.5	27	4.3
300	31	9,258	-43.0		27	5.4
250	31	10,463	-51.5		28	6.3
200	31	11,898	-53.6		28	7.0
175	31	12,760	-51.5		28	4.8
150	31	13,763	-50.8		28	4.7
125	31	14,950	-50.9		28	2.5
100	31	16,405	-49.8		28	1.1
80	31	17,866	-49.4		10	.9
70	31	18,741	-49.1		10	1.8
60	31	19,752	-48.7		10	2.9
50	30	20,951	-48.2		10	3.8
40	30	22,422	-47.6		09	5.3
30	30	24,327	-46.3		09	6.7
25	30	25,541	-44.9		09	7.5
20	30	27,038	-43.1		09	9.4
15	28	28,990	-40.2		09	9.7
10	26	31,784	-35.6		08	12.2
7	21	34,310	-31.0		08	14.3
5	16	36,722	-27.2		09	17.3
4	7	38,328	-24.9			

SALEM, OREG. 1010 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	61	11.4	9.8	22	.8
1000	31	147	13.4	10.6	31	.5
950	31	582	14.2	9.0	01	2.4
900	31	1,038	13.7	6.8	36	2.9
850	31	1,520	13.4	.3	32	1.1
800	31	2,029	11.4	-5.1	22	1.8
750	31	2,561	8.7	-8.8	23	3.7
700	31	3,133	6.0	-12.3	23	5.7
650	31	3,732	2.4	-15.4	23	7.7
600	31	4,378	-1.8	-19.3	23	9.6
550	31	5,056	-6.1	-21.8	24	11.1
500	31	5,805	-11.3	-25.9	24	12.4
450	31	6,599	-16.8	-31.1	24	14.3
400	31	7,480	-23.4	-36.0	24	16.3
350	31	8,442	-30.6	-43.6	25	18.4
300	31	9,519	-38.7	-51.3	25	20.5
250	31	10,746	-47.9		25	22.9
200	31	12,188	-55.8		25	24.9
175	31	13,036	-56.3		25	24.8
150	31	14,013	-57.1		25	22.1
125	31	15,162	-58.5		25	16.2
100	31	16,564	-58.7		24	8.6
80	31	17,970	-58.0		25	3.5
70	31	18,812	-57.1		22	.7
60	31	19,786	-55.5		09	1.6
50	31	20,953	-53.6		09	3.0
40	30	22,399	-51.3		08	4.9
30	27	24,281	-48.3		09	6.9
25	27	25,487	-46.3		08	7.4
20	26	26,980	-43.4		08	8.6
15	25	28,928	-40.1		09	9.4
10	19	31,733	-35.4		09	9.7
7	9	34,230	-30.8			

See reference note at end of table

RAWINSONDE DATA

Average monthly values

JULY 1968

Columns: Standard pressure surface (mb) | No. of observations | Dynamic height | Temperature | Dew Point | Resultant Wind: Direction | Resultant Wind: Speed M.p.s.

SALT LAKE CITY, UTAH 873 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Direction	Speed M.p.s.
SURFACE	31	1,288	18.6	7.2	16	2.5
1000	31	96				
950	31	545				
900	31	1,017				
850	31	1,515	22.3	6.[illegible]	16	4.8
800	31	2,040	20.1	3.0	18	5.2
750	31	2,592	16.3	.3	20	3.0
700	31	3,175	12.0	-2.5	24	2.4
650	31	3,790	7.1	-5.4	24	2.8
600	31	4,443	1.7	-8.3	25	3.9
550	31	5,134	-3.9	-13.6	26	4.9
500	31	5,883	-9.2	-20.5	27	5.3
450	31	6,692	-14.2	-28.7	27	6.3
400	31	7,575	-20.4	-34.9	26	7.9
350	31	8,550	-27.6	-40.7	26	10.3
300	31	9,640	-36.1	-47.9	26	12.4
250	31	10,882	-45.2		26	16.8
200	31	12,340	-54.[illegible]		26	20.5
175	31	13,188	-58.3		26	18.1
150	31	14,150	-61.9		26	15.3
125	31	15,270	-64.4		26	11.5
100	31	16,630	-65.0		26	6.2
80	31	17,997	-62.6		24	2.1
70	31	18,825	-60.0		08	.9
60	31	19,792	-57.6		08	3.2
50	31	20,951	-54.8		08	5.0
40	31	22,385	-52.2		08	6.3
30	30	24,260	-48.7		08	8.5
25	29	25,462	-46.9		08	9.2
20	29	26,949	-44.1		08	9.3
15	26	28,893	-40.8		09	11.7
10	20	31,690	-35.[illegible]		09	12.5
7	6	34,213	-32.7			
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SAN DIEGO, CALIF. 999 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Direction	Speed M.p.s.
SURFACE	31	124	18.0	15.8	32	.8
1000	31	117			33	1.0
950	31	555	19.1	11.2	36	.6
900	31	1,026	22.8	3.5	31	1.0
850	31	1,523	21.3	4.3	29	1.5
800	31	2,045	18.3	2.3	25	2.2
750	31	2,592	14.7	.6	22	3.1
700	31	3,175	10.7	-2.1	20	3.3
650	31	3,783	6.4	-5.4	21	3.4
600	31	4,441	1.8	-9.5	21	3.0
550	31	5,130	-2.7	-14.8	22	2.8
500	31	5,888	-7.3	-20.7	23	2.3
450	31	6,697	-12.6	-27.5	24	2.8
400	31	7,592	-18.6	-33.1	24	3.8
350	31	8,574	-25.5	-39.4	24	4.5
300	31	9,675	-33.6	-47.7	23	6.6
250	31	10,931	-42.6		22	9.1
200	31	12,405	-53.0		22	10.8
175	31	13,255	-58.6		22	9.4
150	31	14,211	-64.3		21	8.7
125	31	15,314	-68.0		21	4.5
100	31	16,651	-68.7		13	3.2
80	31	17,994	-66.2		11	5.7
70	31	18,806	-63.7		10	7.0
60	31	19,758	-60.3		09	9.1
50	31	20,904	-57.2		09	10.5
40	31	22,327	-53.6		08	12.0
30	29	24,190	-50.3		09	14.7
25	27	25,382	-48.4		09	14.9
20	23	26,861	-46.1		09	16.6
15	21	28,794	-42.4		09	18.9
10	15	31,546	-39.1		09	23.0
7	6	34,035	-33.1			
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SAN JUAN, P. R. 1018 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Direction	Speed M.p.s.
SURFACE	31	6	25.6	23.9	12	2.1
1000	31	163	25.0	22.0	10	5.7
950	31	606	22.3	18.4	09	8.1
900	31	1,083	19.3	14.[illegible]	10	9.0
850	31	1,573	16.7	9.6	10	8.8
800	31	2,088	14.4	3.4	10	8.5
750	31	2,626	11.5	-.8	10	8.3
700	31	3,205	8.1	-4.8	10	7.3
650	31	3,805	4.8	-10.0	10	7.0
600	31	4,461	.9	-14.0	09	7.5
550	31	5,145	-2.8	-19.5	09	6.9
500	31	5,904	-7.2	-24.4	09	6.2
450	31	6,709	-12.3	-30.3	10	4.[illegible]
400	31	7,606	-18.9	-36.3	11	3.9
350	31	8,587	-26.2	-42.0	10	3.7
300	30	9,683	-34.5	-48.9	09	1.3
250	30	10,931	-44.4		22	.1
200	30	12,387	-56.0		25	2.6
175	30	13,225	-61.1		23	1.1
150	30	14,173	-65.2		16	2.0
125	30	15,272	-69.1		11	3.8
100	30	16,593	-72.3		09	8.1
80	29	17,913	-69.2		08	13.9
70	29	18,717	-65.7		09	17.1
60	29	19,659	-62.6		09	17.9
50	29	20,793	-59.0		09	21.4
40	29	22,204	-55.4		09	23.5
30	27	24,059	-50.7		09	24.7
25	24	25,249	-48.9		09	26.[illegible]
20	22	26,721	-45.7		09	25.6
15	18	28,656	-41.8		09	27.5
10	10	31,417	-37.5			

SAN NICOLAS, CALIF. 994 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Direction	Speed M.p.s.
SURFACE	29	174	14.1	12.5	29	2.5
1000	29	118				
950	29	557	20.8	3.2	30	2.1
900	29	1,026	23.1	-.2	30	1.5
850	29	1,522	21.1	.7	26	1.2
800	29	2,043	18.2	.3	21	1.5
750	29	2,592	14.6	-2.7	20	2.3
700	29	3,171	10.5	-5.5	19	2.3
650	29	3,783	6.4	-7.6	19	2.4
600	29	4,435	1.9	-10.8	19	1.8
550	29	5,131	-2.6	-15.3	20	1.6
500	29	5,880	-7.5	-21.0	21	2.0
450	29	6,692	-12.9	-27.7	21	1.9
400	29	7,580	-19.4	-34.7	23	2.8
350	29	8,558	-26.7	-41.8	24	4.2
300	29	9,652	-35.1	-49.7	22	7.2
250	29	10,898	-44.4	-58.1	22	9.3
200	29	12,362	-53.7	-65.8	22	10.9
175	29	13,209	-59.3	-69.[illegible]	22	10.9
150	29	14,163	-64.4		21	9.3
125	29	15,268	-67.8		22	6.0
100	29	16,606	-68.3		14	3.2
80	29	17,954	-65.7		10	5.8
70	29	18,770	-62.9		09	7.0
60	29	19,726	-60.1		10	9.2
50	29	20,874	-56.8		09	9.9
40	29	22,296	-54.[illegible]		08	11.9
30	28	24,155	-50.8		09	14.[illegible]
25	27	25,344	-49.2		09	15.1
20	24	26,818	-46.8		09	15.5
15	23	28,742	-43.4		09	18.0
10	19	31,502	-39.[illegible]		09	20.6
7	14	33,948	-35.5		10	23.2
5	6	36,319	-32.7			

*** SAULT STE MARIE, MICH. 990 MB**

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Direction	Speed M.p.s.
SURFACE	31	221	13.5	11.8	26	.9
1000	31	136				
950	31	569	15.0	10.3	26	6.0
900	31	1,028	13.8	7.9	27	8.5
850	31	1,508	11.1	4.3	27	9.7
800	31	2,013	8.6	.4	27	10.6
750	31	2,543	6.0	-4.1	27	11.7
700	31	3,107	2.9	-7.2	27	13.2
650	31	3,697	-.1	-11.5	27	14.3
600	31	4,341	-3.[illegible]	-14.6	27	15.3
550	31	5,015	-8.2	-21.3	27	15.2
500	31	5,758	-12.7	-25.7	28	17.0
450	31	6,550	-17.8	-30.9	27	18.7
400	31	7,426	-23.6	-36.[illegible]	27	18.9
350	31	8,389	-30.5	-43.3	27	20.6
300	31	9,466	-38.4	-48.3	27	22.5
250	31	10,696	-46.8		27	25.6
200	31	12,150	-54.0		28	27.7
175	31	13,001	-56.7		28	25.5
150	31	13,976	-56.9		28	19.9
125	31	15,131	-56.9		28	15.5
100	31	16,547	-56.0		28	9.9
80	31	17,969	-54.9		29	6.0
70	31	18,825	-53.5		30	3.4
60	31	19,820	-52.3		34	1.2
50	31	21,004	-50.6		07	1.1
40	31	22,465	-48.7		08	4.2
30	31	24,366	-46.[illegible]		09	5.6
25	31	25,582	-44.6		09	5.7
20	28	27,081	-42.7		09	7.1
15	28	29,034	-39.9		09	9.5
10	26	31,832	-34.[illegible]		10	13.1
7	21	34,363	-28.8		09	12.8
5	10	36,789	-25.7			

*** SHEMYA, ALASKA 1006 MB**

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Direction	Speed M.p.s.
SURFACE	31	38	7.0	6.6	22	1.3
1000	31	85			25	3.3
950	31	509	6.4	5.1	25	3.0
900	31	950	6.1	3.0	25	2.6
850	31	1,419	5.3	-.[illegible]	25	3.5
800	31	1,913	3.5	-4.0	24	3.5
750	31	2,436	1.5	-7.8	24	4.7
700	31	2,989	-1.0	-13.5	24	5.2
650	31	3,574	-3.8	-17.1	26	5.1
600	31	4,206	-7.4	-20.4	26	5.2
550	31	4,873	-11.5	-22.5	26	6.1
500	31	5,604	-16.1	-28.5	26	7.1
450	31	6,382	-21.4	-35.2	27	8.3
400	31	7,248	-27.4	-41.6	28	10.0
350	31	8,195	-34.6	-48.0	27	11.3
300	31	9,256	-41.9	-49.3	28	13.5
250	31	10,471	-48.9		27	16.4
200	31	11,923	-52.0		27	15.7
175	31	12,789	-51.7		27	13.9
150	31	13,790	-51.2		27	11.5
125	29	14,970	-51.5		27	9.0
100	29	16,418	-51.4		27	5.6
80	29	17,866	-51.0		27	2.2
70	29	18,737	-50.7		27	.7
60	29	19,742	-50.4		09	.9
50	29	20,933	-49.8		09	2.8
40	29	22,396	-48.8		09	4.2
30	29	24,293	-47.0		09	5.9
25	29	25,504	-45.7		09	7.2
20	29	26,996	-44.0		09	8.8
15	29	28,940	-41.0		09	10.2
10	28	31,723	-36.7		09	11.8
7	27	34,214	-32.8		08	12.5
5	24	36,601	-29.4		08	14.4
4	13	38,201	-28.0		08	16.5

*** SHREVEPORT, LA. 1009 MB**

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Direction	Speed M.p.s.
SURFACE	30	79	21.9	20.0	17	.8
1000	30	158	22.2	19.7	18	1.5
950	30	611	21.9	17.3	22	4.1
900	30	1,075	19.2	13.6	20	3.9
850	30	1,565	16.3	9.7	20	3.2
800	30	2,079	13.4	5.1	21	2.4
750	30	2,618	10.5	.7	21	1.7
700	30	3,192	7.1	-2.8	22	[illegible].3
650	30	3,797	3.4	-6.9	22	1.6
600	30	4,444	-.3	-10.4	24	1.7
550	30	5,129	-4.4	-14.9	25	[illegible].4
500	30	5,880	-8.7	-20.[illegible]	27	1.9
450	30	6,688	-13.9	-25.6	30	1.6
400	30	7,576	-19.7	-32.[illegible]	34	2.1
350	30	8,556	-26.3	-39.4	35	3.7
300	30	9,652	-34.6	-46.7	36	5.4
250	30	10,900	-44.3		36	6.8
200	28	12,358	-55.3		36	8.3
175	28	13,200	-60.6		01	8.8
150	28	14,147	-65.7		01	9.8
125	28	15,245	-68.6		03	7.2
100	28	16,582	-67.5		04	5.3
80	28	17,934	-64.9		06	6.6
70	28	18,752	-62.4		08	8.9
60	28	19,708	-59.8		08	10.6
50	28	20,856	-56.5		09	11.3
40	27	22,282	-53.2		09	11.9
30	26	24,147	-50.5		08	14.1
25	24	25,344	-47.8		09	15.8
20	24	26,824	-45.4		09	16.8
15	22	28,763	-42.5		09	18.7
10	21	31,528	-38.0		09	22.8
7	16	34,018	-33.6		09	24.3
5	6	36,393	-30.1			

SPOKANE, WASH. 933 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Direction	Speed M.p.s.
SURFACE	31	717	14.7	5.0	15	1.7
1000	31	119				
950	31	556				
900	31	1,022	19.2	[illegible].2	19	1.4
850	31	1,511	16.9	.4	23	1.7
800	31	[illegible],024	12.8	-1.6	25	2.2
750	31	2,556	8.7	-4.5	26	3.1
700	31	3,129	4.7	-9.0	25	5.0
650	31	[illegible],723	1.2	-14.9	26	7.3
600	31	4,368	-2.9	-18.8	25	9.9
550	31	5,042	-7.5	-22.5	26	11.3
500	31	5,787	-12.2	-26.8	26	12.1
450	31	6,575	-17.8	-31.5	26	14.3
400	31	7,455	-24.2	-37.4	26	16.8
350	31	8,414	-31.4	-42.9	26	18.8
300	31	9,487	-39.7	-49.8	26	21.4
250	31	10,709	-48.6		26	24.5
200	31	12,150	-55.0		26	25.8
175	30	13,006	-54.6		26	23.9
150	30	13,992	-55.1		26	21.0
125	30	15,154	-56.1		26	16.6
100	30	16,571	-56.5		25	10.7
80	30	17,987	-56.3		26	4.9
70	30	18,836	-55.1		28	2.8
60	30	19,822	-53.6		03	.8
50	29	21,000	-51.9		07	3.1
40	29	22,453	-49.9		08	4.6
30	27	24,346	-46.8		08	6.1
25	27	25,559	-45.0		09	6.7
20	27	27,058	-42.6		09	8.5
15	27	29,016	-38.8		09	9.2
10	21	31,825	-34.0		08	10.8

*** SWAN ISLAND, W. I. 1014 MB**

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Direction	Speed M.p.s.
SURFACE	31	10	26.[illegible]	23.7	08	4.4
1000	31	130	25.7	22.8	08	6.0
950	31	584	22.6	19.8	09	8.[illegible]
900	31	1,053	19.9	15.1	09	10.[illegible]
850	31	1,545	17.1	10.9	10	10.4
800	31	2,061	14.3	6.0	10	10.5
750	31	2,601	11.3	1.2	10	10.3
700	31	3,178	8.1	-3.0	11	10.[illegible]
650	31	3,786	4.7	-7.9	10	[illegible].9
600	31	4,435	1.5	-13.6	10	9.2
550	31	5,124	-2.6	-17.3	10	7.4
500	31	5,881	-7.3	-22.1	10	5.9
450	31	6,693	-12.5	-27.3	09	4.5
400	31	7,585	-18.3	-32.4	08	3.6
350	31	8,568	-25.3	-39.3	03	2.8
300	31	9,668	-33.8	-46.3	34	3.9
250	31	10,920	-44.0		31	5.[illegible]
200	31	12,377	-56.2		29	6.6
175	30	13,213	-62.6		30	[illegible].3
150	30	14,149	-68.4		30	4.1
125	30	15,235	-70.3		04	2.3
100	30	16,553	-72.2		09	8.[illegible]
80	30	17,873	-69.9		09	12.9
70	30	18,672	-67.0		09	14.2
60	29	19,615	-63.0		09	17.3
50	29	20,746	-59.5		09	22.[illegible]
40	29	22,151	-57.0		09	24.1
30	29	23,986	-53.0		09	27.1
25	28	25,171	-49.9		09	27.4
20	27	26,640	-46.4		09	27.6
15	24	28,562	-43.2		09	27.7
10	19	31,308	-40.0		09	26.4
7	8	33,759	-35.9			

TAMPA, FLA. 1019 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Direction	Speed M.p.s.
SURFACE	31	8	23.9	22.[illegible]	11	1.8
1000	31	169	24.1	21.4	13	2.8
950	31	614	22.5	17.[illegible]	17	3.1
900	31	1,088	19.7	13.7	17	2.[illegible]
850	31	1,579	16.8	10.1	16	2.5
800	31	2,094	13.9	5.7	16	2.8
750	31	2,637	10.8	.8	16	3.1
700	31	3,209	7.6	-3.0	17	2.9
650	31	3,815	3.9	-6.2	16	1.7
600	31	4,463	.3	-10.5	17	[illegible].4
550	31	5,150	-3.7	-14.7	17	1.6
500	31	5,904	-8.1	-19.[illegible]	16	1.5
450	31	6,714	-13.1	-26.9	15	1.3
400	31	7,604	-19.2	-31.4	13	1.5
350	31	8,583	-26.2	-38.7	09	2.[illegible]
300	31	9,680	-34.4	-47.0	07	3.6
250	31	10,930	-44.1		07	4.2
200	31	12,390	-55.6		07	6.5
175	31	13,231	-60.9		07	5.5
150	31	14,180	-65.0		07	[illegible].3
125	31	15,285	-67.3		06	3.7
100	31	16,625	-68.1		08	4.7
80	31	17,971	-66.1		08	8.1
70	31	18,785	-63.4		08	11.8
60	31	19,740	-60.0		08	14.1
50	31	20,888	-56.7		09	16.5
40	31	22,313	-53.3		10	17.1
30	30	24,179	-49.8		09	17.1
25	30	25,378	-47.5		09	18.0
20	29	26,863	-45.4		08	19.6
15	26	28,793	-42.6		09	22.5
10	22	31,562	-38.6		09	26.9
7	5	33,979	-33.8			

TOPEKA, KANS. 986 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Direction	Speed M.p.s.
SURFACE	31	269	19.8	17.1	17	1.4
1000	31	147				
950	31	592	21.7	15.5	20	4.5
900	31	1,062	20.5	11.5	23	5.8
850	31	1,554	17.9	8.1	25	6.3
800	31	2,071	14.8	5.0	25	5.2
750	31	2,608	11.2	1.0	25	5.3
700	31	3,188	7.4	-2.2	26	5.1
650	31	3,793	3.4	-6.1	27	5.4
600	31	4,440	-.4	-11.4	27	6.9
550	31	5,127	-4.3	-16.2	27	6.8
500	31	5,878	-8.7	-21.0	27	7.2
450	31	6,696	-13.8	-25.7	28	7.4
400	31	7,575	-19.4	-32.2	29	7.3
350	31	8,555	-26.1	-37.2	29	9.2
300	31	9,653	-34.3	-45.3	29	11.2
250	31	10,904	-43.9		29	12.6
200	31	12,368	-54.4		29	14.4
175	31	13,214	-59.1		29	14.1
150	31	14,171	-63.1		30	13.1
125	30	15,287	-65.6		31	10.6
100	29	16,642	-65.2		32	5.9
80	29	18,012	-62.1		36	3.5
70	29	18,840	-60.2		04	3.3
60	29	19,808	-57.4		06	4.4
50	28	20,969	-54.5		08	5.8
40	27	22,406	-51.8		09	7.3
30	27	24,282	-48.8		09	8.4
25	26	25,490	-46.9		09	9.6
20	25	26,972	-44.7		09	11.5
15	21	28,904	-41.2		09	12.3
10	7	31,626	-37.6			
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+ TRUK, CAROLINE IS. 1010 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Direction	Speed M.p.s.
SURFACE	31	2	28.0	24.5	10	1.1
1000	31	92	27.0	23.0	11	1.4
950	31	543	23.4	19.0	11	2.1
900	31	1,016	20.4	15.1	12	2.7
850	31	1,510	17.9	11.8	12	3.0
800	31	2,028	15.1	8.9	11	3.3
750	31	2,572	12.3	5.7	10	4.1
700	31	3,150	9.2	2.4	09	4.5
650	31	3,760	5.8	-1.5	10	5.4
600	31	4,415	2.1	-5.1	10	5.9
550	31	5,109	-1.6	-9.4	10	5.5
500	31	5,869	-5.6	-15.4	09	5.5
450	31	6,688	-10.1	-20.0	09	5.3
400	31	7,591	-15.4	-26.7	10	4.6
350	31	8,587	-22.1	-34.7	10	4.1
300	31	9,704	-30.3	-43.2	09	4.5
250	31	10,975	-40.5	-52.6	07	3.8
200	31	12,456	-52.9		06	6.1
175	31	13,304	-60.0		05	7.1
150	31	14,249	-67.7		03	7.0
125	31	15,326	-75.0		03	7.2
100	31	16,615	-78.4		06	5.2
80	31	17,897	-71.9		09	10.6
70	31	18,690	-68.3		09	11.8
60	31	19,625	-65.0		10	12.7
50	31	20,745	-61.6		09	18.5
40	31	22,139	-58.0		09	27.5
30	29	23,972	-53.3		09	32.4
25	27	25,152	-49.6		09	34.7
20	26	26,626	-45.8		09	32.0
15	24	28,564	-42.7		09	18.7
10	18	31,321	-39.4		09	12.7
7	13	33,787	-33.7		09	14.3

*** TUCSON, ARIZ. 925 MB**

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Direction	Speed M.p.s.
SURFACE	31	789	24.0	14.7	15	2.9
1000	31	97				
950	31	554				
900	31	1,028	24.9	12.6	14	2.9
850	31	1,528	22.4	10.0	05	1.1
800	31	2,052	18.9	7.4	35	1.2
750	31	2,599	14.9	4.6	02	.6
700	31	3,184	10.6	2.2	13	.6
650	31	3,792	6.0	-.1	15	2.5
600	31	4,448	1.3	-4.5	15	2.6
550	31	5,135	-3.0	-10.4	13	3.1
500	31	5,894	-7.5	-16.3	13	2.4
450	31	6,702	-12.2	-23.0	17	1.3
400	31	7,599	-17.9	-29.6	21	1.9
350	31	8,584	-24.7	-36.1	23	2.8
300	31	9,686	-32.9	-43.2	23	4.5
250	31	10,942	-42.7		23	5.9
200	31	12,411	-54.0		23	6.3
175	31	13,256	-59.8		24	4.4
150	31	14,206	-65.4		21	1.4
125	31	15,304	-69.2		11	3.1
100	31	16,633	-69.9		09	4.9
80	31	17,971	-66.6		09	7.2
70	31	18,784	-63.5		09	9.1
60	31	19,736	-60.5		09	11.6
50	31	20,881	-57.0		09	12.2
40	30	22,303	-54.0		09	13.4
30	30	24,165	-50.3		09	15.5
25	30	25,361	-48.2		09	16.4
20	29	26,839	-45.7		09	17.8
15	26	28,769	-42.6		09	19.6
10	21	31,533	-38.0		09	24.5
7	11	34,017	-33.7		09	29.1

*** VANDENBERG AFB, CALIF. 1003 MB**

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Direction	Speed M.p.s.
SURFACE	31	100	11.8	11.5	32	.5
1000	31	127	11.8	11.3	33	.5
950	31	571	17.0	2.3	36	1.8
900	31	1,027	23.1	-2.6	01	2.8
850	31	1,522	20.9	-4.4	05	1.8
800	31	2,042	17.6	-5.5	10	.8
750	31	2,587	14.4	-8.4	19	1.1
700	31	3,169	10.6	-10.2	20	1.8
650	31	3,778	6.8	-13.2	20	1.2
600	31	4,434	2.3	-16.6	18	.7
550	31	5,125	-2.7	-20.8	16	.8
500	31	5,880	-7.6	-26.1	22	1.7
450	31	6,687	-13.0	-32.0	22	2.3
400	31	7,579	-19.8	-37.7	22	3.0
350	31	8,556	-27.5	-44.5	23	3.9
300	31	9,645	-36.0	-52.5	23	6.4
250	31	10,888	-45.1		22	9.6
200	31	12,349	-54.2		22	12.3
175	30	13,194	-59.1		22	12.3
150	30	14,150	-63.9		22	10.6
125	30	15,257	-67.3		23	6.7
100	30	16,597	-68.0		18	2.7
80	30	17,946	-65.4		12	4.1
70	30	18,760	-63.6		11	5.6
60	30	19,711	-60.9		10	7.2
50	30	20,852	-58.1		09	8.3
40	29	22,266	-55.6		09	10.7
30	29	24,114	-51.6		09	12.5
25	28	25,300	-50.0		09	13.1
20	28	26,765	-47.6		09	13.9
15	27	28,684	-44.1		09	15.9
10	27	31,426	-39.9		09	18.2
7	19	33,882	-35.6		09	20.6
5	10	36,243	-31.0			

VICTORIA, TEXAS 1013 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Direction	Speed M.p.s.
SURFACE	30	33	24.3	23.1	10	1.2
1000	30	147	24.7	23.3	14	3.0
950	30	593	22.7	20.3	17	6.8
900	30	1,068	20.1	14.8	17	7.1
850	30	1,560	17.5	10.5	17	6.1
800	30	2,077	14.6	7.0	17	5.0
750	30	2,617	11.5	2.8	17	4.1
700	30	3,195	8.4	-.9	17	3.2
650	30	3,799	4.9	-5.8	17	2.9
600	30	4,453	1.1	-10.4	16	1.9
550	30	5,144	-3.0	-16.0	15	1.8
500	30	5,896	-7.6	-21.4	13	1.8
450	30	6,703	-12.8	-26.5	09	1.5
400	30	7,599	-18.3	-32.6	07	1.9
350	30	8,583	-25.0	-39.2	05	2.1
300	30	9,686	-33.3	-46.0	01	4.2
250	30	10,940	-43.3		02	6.6
200	29	12,402	-54.7		02	7.9
175	29	13,245	-60.8		03	7.8
150	29	14,192	-65.7		04	7.9
125	28	15,289	-69.4		05	8.0
100	28	16,619	-68.8		07	8.7
80	28	17,962	-66.3		08	8.6
70	28	18,774	-64.0		08	10.3
60	28	19,724	-60.9		08	12.5
50	28	20,868	-57.2		09	14.2
40	28	22,287	-54.6		09	15.1
30	26	24,146	-50.7		09	17.5
25	24	25,339	-48.5		09	18.4
20	23	26,812	-46.4		09	19.3
15	15	28,740	-42.8		09	20.7
10	10	31,495	-37.0			

See reference note at end of table

RAWINSONDE DATA

Average monthly values

JULY 1968

Standard pressure surface (mb.)	* WAKE IS., PACIFIC AREA 1014 MB: No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind: Direction	Resultant Wind: Speed M.p.s.	* WALLOPS IS., VA, NASA 1019 MB: No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind: Direction	Resultant Wind: Speed M.p.s.
SURFACE	31	5	27.6	24.6	10	5.4	31	3	23.0	21.4	04	.[illegible]
1000	31	128	26.6	23.7	10	6.5	31	164	22.8	19.1	32	.9
950	31	575	22.8	20.8	10	7.3	31	607	20.8	15.2	31	2.3
900	31	1,051	20.0	16.3	10	7.8	31	1,078	18.0	11.7	30	2.7
850	31	1,544	17.2	12.8	10	7.5	31	1,566	15.2	8.2	29	[illegible].0
800	31	2,060	14.4	9.1	10	6.9	31	2,078	12.7	3.1	27	3.8
750	31	2,600	11.8	4.2	09	6.4	31	2,614	9.9	-.6	27	[illegible].1
700	31	3,180	8.8	-1.4	09	5.7	31	3,189	7.0	-4.0	26	6.[illegible]
650	31	3,786	5.4	-6.7	08	5.3	31	3,793	3.8	-8.0	26	7.0
600	31	4,440	1.5	-10.8	08	4.7	31	4,443	.3	-14.0	26	6.9
550	31	5,130	-2.6	-17.0	08	3.8	31	5,129	-3.7	-18.2	26	7.7
500	31	5,887	-7.3	-21.1	08	2.9	31	5,883	-8.3	-22.1	26	[illegible].2
450	31	6,698	-12.4	-26.2	07	2.7	31	6,688	-13.4	-28.4	26	8.[illegible]
400	31	7,591	-18.4	-31.1	05	1.8	31	7,581	-19.2	-34.4	26	[illegible]
350	31	8,574	-25.4	-38.3	33	1.3	31	8,561	-26.4	-40.7	26	10.1
300	31	9,674	-33.8	-45.9	30	2.5	31	9,657	-34.8	-48.2	26	11.4
250	31	10,926	-43.8		29	4.3	31	10,905	-44.6		26	11.8
200	31	12,386	-56.0		28	6.5	31	12,363	-55.8		27	13.4
175	31	13,222	-62.3		28	7.5	31	13,203	-61.0		27	12.6
150	31	14,161	-68.0		28	7.8	31	14,151	-65.0		26	12.[illegible]
125	30	15,243	-71.4		30	2.9	31	15,258	-66.2		26	8.4
100	28	16,561	-70.7		07	5.8	31	16,616	-64.2		28	[illegible].8
80	28	17,890	-68.8		08	11.2	31	17,990	-61.4		01	.8
70	28	18,692	-66.6		09	13.8	31	18,821	-59.6		08	2.3
60	28	19,632	-62.9		09	16.[illegible]	31	19,788	-57.3		09	4.3
50	28	20,762	-60.0		09	19.9	31	20,967	-55.0		09	5.9
40	28	22,168	-56.4		09	22.7	31	22,382	-51.9		09	8.5
30	28	24,012	-52.2		09	25.5	30	24,260	-48.1		09	9.8
25	28	25,199	-49.8		09	26.7	28	25,469	-46.2		09	10.7
20	28	26,665	-47.8		09	27.4	28	26,959	-44.0		09	11.4
15	28	28,575	-45.3		09	28.0	27	28,897	-41.4		09	13.4
10	27	31,298	-41.6		09	29.0	23	31,663	-37.2		09	15.4
7	21	33,730	-38.7		09	31.[illegible]	10	34,144	-33.8			
5	12	36,049	-35.9									
4	6	37,601	-32.7									

Standard pressure surface (mb.)	WASHINGTON DULLES INT. AP 1010 MB: No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind: Direction	Resultant Wind: Speed M.p.s.	WINNEMUCCA, NEV. 870 MB: No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind: Direction	Resultant Wind: Speed M.p.s.
SURFACE	29	55	19.5	17.5	30	.[illegible]	31	1,312	16.2	-1.0	14	1.3
1000	29	173	20.4	16.9	31	.6	31	100				
950	29	620	20.3	14.1	31	1.7	31	567				
900	29	1,083	17.7	10.9	31	[illegible].7	31	1,020				
850	29	1,571	15.0	6.6	29	[illegible]	31	1,511	21.0	1.7	16	.7
800	29	2,082	12.4	2.2	29	4.2	31	2,033	19.0	-1.0	24	2.2
750	29	2,621	9.8	-3.1	28	4.7	31	2,580	15.3	-3.5	25	2.6
700	29	3,192	6.9	-6.4	27	6.1	31	3,163	10.9	-6.0	23	3.3
650	29	3,797	3.6	-9.6	27	7.1	31	3,775	6.2	-8.3	22	5.[illegible]
600	29	4,442	-.3	-14.0	26	7.9	31	4,426	1.3	-11.0	22	7.4
550	29	5,130	-4.1	-18.5	26	8.8	31	5,110	-4.2	-13.6	23	8.0
500	29	5,880	-8.1	-25.3	26	9.5	31	5,865	-9.5	-20.5	23	7.3
450	29	6,687	-13.5	-29.8	26	9.9	31	6,667	-15.2	-27.4	25	7.4
400	29	7,576	-19.6	-35.4	26	11.6	31	7,550	-21.3	-33.6	25	8.6
350	29	8,554	-26.7	-41.3	26	13.0	31	8,521	-28.5	-40.9	25	11.2
300	29	9,648	-35.4	-48.8	26	14.9	31	9,607	-36.9	-48.1	25	14.9
250	29	10,893	-44.9		26	15.7	31	10,843	-45.8		25	16.7
200	29	12,350	-55.5		26	17.3	31	12,297	-55.0		24	18.3
175	29	13,192	-60.2		27	15.4	31	13,143	-58.3		24	18.5
150	29	14,145	-63.5		27	12.1	30	14,103	-61.5		25	16.9
125	29	15,260	-65.0		27	10.6	30	15,226	-63.9		25	12.6
100	29	16,625	-63.3		28	6.8	30	16,592	-64.2		24	5.7
80	29	18,005	-60.6		33	.9	30	17,965	-62.1		19	2.0
70	29	18,840	-58.8		07	2.1	30	18,793	-60.1		12	2.4
60	29	19,814	-55.9		09	3.[illegible]	30	19,739	-57.8		09	3.1
50	28	20,979	-53.4		09	5.4	30	20,915	-55.4		08	5.4
40	28	22,425	-50.4		09	7.2	30	22,346	-52.8		09	7.3
30	27	24,316	-47.5		09	8.5	30	24,217	-49.2		08	8.2
25	26	25,527	-45.7		09	10.2	29	25,415	-47.1		08	9.1
20	26	27,023	-42.9		09	11.7	28	26,900	-44.3		09	9.9
15	23	28,980	-39.9		09	13.6	26	28,833	-41.4		09	11.8
10	17	31,762	-36.3		09	13.8	18	31,613	-36.6		10	12.5

Standard pressure surface (mb.)	WINSLOW, ARIZ. 853 MB: No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind: Direction	Resultant Wind: Speed M.p.s.
SURFACE	31	1,492	18.5	6.9	18	1.5
1000	31	104				
950	31	551				
900	31	1,027				
850	31	1,526	18.6	7.2	18	1.6
800	31	2,048	19.0	5.6	25	2.[illegible]
750	31	2,597	15.7	2.6	25	2.7
700	31	3,180	11.4	-.9	21	1.9
650	31	3,788	6.6	-3.7	18	2.4
600	31	4,446	1.7	-7.0	18	3.8
550	31	5,130	-3.2	-11.8	18	3.7
500	31	5,890	-8.2	-18.2	19	2.[illegible]
450	31	6,694	-13.0	-24.0	23	2.7
400	31	7,590	-18.6	-30.6	25	3.[illegible]
350	31	8,573	-25.5	-37.6	25	4.5
300	31	9,674	-33.8	-45.0	25	7.3
250	31	10,928	-43.2		24	8.3
200	31	12,396	-53.9		24	8.[illegible]
175	31	13,242	-59.5		24	8.6
150	31	14,195	-64.5		24	[illegible].5
125	31	15,297	-68.5		25	[illegible].9
100	31	16,630	-68.9		12	1.2
80	31	17,972	-65.9		10	4.1
70	31	18,787	-63.3		09	6.0
60	31	19,739	-60.5		09	7.9
50	31	20,882	-57.5		09	8.9
40	30	22,304	-53.7		08	10.4
30	30	24,164	-50.9		09	12.8
25	29	25,358	-48.3		09	13.3
20	27	26,836	-45.9		09	14.1
15	25	28,766	-42.9		09	16.7
10	16	31,522	-38.0		09	19.4

Standard pressure surface (mb.)	YAKUTAT, ALASKA 1016 MB: No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind: Direction	Resultant Wind: Speed M.p.s.	+ YAP, CAROLINE IS. 1008 MB: No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind: Direction	Resultant Wind: Speed M.p.s.
SURFACE	30	12	8.9	8.8	09	1.3	31	17	28.7	24.5	21	1.1
1000	30	147	10.9	9.6	11	1.3	31	84	27.7	23.2	21	1.5
950	30	574	9.7	7.3	14	2.1	31	531	23.5	18.9	23	2.2
900	30	1,023	7.2	4.4	14	2.8	31	1,008	20.8	15.2	25	1.9
850	30	1,492	5.0	.5	14	3.5	31	1,502	18.2	12.0	25	1.2
800	30	1,985	2.7	-2.0	13	3.8	31	2,020	15.5	8.8	17	.3
750	30	2,505	.3	-5.9	13	3.8	31	2,561	12.7	5.3	08	1.1
700	30	3,056	-2.9	-10.4	13	[illegible].0	31	3,143	9.6	1.7	10	2.3
650	30	3,638	-6.1	-15.2	13	4.8	31	3,752	6.3	-2.6	10	3.3
600	30	4,264	-9.5	-20.3	14	5.9	31	4,408	2.6	-6.3	09	4.7
550	30	4,926	-13.5	-26.2	14	6.[illegible]	31	5,100	-1.2	-11.0	10	5.2
500	30	5,651	-18.2	-28.9	13	6.[illegible]	31	5,863	-5.3	-16.2	09	4.9
450	30	6,424	-23.7	-34.5	13	7.3	31	6,678	-9.9	-21.9	09	5.1
400	30	7,280	-29.9	-39.4	13	7.4	31	7,585	-15.4	-28.2	09	5.1
350	30	8,217	-37.1	-47.0	13	8.2	31	8,581	-22.0	-36.0	09	5.9
300	30	9,264	-45.4		13	9.0	31	9,697	-30.2	-44.3	08	6.5
250	30	10,459	-52.6		15	8.4	31	10,967	-40.5	-51.8	08	8.5
200	30	11,896	-51.6		18	4.3	31	12,448	-53.0		07	11.1
175	30	12,766	-49.6		19	3.8	31	13,295	-60.0		07	12.1
150	30	13,777	-48.8		20	2.9	31	14,241	-67.6		07	14.0
125	30	14,975	-48.5		21	1.5	31	15,316	-75.3		07	13.[illegible]
100	30	16,443	-48.4		19	1.4	31	16,595	-77.9		08	14.8
80	30	17,911	-48.1		13	1.1	31	17,890	-71.5		09	15.2
70	30	18,792	-47.8		11	1.3	31	18,683	-68.1		08	14.[illegible]
60	30	19,809	-47.5		10	1.[illegible]	31	19,616	-64.4		09	16.5
50	30	21,016	-46.8		10	2.8	31	20,738	-61.5		09	20.[illegible]
40	30	22,498	-45.8		09	4.6	31	22,130	-58.8		09	27.6
30	30	24,419	-44.1		09	7.7	30	23,955	-53.8		09	33.8
25	29	25,647	-42.9		09	8.2	26	25,136	-50.3		09	36.5
20	28	27,158	-40.8		09	9.5	25	26,603	-46.2		09	32.6
15	21	29,126	-37.9		08	10.3	23	28,532	-42.1		09	26.5
10	12	31,955	-33.1				11	31,307	-35.9			

Standard pressure surface (mb.)	YUCCA FLAT, NEV. 882 MB: No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind: Direction	Resultant Wind: Speed M.p.s.	YUMA, ARIZ. 995 MB: No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind: Direction	Resultant Wind: Speed M.p.s.
SURFACE	31	1,196	17.9	5.7	30	.3	18	131	27.9	14.0	04	.5
1000	31	98					18	[illegible]				
950	31	544					18	537	29.0	12.8	22	1.8
900	31	1,019					18	1,022	26.8	9.7	21	2.9
850	31	1,516	23.0	9.5	23	1.5	18	1,524	23.5	7.2	20	3.1
800	31	2,041	19.8	6.6	21	5.0	18	2,050	19.8	4.6	18	3.2
750	31	2,590	15.8	3.3	20	[illegible].6	18	2,595	15.6	1.8	18	[illegible].7
700	31	3,175	11.3	.0	18	3.6	18	3,183	11.0	-2.0	18	4.5
650	31	3,785	6.6	-3.7	16	[illegible].7	18	3,788	6.3	-5.5	19	[illegible].6
600	31	4,441	1.5	-7.5	15	3.2	18	4,448	1.8	-8.6	19	[illegible].1
550	31	5,129	-3.5	-12.2	14	3.1	18	5,138	-2.7	-13.8	18	3.6
500	31	5,882	-8.4	-18.0	19	2.1	18	5,894	-7.1	-20.6	19	2.7
450	31	6,689	-13.5	-24.6	23	1.9	18	6,699	-12.3	-26.7	23	3.5
400	31	7,579	-19.6	-31.1	24	[illegible].1	18	7,599	-18.1	-32.6	25	4.7
350	31	8,557	-26.8	-37.5	24	5.7	18	8,582	-25.4	-38.4	23	6.[illegible]
300	31	9,651	-35.0	-44.5	23	8.1	18	9,682	-33.5	-46.6	22	8.0
250	31	10,898	-44.3		23	11.2	18	10,938	-43.0		22	[illegible].4
200	31	12,362	-53.6		23	14.5	17	12,405	-54.4		21	10.1
175	31	13,210	-58.6		23	13.2	16	13,250	-60.2		21	[illegible].3
150	31	14,168	-63.5		24	12.0	10	14,203	-65.5		21	7.3
125	30	15,277	-66.4		24	8.[illegible]	[illegible]	15,305	-68.8			
100	30	16,624	-67.3		21	3.8						
80	30	17,977	-64.4		14	2.8						
70	30	18,796	-62.3		11	3.6						
60	30	19,754	-59.3		10	5.0						
50	29	20,904	-56.7		09	7.1						
40	27	22,329	-53.8		08	8.5						
30	24	24,190	-50.6		09	10.[illegible]						
25	24	25,385	-48.4		09	10.[illegible]						
20	20	26,862	-46.1		09	11.5						
15	13	28,772	-43.6		09	15.1						

Note: All observations scheduled at 1200, G.C.T. Pressures shown under station names are the average monthly station pressures for the month of record, corrected to the height of the floors of the instrument shelters used for rawinsonde purposes. "Number of observations" refers to those of dynamic height only. Although the number of temperature observations at any given pressure surface is usually the same as for height, it is possible for temperature to be missing for one or more pressure surfaces of some observations. Dew Point averages are limited to those observations with temperatures warmer than -40°C. Observations of wind speed and direction are sometimes lost due to limiting angles, i.e., elevation angles less than 6° above the horizon, or any obstruction above the horizon.

The temperature and wind values are based on 15 or more observations at the surface or 5 observations at a standard pressure level for temperature and 10 for wind. Dew Point data are not published for standard pressure surfaces for which less than 5 observations are available. Dew Point data are computed and expressed on the basis of vapor pressure over water. Unless otherwise indicated, they are obtained from carbon hygristors.

These average values for standard pressure surfaces were obtained by rawinsondes; dynamic height (geopotential) in units of .98 dynamic meter, temperature and dew point in degrees Celsius, and resultant winds in tens of degrees and meters per second.

* Rawinsondes at this station were equipped with hypsometers to permit more accurate evaluations of pressure, and consequently height, at pressures lower than 50 mb. These rawinsondes were carried aloft by special high altitude balloons, in an effort to consistently reach higher altitudes.

\+ Observations for these stations are scheduled at 0000 G.C.T.

† Dew Point temperatures are based on a minimum of 5 observations. Therefore, due to the lesser number of Dew Point observations at the higher levels comparison with dry-bulb temperatures should be made with care. Dew Point temperatures replaced Relative Humidity January 1967.

SOLAR RADIATION DATA

Date	Sun's zenith distance								
	A. M.				*	P. M.			
	78.7°	75.7°	70.7°	60.0°		60.0°	70.7°	75.7°	78.7°
ALBUQUERQUE, N. MEX.									
	Air mass								
	4.19	3.35	2.51	1.67	*	1.67	2.51	3.35	4.19
July									
1-----	0.74	0.82	0.96	1.12	1.35	1.12	0.99	0.85	0.76
7-----	----	.81	----	----	1.31	1.10	----	----	----
8-----	----	----	----	----	1.25	----	----	----	----
10† --	.69	.78	.92	1.08	1.32	----	----	----	----
11----	.74	.81	.93	1.10	1.33	----	----	----	----
12----	.74	.82	.97	1.14	1.36	----	----	----	----
13----	.73	.81	.94	1.11	1.30	----	----	----	----
14----	----	----	----	----	1.23	----	----	----	----
15----	.77	.89	1.01	1.13	1.36	1.23	1.09	.97	.89
16----	.85	.93	1.03	1.19	1.37	1.21	1.08	.96	.86
17----	.88	.97	1.07	1.21	1.37	----	----	----	----
18----	.85	.93	1.05	1.19	1.38	----	.97	.83	.73
19----	.79	.87	1.01	1.15	1.35	1.14	.97	.83	----
20----	.76	.86	.98	1.16	1.35	----	----	----	----
21----	.73	.86	.99	1.15	1.33	1.09	.91	.77	----
22----	----	----	----	----	1.29	----	----	----	----
23----	----	----	----	----	1.31	----	----	----	----
26----	.65	.76	.88	----	----	1.17	.97	.87	.77
27----	----	----	.99	1.16	----	----	----	----	----
28----	----	----	----	1.19	----	----	----	----	----
29----	----	----	----	----	1.39	----	----	----	----
30----	.87	.96	1.06	1.20	1.38	----	----	----	----
Averages	0.77	0.86	0.99	1.15	1.33	1.15	1.00	0.87	0.80
MADISON, WIS.									
	Air mass								
	4.69	3.75	2.81	1.88	*	1.88	2.81	3.75	4.69
	Instrument Inoperative								

Date	Sun's zenith distance								
	A. M.				*	P. M.			
	78.7°	75.7°	70.7°	60.0°		60.0°	70.7°	75.7°	78.7°
BLUE HILL OBS., MASS.									
	Air mass								
	4.89	3.92	2.94	1.96	*	1.96	2.94	3.92	4.89
July									
7-----	----	----	----	----	1.30	0.99	0.79	0.65	0.55
20----	----	----	----	----	----	1.04	.89	.79	.70
21----	0.77	0.82	0.89	0.99	1.28	.99	.82	.65	.55
22----	.55	.65	.79	.99	----	----	.82	.70	.58
23----	----	----	----	----	----	1.08	.96	.84	.75
26----	----	----	.72	.94	1.25	1.04	.79	.62	.53
29----	.77	.95	1.06	1.21	1.37	1.15	.95	.84	.77
30----	.79	.91	1.04	1.17	1.35	1.08	.94	.84	.76
Averages	0.72	0.83	0.90	1.06	1.31	1.05	0.87	0.74	0.65
OMAHA, NEBR.									
	Air mass								
	4.78	3.82	2.87	1.91	*	1.91	2.87	3.82	4.78
July									
2-----	HS0.75	HS0.84	HS0.96	HS1.11	----	----	----	----	----
3-----	HS .70	HS .84	HS .92	HS1.10	HS1.29	HM1.09	----	----	----
4-----	----	----	----	HM1.02	----	----	HS0.91	HS0.80	----
8-----	----	----	----	----	HM1.12	----	----	----	----
10----	----	----	----	HS .98	----	HM .95	HM .78	HM .61	HM .52
20----	----	----	----	----	----	----	HM .81	HM .68	HM .58
21----	HS .61	HS .69	HS .82	HS1.00	HS1.21	----	----	----	----
Averages	0.69	0.79	0.90	1.04	1.21	1.02	0.83	0.70	0.55

HS Slight haze
HM Moderate haze
* Values corresponding to true solar noon
† Normal incidence sensor is blocked by sunshine sensor at and shortly after sunrise on the 10th and other dates

Langley is the unit used to denote one gram calorie per square centimeter. An explanation of the formula used in computing the air mass values for each station listed above appears in the February 1957 issue, Vol. 8, No. 2, page 63, of this publication.

SOLAR RADIATION DATA

Daily totals and monthly averages of solar radiation (direct and diffuse) received on a horizontal surface, tabulated in langleys. JULY 1968

Station	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
ALBUQUERQUE N.M.	760	610	541	495	199	537	679	651	582	641	680	654	635	515	739	748	689	726	725	697	710	692	675	472	433	485	602	507	685	625	369	605
AMES IOWA	663	657	---	564	516	374	545	575	665	651	607	392	600	621	473	168	348	619	660	390	615	623	272	514	519	423	564	591	467	466	485	521
ANNETTE ALASKA	615	679	585	196	578	694	148	259	286	390	---	212	317	591	472	613	575	689	---	265	---	488	641	---	555	222	141	---	585	---	---	450
APALACHICOLA FLORIDA	656	709	436	235	535	425	562	153	448	292	582	459	702	695	679	634	497	---	674	683	493	662	702	694	697	689	632	650	515	663	673	571
ARGONNE NAT. LAB.	675	539	781	508	653	709	---	---	---	---	---	---	---	---	---	---	---	---	661	647	660	590	279	458	526	586	448	634	669	561	272	---
ASTORIA OREGON	758	644	545	620	602	645	774	581	507	560	157	650	506	418	562	386	559	567	342	546	614	375	557	402	200	540	631	571	435	657	663	535
ATLANTA GEORGIA	580	637	327	177	357	395	587	360	205	299	453	409	542	310	577	708	561	607	644	605	556	---	506	402	594	628	629	472	467	643	537	493
BARROW ALASKA	285	268	533	642	428	496	694	738	755	754	725	690	527	582	592	484	425	373	527	560	540	504	514	516	571	389	323	526	423	433	317	521
BETHEL ALASKA	0	0	403	0	517	510	197	622	427	394	568	337	219	178	358	185	340	149	165	505	549	567	626	615	609	590	360	444	218	300	190	398
BISMARCK N.DAK.	151	796	770	707	769	762	701	789	774	729	706	695	643	656	557	736	548	755	706	688	742	375	540	558	527	408	722	710	708	450	---	646
BLUE HILL MASS.	670	688	292	237	705	467	710	680	658	411	404	512	663	452	593	628	571	581	431	598	658	628	598	326	517	627	514	385	694	682	520	552
BOISE IDAHO	716	704	631	692	682	612	664	521	503	654	618	369	634	675	677	658	696	672	653	690	668	664	661	650	639	640	601	547	526	631	642	632
BOSTON MASSACHUSETTS	---	---	150	91	---	---	---	---	613	---	---	438	609	431	567	593	544	529	477	494	600	621	605	289	546	640	517	436	644	653	481	503
BROWNSVILLE TEXAS	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	655	609	301	485	560	656	---
BURLINGTON VERMONT	443	333	549	625	565	398	234	646	343	339	664	637	560	486	542	504	435	454	388	677	597	599	474	138	525	623	401	498	307	650	526	489
CAPE HATTERAS N.C.	572	576	587	406	338	356	592	584	82	208	370	525	558	449	558	---	611	634	531	378	666	697	588	639	667	468	352	632	440	280	439	493
CARIBOU MAINE	684	515	---	720	---	336	543	584	726	312	814	524	804	744	---	733	774	426	---	777	479	---	669	455	580	707	609	258	629	611	710	605
CHARLESTON S.C.	762	717	690	200	258	415	696	447	318	398	361	666	630	541	628	522	703	662	632	589	502	659	679	617	467	656	650	581	645	308	544	553
CLEVELAND OHIO	513	258	461	716	304	686	666	531	664	488	647	647	560	551	557	210	341	557	673	722	698	471	590	231	507	565	377	665	629	553	400	530
COLUMBIA MISSOURI	554	753	759	695	662	573	565	716	407	695	704	648	679	756	419	337	315	635	720	715	690	688	689	164	294	314	381	695	703	504	95	553
DAVIS CALIFORNIA	774	688	732	729	723	740	744	726	723	778	751	748	746	754	741	747	744	734	726	776	770	761	747	746	739	735	744	641	639	680	660	732
DODGE CITY KANSAS	566	655	753	606	582	406	733	675	715	269	662	660	731	678	604	682	724	688	719	749	702	633	676	330	351	598	499	349	445	681	513	601
E. LANSING MICHIGAN	633	524	731	552	461	703	631	616	455	754	697	685	622	618	626	575	638	---	---	730	627	727	491	323	647	710	371	640	612	640	252	596
EL CENTRO CALIF. NPF	701	684	684	656	550	300	300	668	692	694	687	672	681	688	689	670	670	636	595	613	511	476	556	642	647	628	496	379	603	601	---	602
EL PASO TEXAS	737	775	184	202	489	478	655	716	755	753	750	734	769	692	758	758	741	684	669	695	756	738	755	718	735	759	683	698	572	737	692	672
ELY NEVADA	880	834	830	761	792	815	734	494	705	483	613	856	860	867	859	842	806	842	742	732	580	589	674	630	458	802	725	448	629	471	437	703
EPPLEY NEWPORT R.I.	659	642	265	128	621	578	690	679	631	273	326	412	573	513	514	583	586	522	324	571	658	644	512	363	505	643	554	471	680	654	582	528
FAIRBANKS ALASKA	468	397	547	733	687	694	718	651	530	690	723	615	671	458	473	627	612	622	672	635	644	641	587	555	604	598	247	402	476	468	114	566
FLAMING GORGE UTAH	833	836	770	384	758	739	753	549	326	409	761	705	791	779	487	663	648	464	689	593	287	389	650	428	460	413	653	675	628	374	691	599
FORT WORTH TEXAS	754	272	656	767	776	626	644	208	648	666*	618	727	479	340	692	596	771	695	530	732	630	648	514	636	694	743	747	744	290	743	719	623*
GLASGOW MONTANA	565	747	790	749	608	750	657	659	754	702	731	538	781	723	724	774	159	545	728	745	750	594	524	521	621	704	710	679	649	287	713	651
GRAND JUNCTION COLO.	812	814	783	573	734	780	597	702	687	718	696	650	649	746	628	764	766	756	681	709	669	331	605	569	646	386	411	585	643	401	293	638
GREAT FALLS MONTANA	654	780	760	767	775	655	672	726	612	620	738	370	738	512	672	755	513	745	723	759	747	683	534	583	605	599	667	650	658	180	710	650
GREENSBORO N.C.	650	613	357	269	293	643	536	441	239	257	216	418	520	549	622	615	619	449	456	655	611	542	585	594	476	474	430	509	563	292	366	479
INDIANAPOLIS INDIANA	692	479	---	754	657	740	597	601	641	553	504	522	634	546	510	634	617	334	582	502	596	562	569	446	186	393	279	592	638	509	166	535
ITHACA NEW YORK	559	457	401	626	462	679	694	665	404	242	313	532	624	629	515	606	582	589	334	572	733	612	695	113	628	640	462	603	587	534	594	538
LAKE CHARLES LA.	638	612	489	671	698	652	614	541	294	430	269	350	480	690	598	527	495	276	497	366	289	305	373	530	420	658	667	652	592	604	675	515
LAKELAND FLORIDA	633	388	471	343	231	321	499	499	265	484	659	691	598	439	286	486	408	475	573	591	357	499	682	733	641	736	702	611	---	523	608	514
LANDER WYOMING	779	788	790	509	757	713	561	417	644	467	586	632	699	789	664	539	607	744	604	757	681	495	---	612	595	505	705	548	492	634	720	634
LARAMIE WYOMING	647	722	730	470	334	677	565	500	468	519	369	646	560	635	529	463	491	627	710	617	575	423	440	568	538	317	636	659	456	293	548	540
LAS VEGAS NEVADA	789	793	704	713	678	651	698	598	677	732	726	729	768	749	751	753	744	750	709	694	672	495	485	453	654	651	375	661	404	623	427	657
LITTLE ROCK ARKANSAS	648	436	759	764	674	644	543	597	639	543	562	625	541	526	567	571	539	470	444	496	589	538	344	466	652	656	439	423	214	558	599	544
LOS ANGELES CALIF.	---	708	---	700	660	195	426	443	719	756	761	737	722	703	552	686	710	696	673	652	677	682	683	658	703	690	539	293	542	655	647	627
MADISON WISCONSIN	745	414	797	512	730	719	441	616	737	767	740	609	664	490	641	667	370	531	716	716	644	717	251	494	621	653	625	738	614	527	549	615
MANHATTAN KANSAS	455	648	679	636	473	494	567	600	560	612	614	543	575	542	392	458	554	450	576	620	624	603	530	228	250	403	290	549	621	500	322	515
MATANUSKA ALASKA	199	260	370	643	654	654	619	378	543	244	121	253	321	189	231	536	573	140	678	654	612	644	293*	491	583	505	211	383	488	185	481	424*
MAUNA LOA OBS.HAWAII	464	452	370	448	423	759	787	811	809	578	754	795	743	351	756	258	388	463	502	749	800	748	---	611	392	432	465	697	806	553	301	582
MEDFORD OREGON	794	633	766	768	753	763	773	775	794	774	409	471	783	770	722	792	791	783	777	786	785	773	763	737	722	717	716	712	714	696	652	731
MIAMI FLORIDA	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	747	705	659	753	754	713	683	717	683	669	543	705	---
MIDLAND TEXAS	660	138	498	338	200	507	449	626	607	657	631	620	609	253	648	651	654	393	464	471	649	632	659	613	630	595	579	609	635	605	572	544
NASHVILLE TENNESSEE	704	428	649	759	752	687	---	---	---	476	646	383	424	641	570	479	568	473	480	522	475	383	639	494	506	375	595	453	---	347	541	535
NEW YORK N.Y. U	720	679	288	224	691	453	748	645	594	350	258	502	509	573	372	610	511	462	280	637	735	612	519	221	416	653	541	414	714	633	482	518
OAK RIDGE TENNESSEE	662	412	267	682	685	692	634	437	336	544	650	522	482	513	648	525	624	665	439	402	527	545	545	551	453	409	538	463	397	358	465	518
OKLAHOMA CITY OKLA.	363	573	738	700	427	436	440	642	666	642	685	641	413	266	371	670	713	543	653	659	662	586	683	563	607	692	669	388	512	672	420	571
PAGE ARIZONA	835	---	717	704	783	527	687	718	747	775	768	750	778	768	784	727	782	779	630	537	601	578	517	501	569	---	504	659	747	497	444	669

Note.--Langley is the unit used to denote one gram calorie per square centimeter.
Values with an asterisk are interpolated.

U Indicates Urban sites

SOLAR RADIATION DATA

Daily totals and monthly averages of solar radiation (direct and diffuse) received on a horizontal surface, tabulated in langleys. JULY 1968

Station	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
PALMER AAES ALASKA	212	246	420	600	579	633	450	287	452	217	152	260	223	177	342	489	488	195	577	606	595	570	509	570	523	503	224	458	477	184	368	406
PHOENIX ARIZONA	782	726	724	632	328	538	726	708	658	695	742	733	722	727	731	728	718	701	658	710	666	572	529	693	682	506	576	667	577	643	634	659
PORTLAND MAINE	638	666	468	197	667	539	466	708	595	397	512	656	618	510	593	635	452	637	569	560	630	617	609	204	504	686	557	390	650	677	574	554
RAPID CITY S.DAK.	782	755	744	689	703	738	721	626	646	486	395	520	665	701	526	532	593	721	613	568	721	530	626	229	375	476	612	666	632	462	587	601
RENO NEVADA	702	508	637	639	455	517	480	624	591	680	573	686	667	664	666	672	660	650	657	661	659	673	654	652	635	583	563	614	472	201	212	591
RICHLAND 25 NW WASH.	774	762	742	740	694	673	763	739	644	686	523	558	733	664	683	665	736	737	511	740	730	664	666	670	631	665	674	668	698	700	698	685
RIVERSIDE CALIFORNIA	618	606	637	584	549	294	243	381	564	636	612	612	628	634	588	603	609	586	561	582	575	568	543	572	583	560	268	284	324	523	570	532
RUSTON LOUISIANA	631	371	435	681	---	471	523	404	607	640	587	589	378	507	526	475	633	458	568	590	287	147	393	477	612	633	638	604	409	530	558	512
SAINT CLOUD MINN.	288	698	705*	697*	---	---	664*	688	719	720	641	433	504	217	601	474	367	668	680	514	704	616	494	504	622	418	703	684	447	173	570	559*
SALT LAKE CITY	827	804	737	447	773	776	770	744	---	---	765	664	757	777	766	760	755	748	663	---	---	---	---	---	573	738	743	690	699	706	713	725
SAN ANTONIO TEXAS	614	431	602	543	600	657	435	651	426	570	561	330	528	590	596	690	665	537	664	621	689	663	665	668	515	633	628	663	642	635	646	592
SANTA MARIA CALIF.	616	726	719	712	714	632	479	241	765	759	742	736	632	597	640	742	736	740	711	713	694	650	684	628	625	621	643	263	628	626	589	645
SAULT STE MARIE MICH	757	406	793	408	738	649	484	580	793	799	688	502	415	---	492	617	526	139	746	606	131	544	528	279	710	621	372	733	740	339	443	553
SEATTLE TACOMA WASH.	768	720	660	633	714	755	757	737	569	650	254	510	676	611	561	611	724	659	425	548	671	450	656	676	550	586	667	685	683	684	653	629
SPOKANE WASHINGTON	774	776	727	747	736	687	740	726	671	711	644	536	698	554	566	670	681	731	573	568	707	656	650	695	683	680	677	670	682	706	705	678
STATE COLLEGE PENN.	718	698	581	661	741	671	743	699	674	496	371	468	568	577	391	475	599	550	395	682	706	539	528	285	309	626	431	681	669	654	394	567
STERLING VIRGINA	732	501	378	684	720	635	729	642	634	520	629	578	425	442	---	580	569	559	394	602	647	566	572	506	318	431	313	535	631	457	438	546
SWAN ISLAND W.I.	600	455	400	587	621	638	630	621	623	649	621	430	641	278	598	615	649	623	621	375	585	630	665	648	584	371	607	623	600	593	346	566
TAMPA FLORIDA	585	341	636	435	223	139	357	723	225	576	---	691	431	542	322	429	413	482	600	---	324	703	563	597	532	588	573	382	569	322	436	474
WAKE ISLAND PACIFIC	677	607	674	655	625	555	495	573	695	677	603	601	350	576	627	319	581	617	555	584	639	668	675	542	549	542	532	488	640	516	614	584

Note.--Langley is the unit used to denote one gram calorie per square centimeter.

Values with an asterisk are interpolated.

NET RADIATION

Net radiation in langleys per day (8 a.m. to 8 a.m.) at Palmer, Alaska

JULY 1968

Date.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
Langleys. . .	109	148	203	318	300	333	237	151	263	111	65	130	114	86	186	239	260	86	289	308	299	256	246	282	239	267	104	214	212	83	170	203

The measurement is made with a CSIRO FUNK net exchange radiometer over a plot of sod. The value represents the total incoming minus the total outgoing radiation of all wave lengths.

These data are of an experimental nature and are published as received from the Palmer Exp. Station. The instrument with which they were measured has not been checked by the ESSA, Weather Bureau.

SOLAR ULTRA-VIOLET RADIATION DATA

Daily totals and monthly average (< 3900 Å)

Date.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
Langleys. . .																INSTRUMENT INOPERATIVE																

These data are from an U - V Eppley total ultra violet sensor and Speedomax H (Leeds Northrup) Recorder. It is at the same location (Agronomy Building, Iowa State University, Ames) as the published total solar radiation instrumentation. This instrument has not been checked by the ESSA, Weather Bureau.

TOTAL OZONE DATA

These provisional ozone data are obtained from measurements made with a Dobson ozone spectrophotometer, and are applicable approximately to local apparent noon. The data are presented in the code $\lambda s \Omega \Omega \Omega$ defined in the August 1962 WMO circular entitled "PUBLICATION OF DATA FOR METEOROLOGICAL RESEARCH, WORLD OZONE DATA."

Units Milli-atmo-cms.

Station	Day of month																														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean O_3
																Data will be delayed																

The spectrophotometer measures the total amount of ozone in the atmosphere, i.e. the amount contained in a vertical column of air extending from ground level to the top of the atmosphere in the vicinity of the station. The amount of ozone in this column (coded $\Omega \Omega \Omega$) is expressed in terms of a thickness of a layer it would occupy at standard temperature and pressure, e.g., 350 milli-atmo-cm ozone implies an ozone layer 0.350 centimeter thick. The code λs designates the type of measurement made.

DESCRIPTION OF CHARTS

CHART I., A. NORMAL DAILY AVERAGE TEMPERATURE (°F. 1931-60) FOR MONTH. B. TEMPERATURE DEPARTURE FROM 30-YEAR MEAN (°F. 1931-60) FOR MONTH. Chart I-A is reproduced from Environmental Data Service Publication "Climatic Maps of the United States". Chart I-B is a reproduction of monthly chart appearing in "Weekly Weather and Crop Bulletin", a publication of Environmental Data Service.

CHART II. TOTAL PRECIPITATION. -CHART II is a reproduction of monthly chart appearing in "Weekly Weather and Crop Bulletin".

CHART III. PRECENTAGE OF NORMAL PRECIPITATION. -Chart III is a reproduction of monthly chart appearing in "Weekly Weather and Crop Bulletin".

CHART IV. TOTAL SNOWFALL. CHART V. A. PERCENTAGE OF MEAN MONTHLY SNOWFALL. B. DEPTH OF SNOW ON GROUND. -Chart IV gives the total depth in inches of unmelted snowfall as reported during the month by Weather Bureau and selected cooperative stations. This is converted in Chart V-A into a percentage of the mean monthly total amount computed for each Weather Bureau station having at least 10 years of record. The depth of snow on ground is that reported by both Weather Bureau and selected cooperative stations as of 7:00 a.m. Eastern Standard Time on the Monday nearest the end of the month. This is reported only for the months December through March. The snowfall charts are presented each month November through April.

Isolines for Charts I, II, III, IV, and V, are drawn through points of approximately equal value. Caution should be used in interpolating on these charts, particularly in mountainous areas.

CHART VI. A. PERCENTAGE OF POSSIBLE SUNSHINE. B. PERCENTAGE OF MEAN MONTHLY SUNSHINE. -CHART VI-A shows the amount of sunshine received in terms of percentage of the total hours of sunshine possible during the month. In Chart VI-B this is shown as a percentage of the mean number of hours of sunshine received. Means are computed for Weather Bureau stations having at least 10 years of record.

CHART VII. A. AVERAGE DAILY VALUES OF SOLAR RADIATION, LANGLEYS. B. PERCENTAGE OF MEAN DAILY SOLAR RADIATION. -Shown on Chart VII-A are the monthly averages of daily total solar radiation, both direct and diffuse, in langleys (gm. cal. cm.$^{-2}$) for all Weather Bureau stations which record this element.

CHART VII-B shows the percentages of the mean based on at least 5 years of record during the period 1950-1960, and corrected to the International Pyrheliometer Scale of 1956.

CHART VIII. -TRACKS OF CENTERS OF ANTICYCLONES AT SEA LEVEL.

CHART IX. TRACKS OF CENTERS OF CYCLONES AT SEA LEVEL. -Centers which can be identified for 24 hours or more are tracked in these charts. Semipermanent features such as the Great Basin and Pacific Highs and Colorado and Mexico Lows are not shown. The 7:00 a.m. EST positions are shown by open circles, with the intermediate positions at 6-hour intervals shown by solid dots. The date is given above the circle and the central pressure to whole millibars below. A dashed track indicates a regeneration rather than actual movement to the next position. Solid squares indicate position of stationary center for period shown beside it.

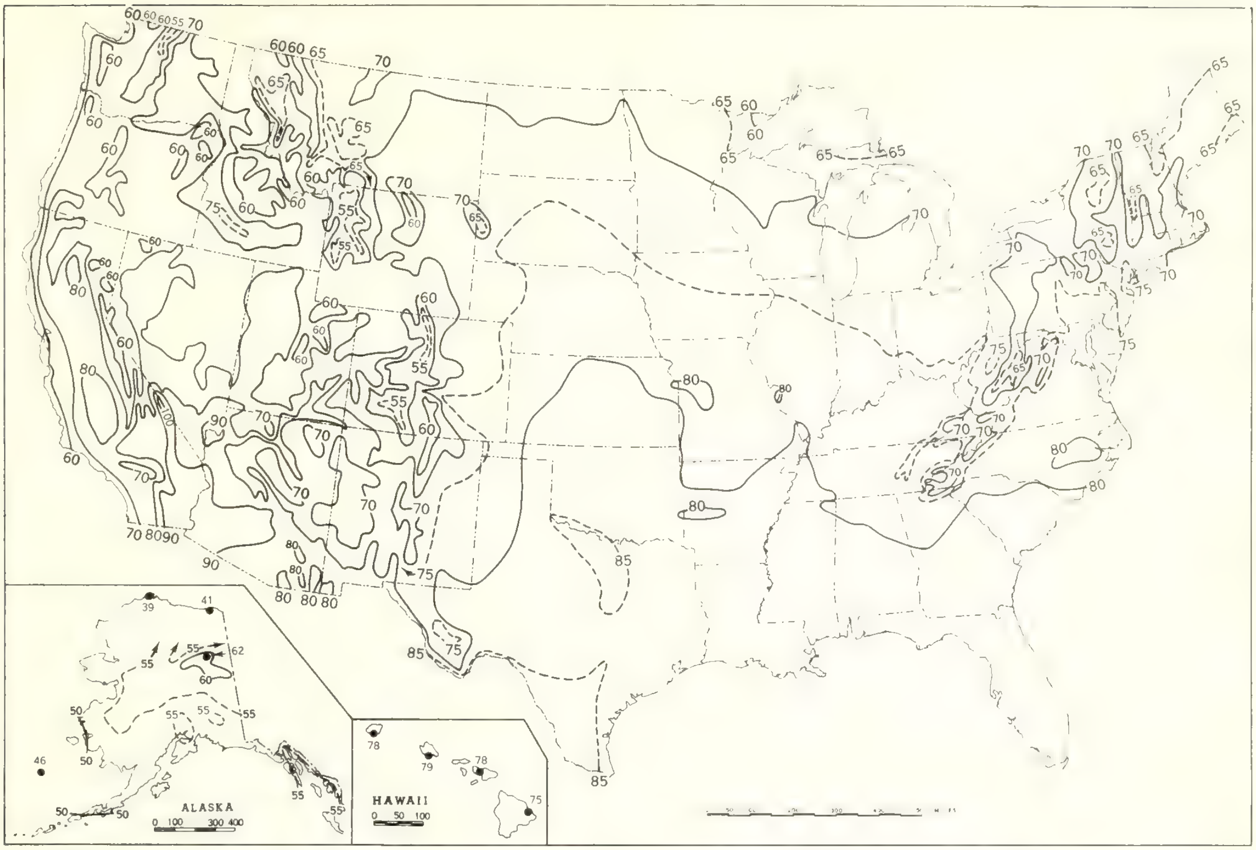
CHART X. AVERAGE SEA LEVEL PRESSURE (mb.) AND RESULTANT SURFACE WIND. -The average monthly sea level pressures are obtained from eight daily 3-hourly observations reported at Weather Bureau Stations. Resultant surface wind directions (to 36 points of the compass) for the month are shown by arrows. Resultant speeds are in miles per hour and are indicated by the length of arrow shafts. Constancy ratios (resultant surface wind divided by average surface wind for month) are shown to two decimal places. The inset shows the departure of the average pressure based on 30-year normals for first-order Weather Bureau Stations, other stations having at least 10 years of record; and for each 10° intersection in a diamond grid over the oceans.

CHARTS XI-XVI. AVERAGE HEIGHT, TEMPERATURE, AND RESULTANT WINDS, 850, 700, 500, 300, 200, and 100 mb. -Height is given in geopotential meters and temperature in degrees Celsius. These are the averages of the 1200 GMT radiosonde reports. Wind speeds are given in meters per second; flag represents 25 m.p.s., full feather 5 m.p.s., and half feather 2 1/2 m.p.s. Directions are shown to 360° of the compass. Winds are based on rawins at the indicated pressure surface and at 1200 GMT.

CHART XVII. A. 50-MB. RESULTANT WINDS. B. 30-MB. RESULTANT WINDS. -Wind speed (isotachs) in meters per second. Arrows show resultant wind direction. Winds are based on rawins at the indicated pressure surface and at 1200 GMT.

Exact values of most of these charted elements for Weather Bureau stations are printed each month in tabular form in CLIMATOLOGICAL DATA, NATIONAL SUMMARY. Extreme values of temperature and precipitation for each state are included in the tables, Condensed Climatological Summary. Annual averages for surface elements are presented in the CDNS Annual Issue each year.

Chart 1. A. Normal Daily Average Temperature (°F. 1931-60), July.



B. Temperature Departure from 30 - Year Mean (°F 1931-60), July 1968.

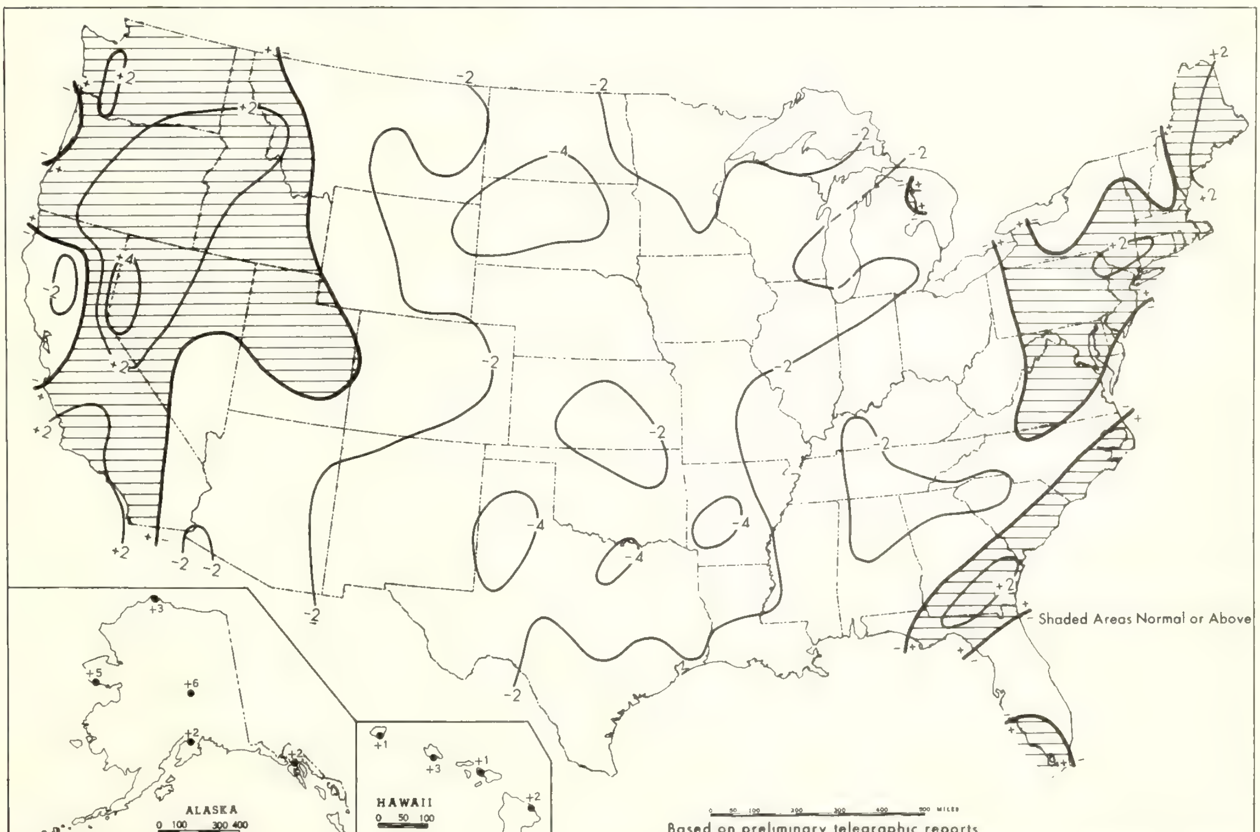


Chart II. Total Precipitation (Inches), July 1968.

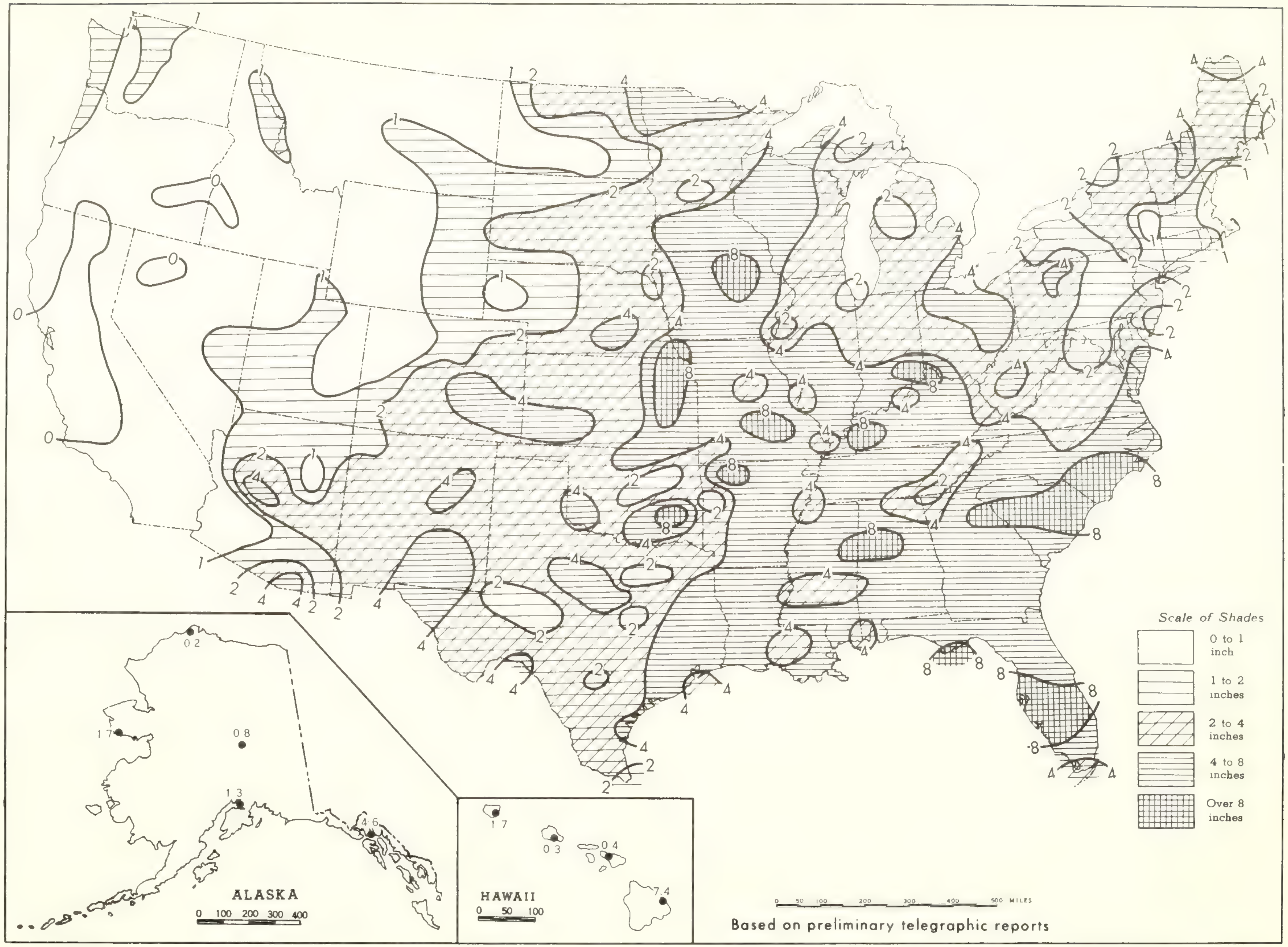
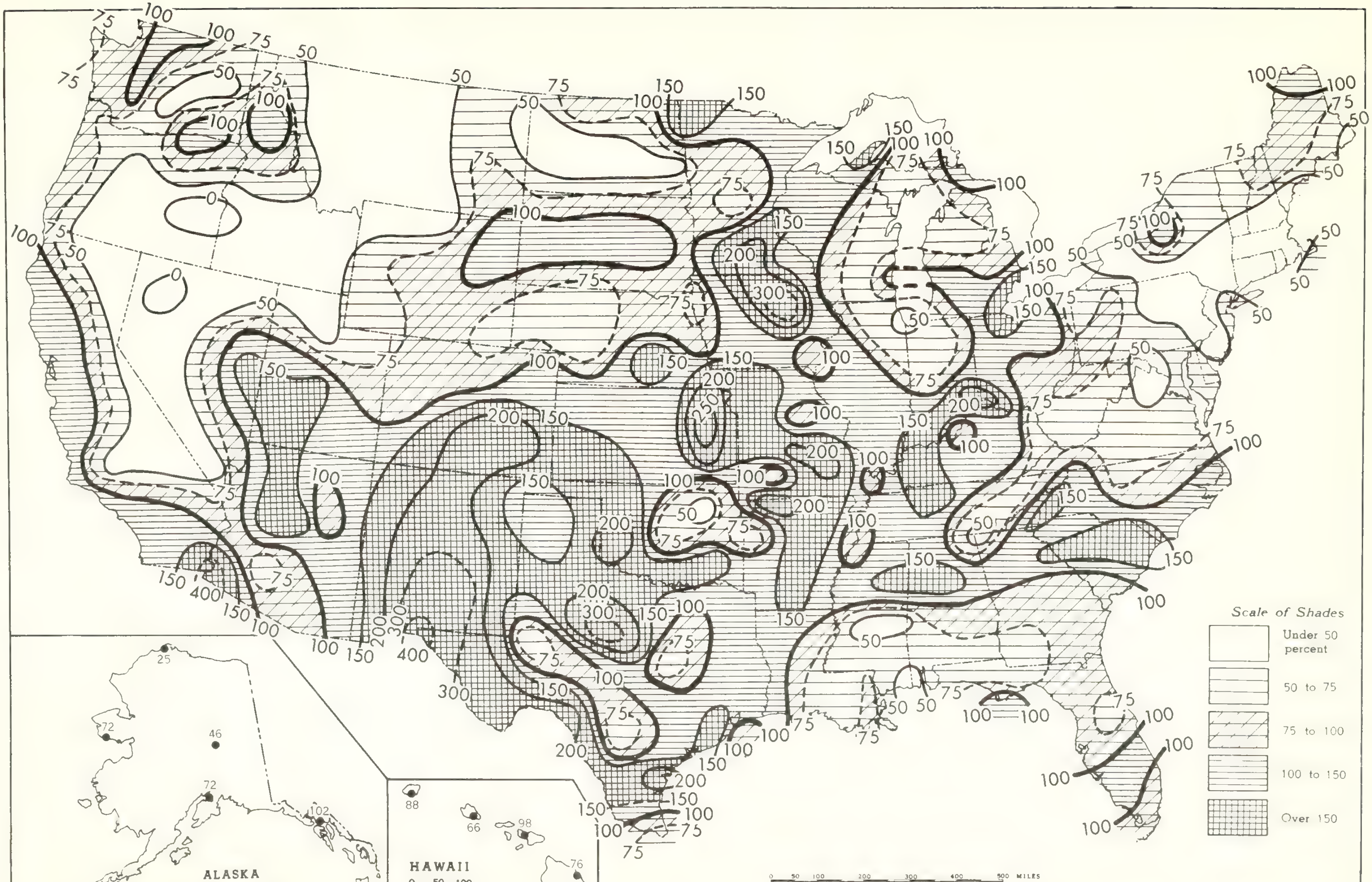
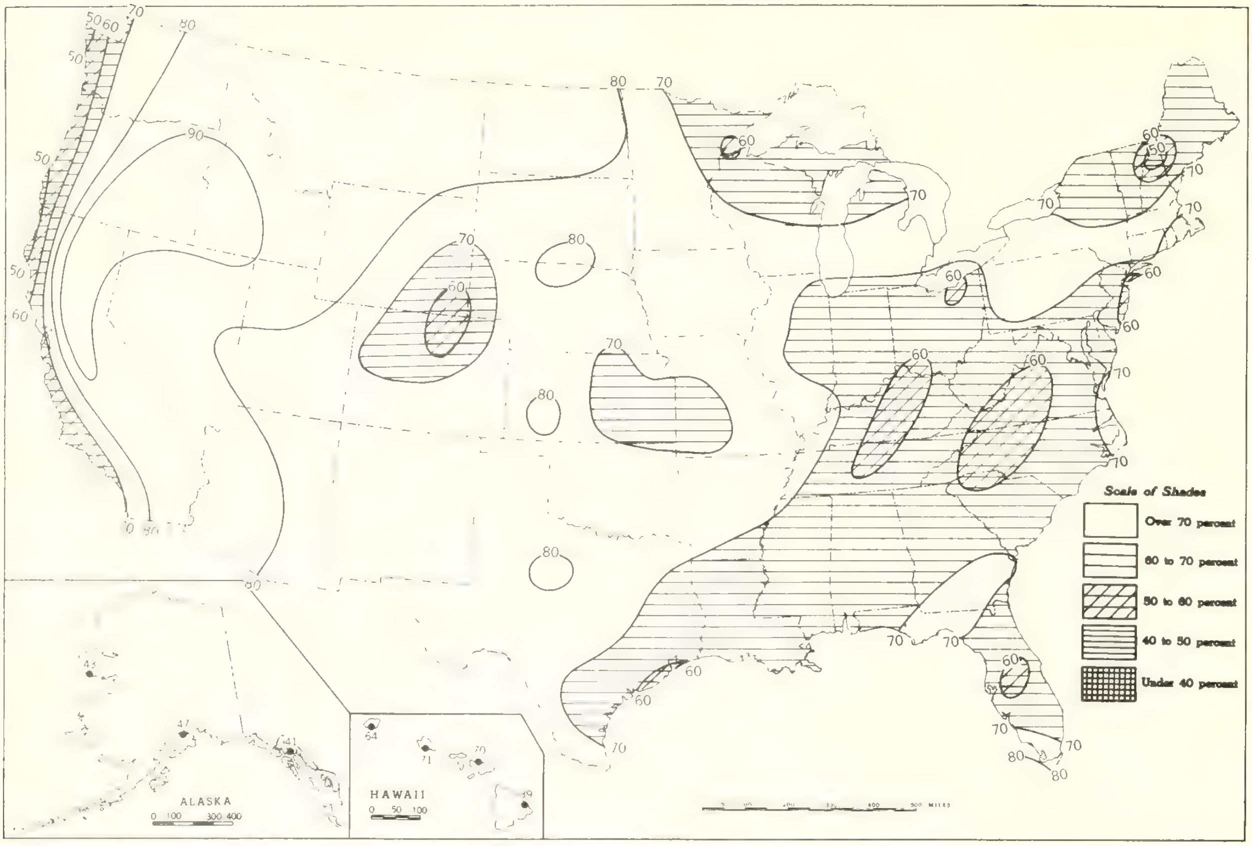


Chart III. Percentage of Normal Precipitation, July 1968.

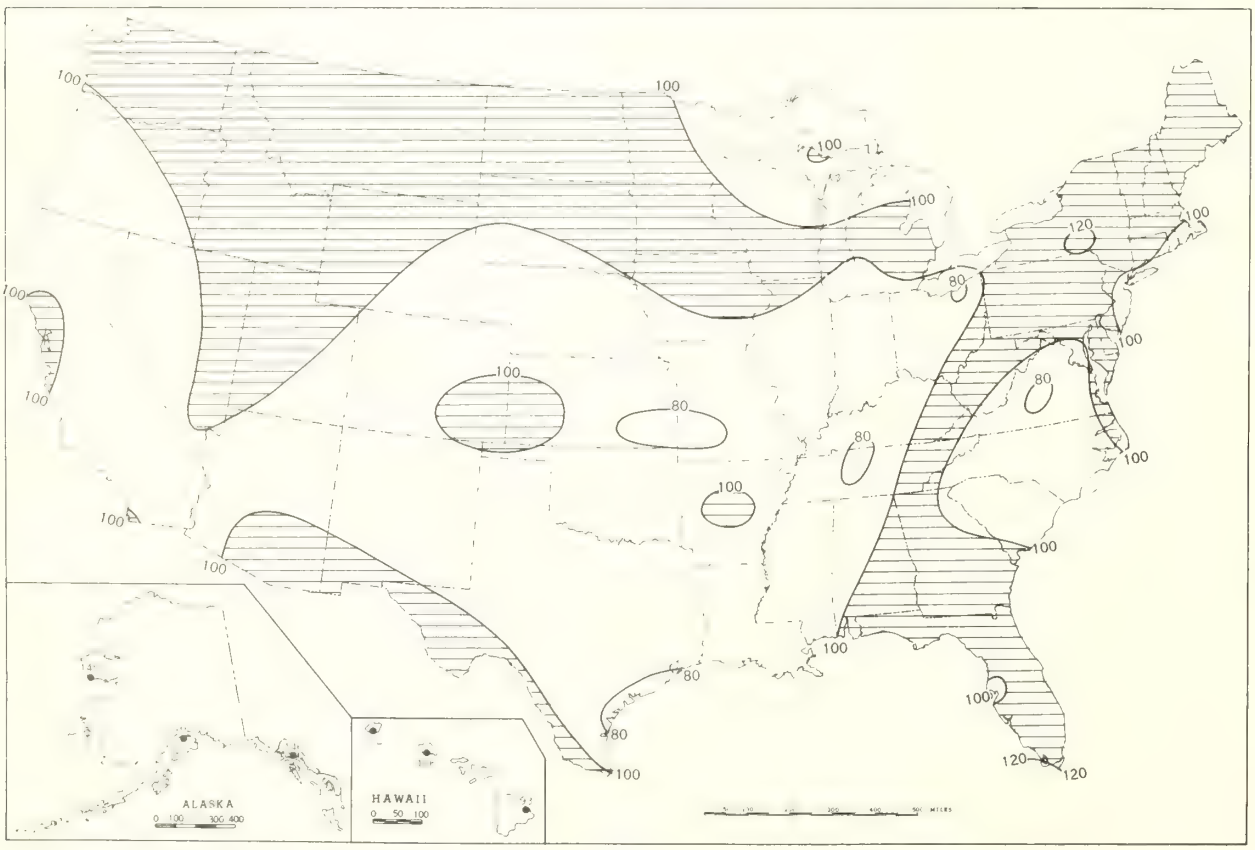


Based on preliminary telegraphic reports

Chart VI. A. Percentage of Possible Sunshine, July 1968.

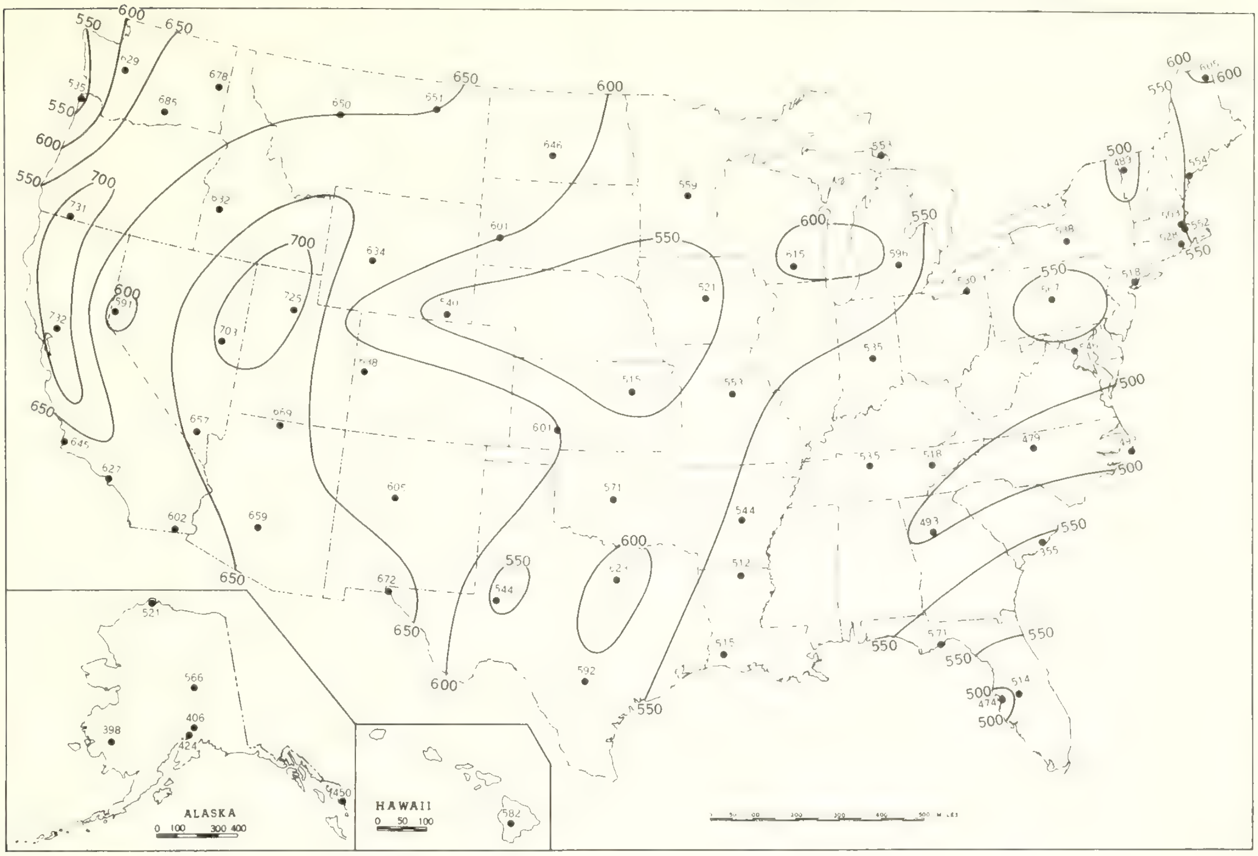


B. Percentage of Mean Monthly Sunshine, July 1968.

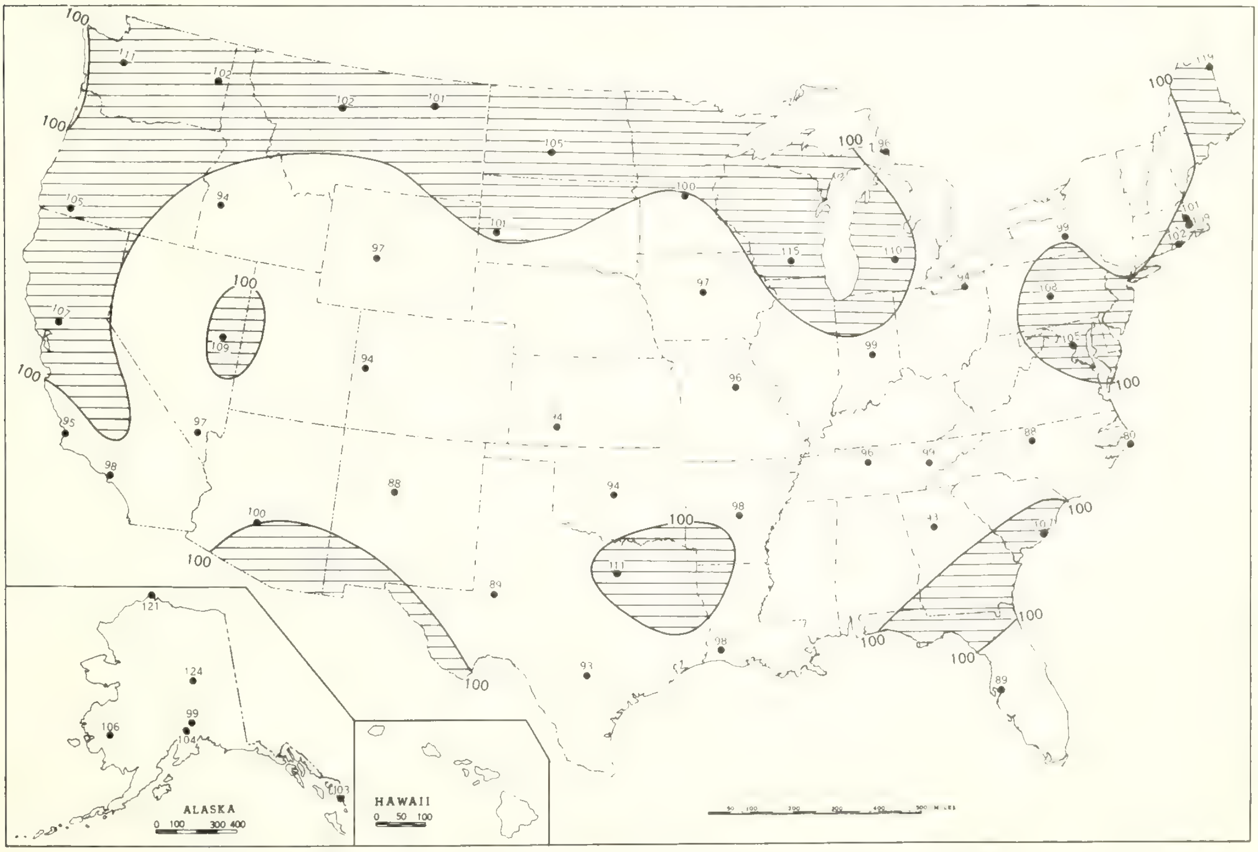


A. Computed from total number of hours of observed sunshine in relation to total number of possible hours of sunshine during month. B. Means are computed for stations having at least 10 years of record.

Chart VII. A. Average Daily Values of Solar Radiation, Langleys, July 1968.

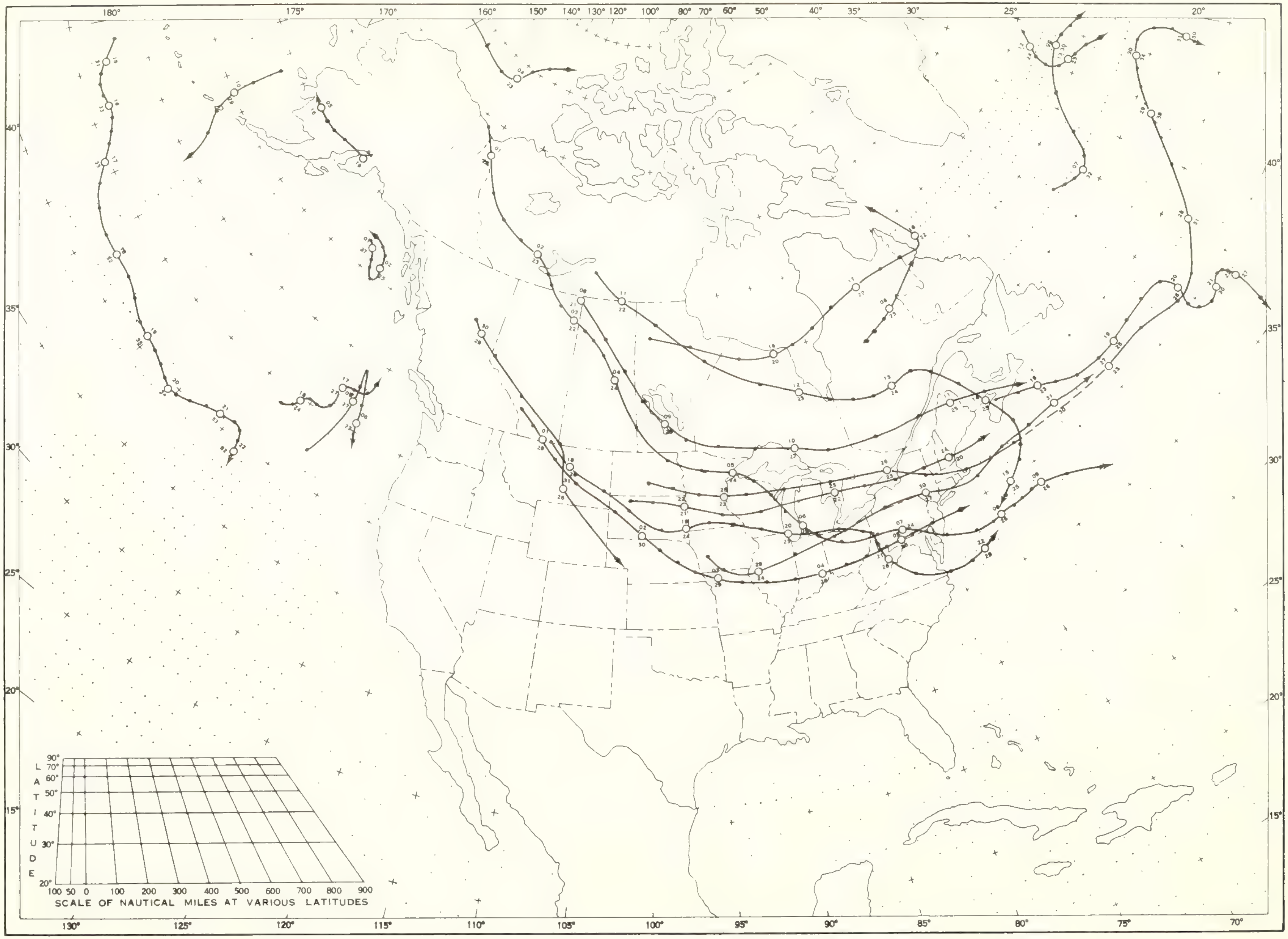


B. Percentage of Mean Daily Solar Radiation, July 1968.



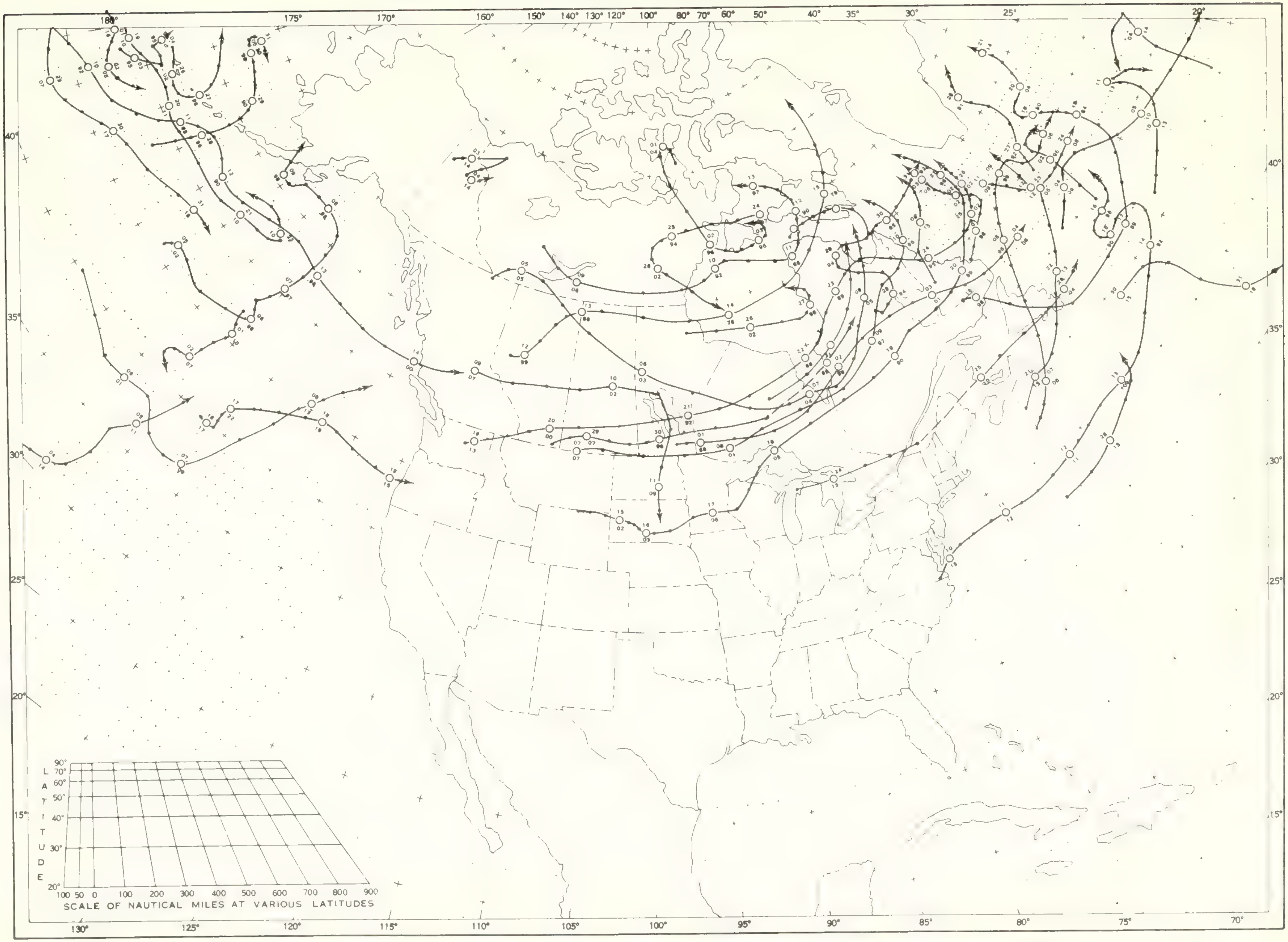
A. Mean daily solar radiation, direct + diffuse, received on a horizontal surface in langleys (1 langley = 1 gm. cal. cm.$^{-2}$) and recorded in International Pyrheliometer Scale of 1956. B. Percentage of the mean based on at least 5 years of record during the period 1950-60, and corrected to the International Pyrheliometer Scale of 1956.

Chart VIII. Tracks of Centers of Anticyclones at Sea Level, July 1968.



Circle indicates position of center at 7:00 a.m. E.S.T. Figure above circle indicates date, figure below, pressure to nearest millibar. Dots indicate intervening 6-hourly positions. Squares indicate position of stationary center for period shown. Dashed line in track indicates reformation at new position. Only those centers which could be identified for 24 hours or more are included.

Chart IX. Tracks of Centers of Cyclones at Sea Level, July 1968.



Circle indicates position of center at 7:00 a.m. E.S.T. Figure above circle indicates date, figure below, pressure to nearest millibar. Dots indicate intervening 6-hourly positions. Squares indicate position of stationary center for period shown. Dashed line in track indicates reformation at new position. Only those centers which could be identified for 24 hours or more are included.

Chart X. Average Sea Level Pressure (mb) and Resultant Surface Wind, July 1968. Inset: Departure of Average Pressure (mb) from Normal, July 1968.

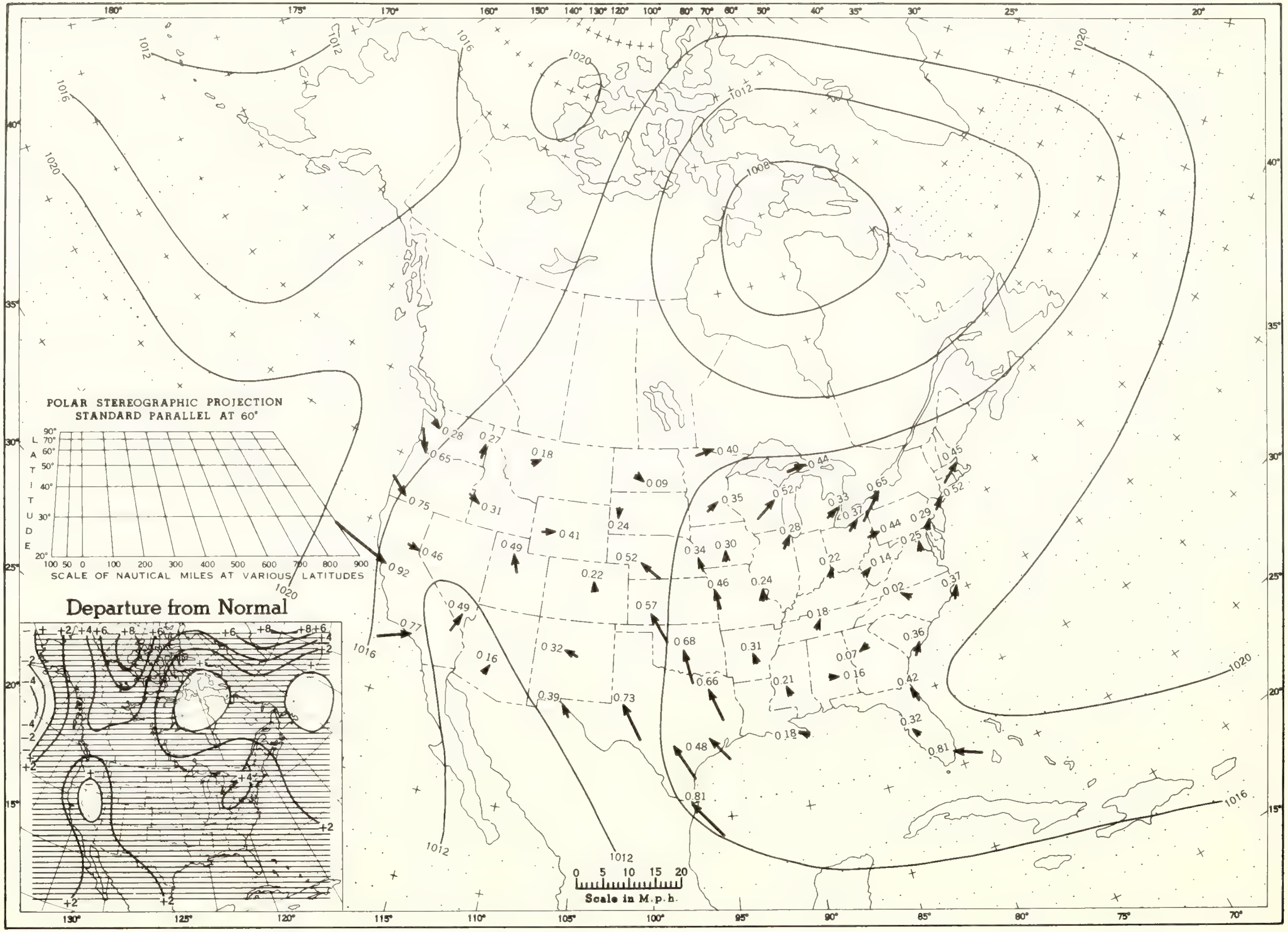
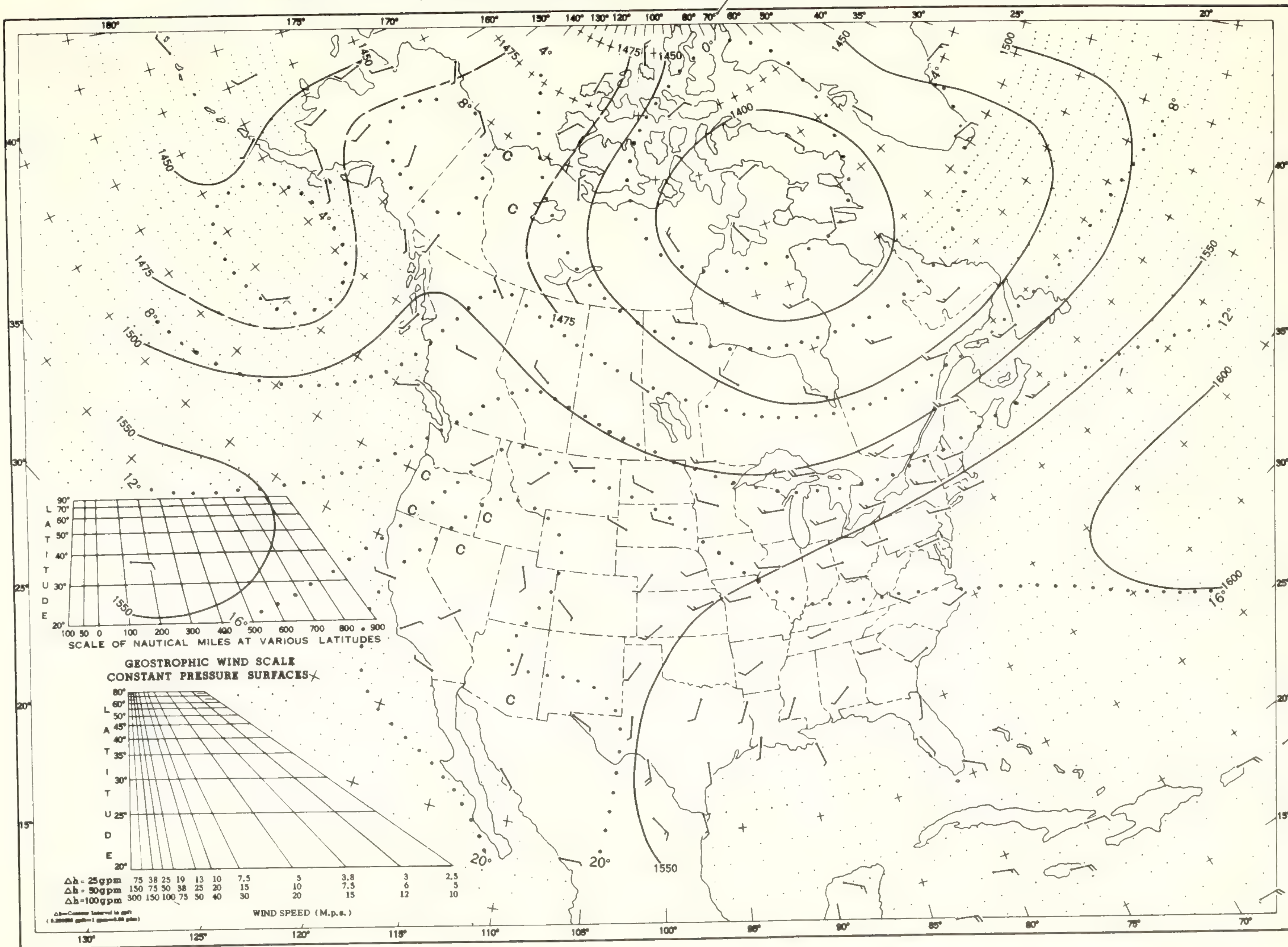
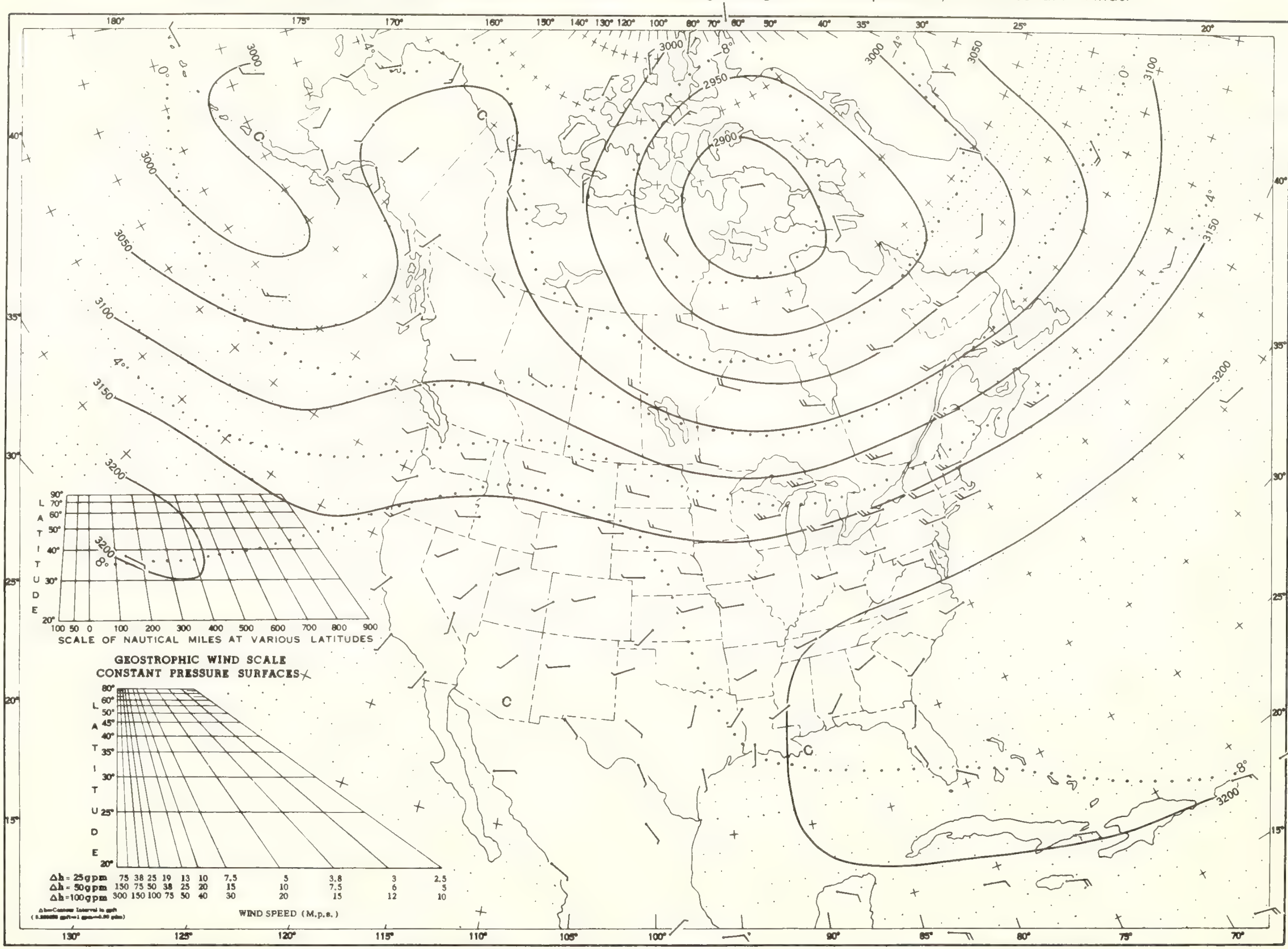


Chart XI. 850-mb. Surface, 1200 GMT, July 1968. Average Height and Temperature, and Resultant Winds.



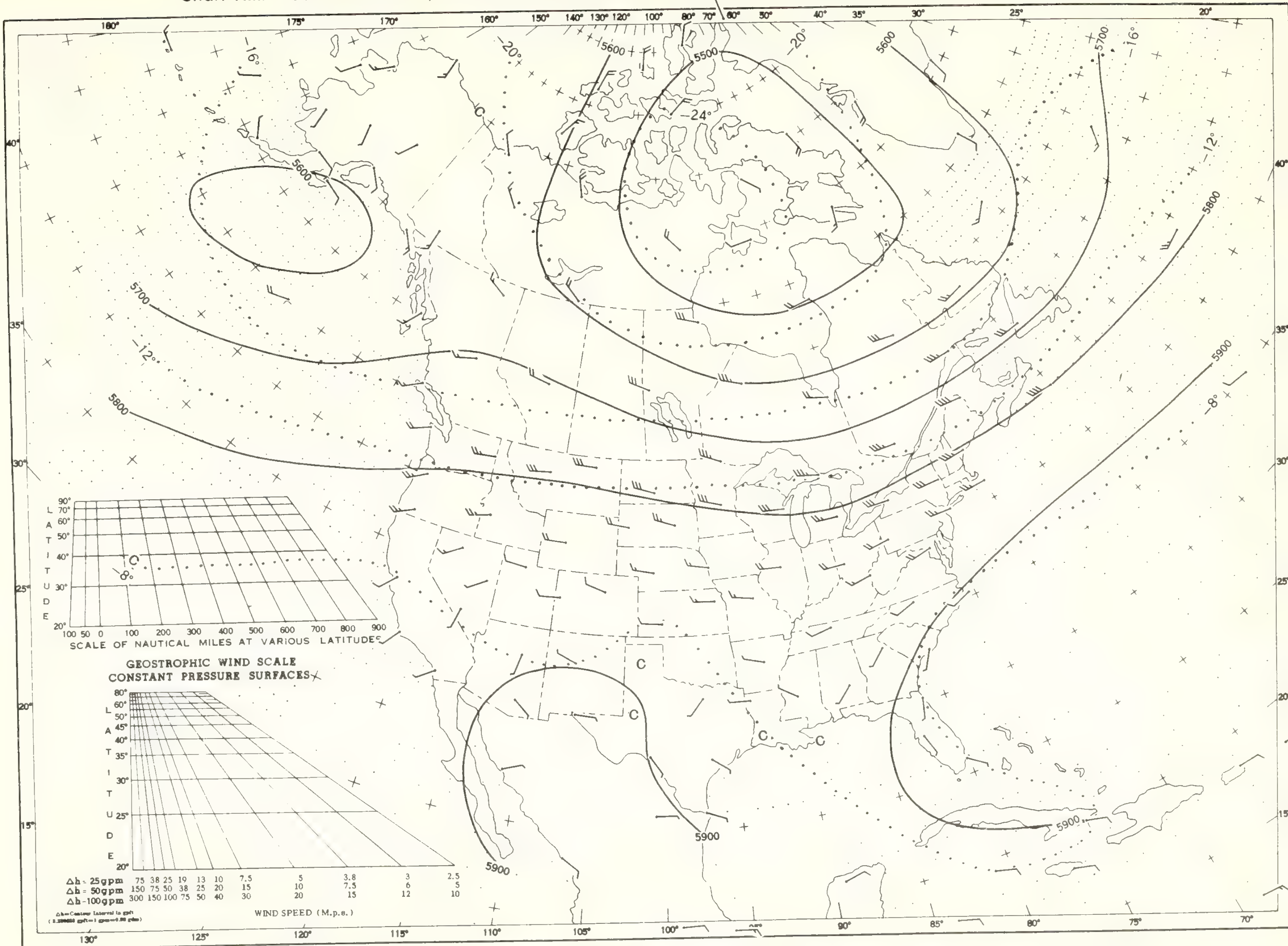
Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XII. 700-mb. Surface, 1200 GMT, July 1968. Average Height and Temperature, and Resultant Winds.



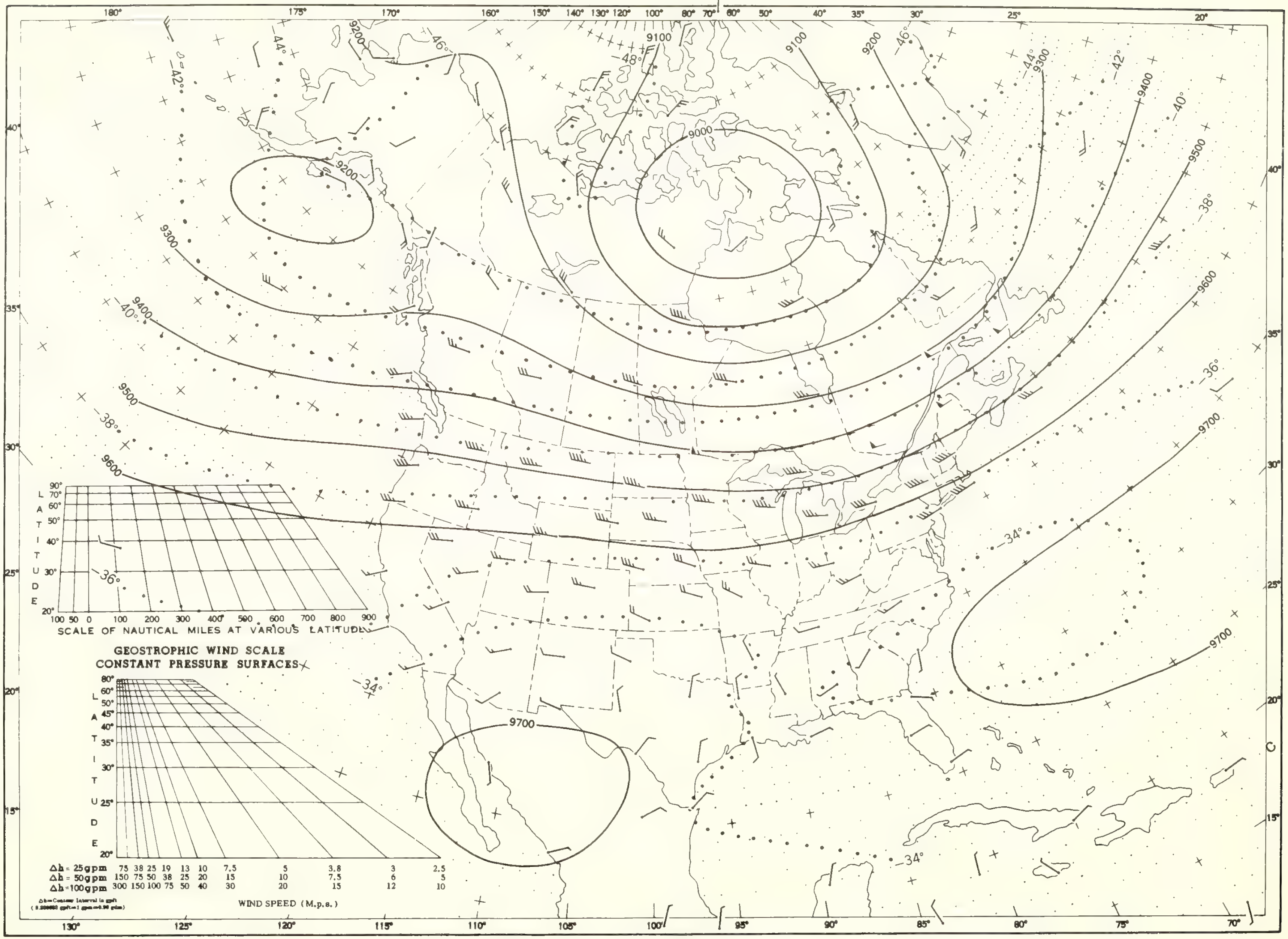
Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XIII. 500-mb. Surface, 1200 GMT, July 1968. Average Height and Temperature, and Resultant Winds.



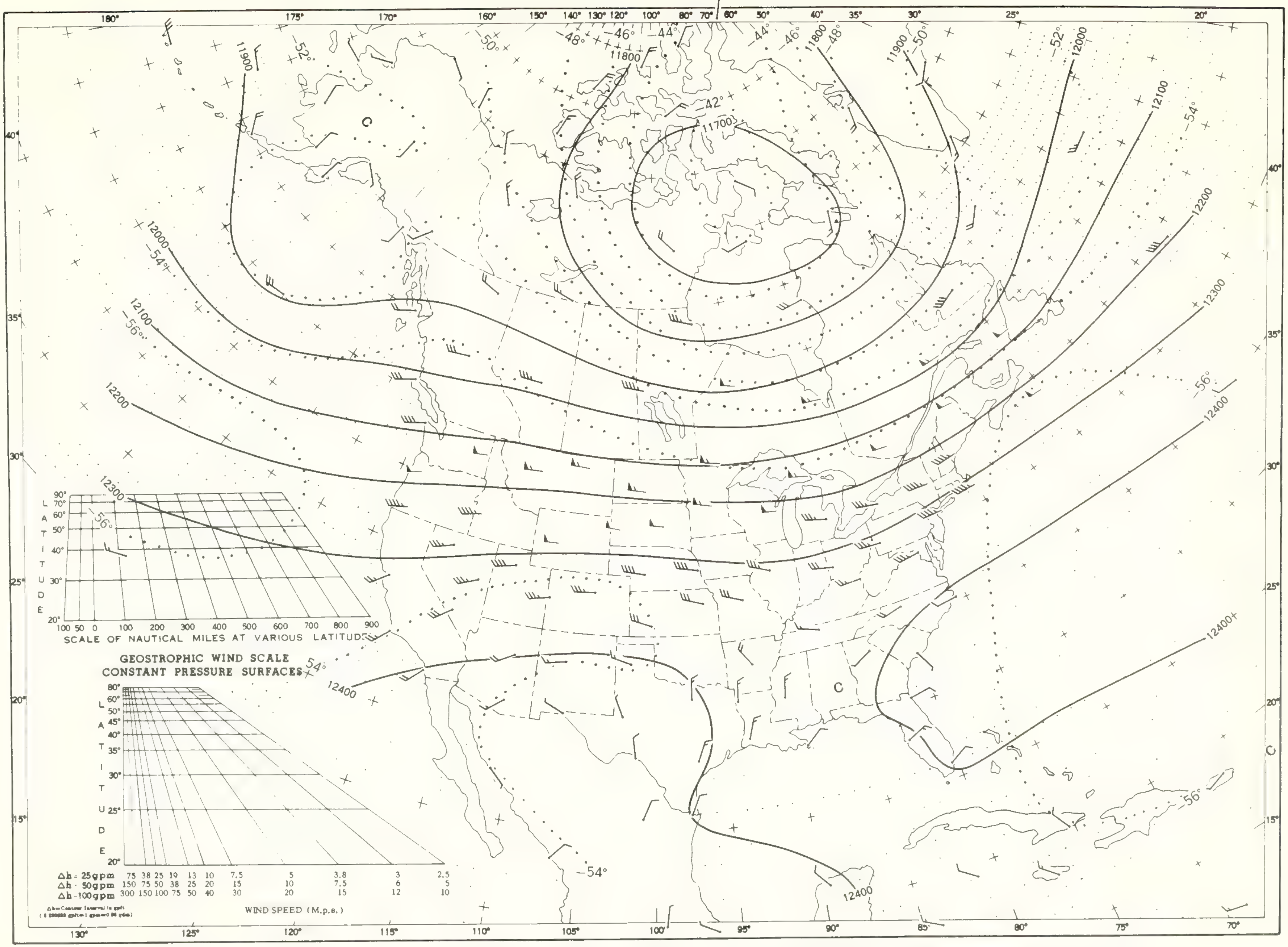
Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XIV. 300-mb. Surface, 1200 GMT, July 1968. Average Height and Temperature, and Resultant Winds.



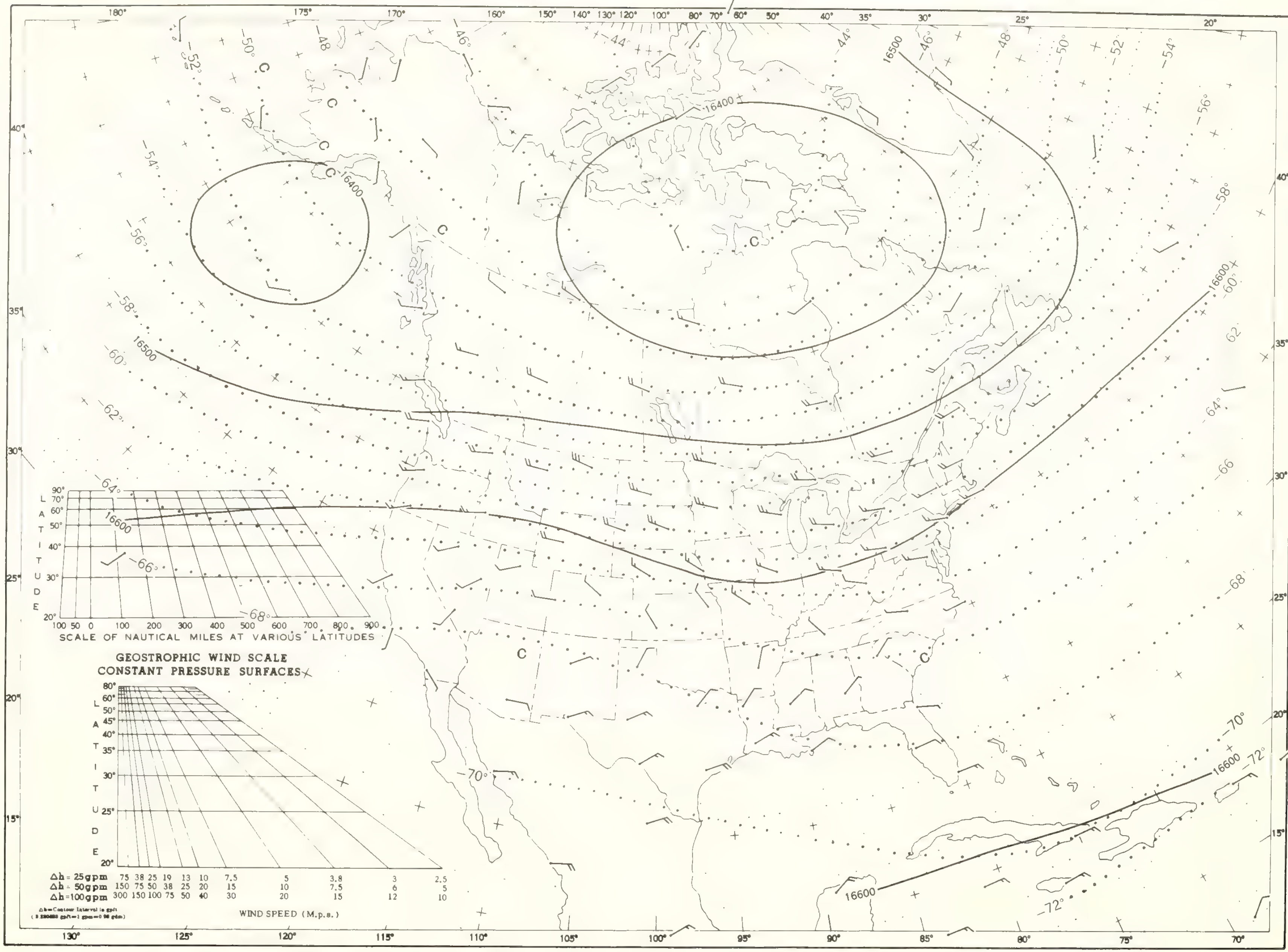
Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XV. 200-mb. Surface, 1200 GMT, July 1968. Average Height and Temperature, and Resultant Winds.



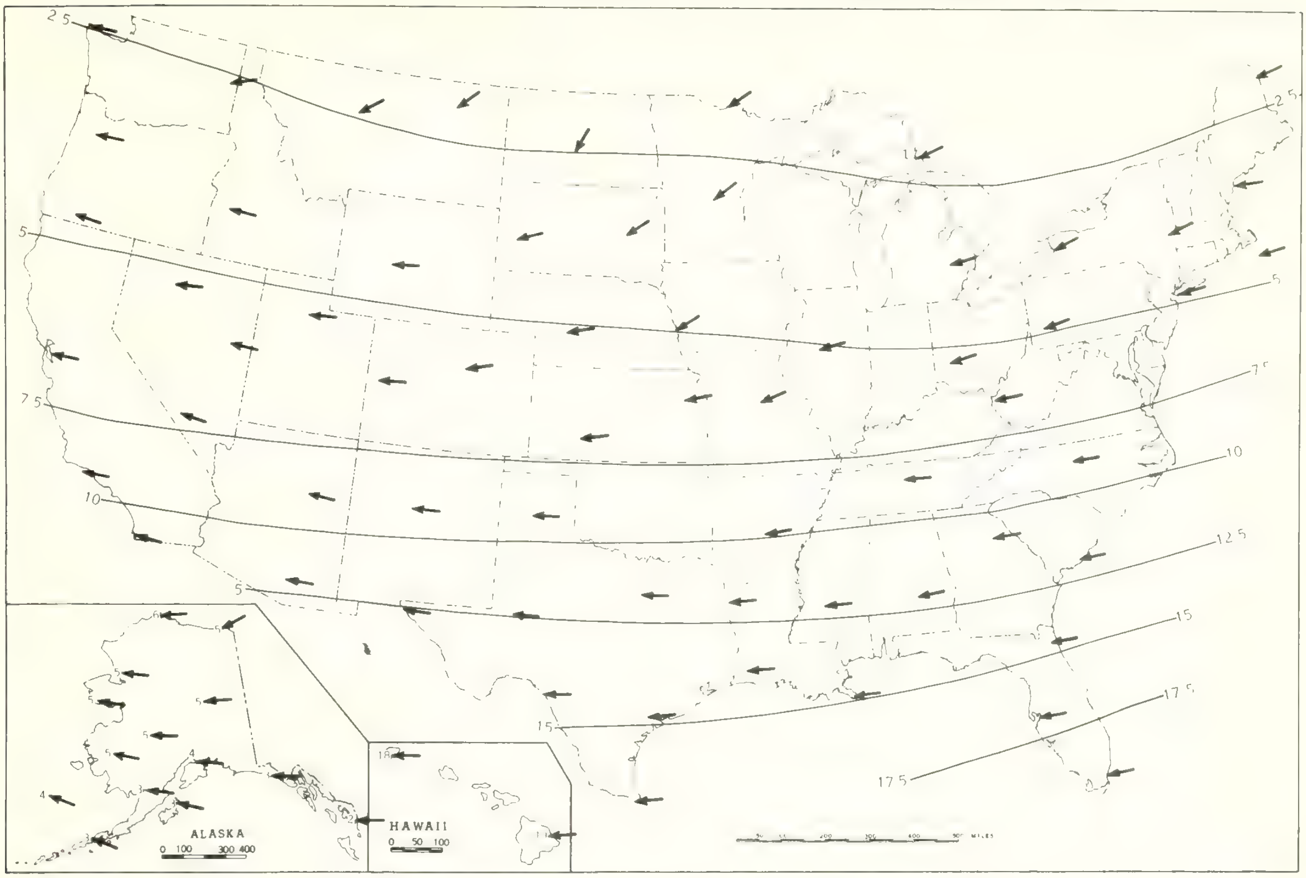
Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XVI. 100-mb. Surface, 1200 GMT, July 1968. Average Height and Temperature, and Resultant Winds

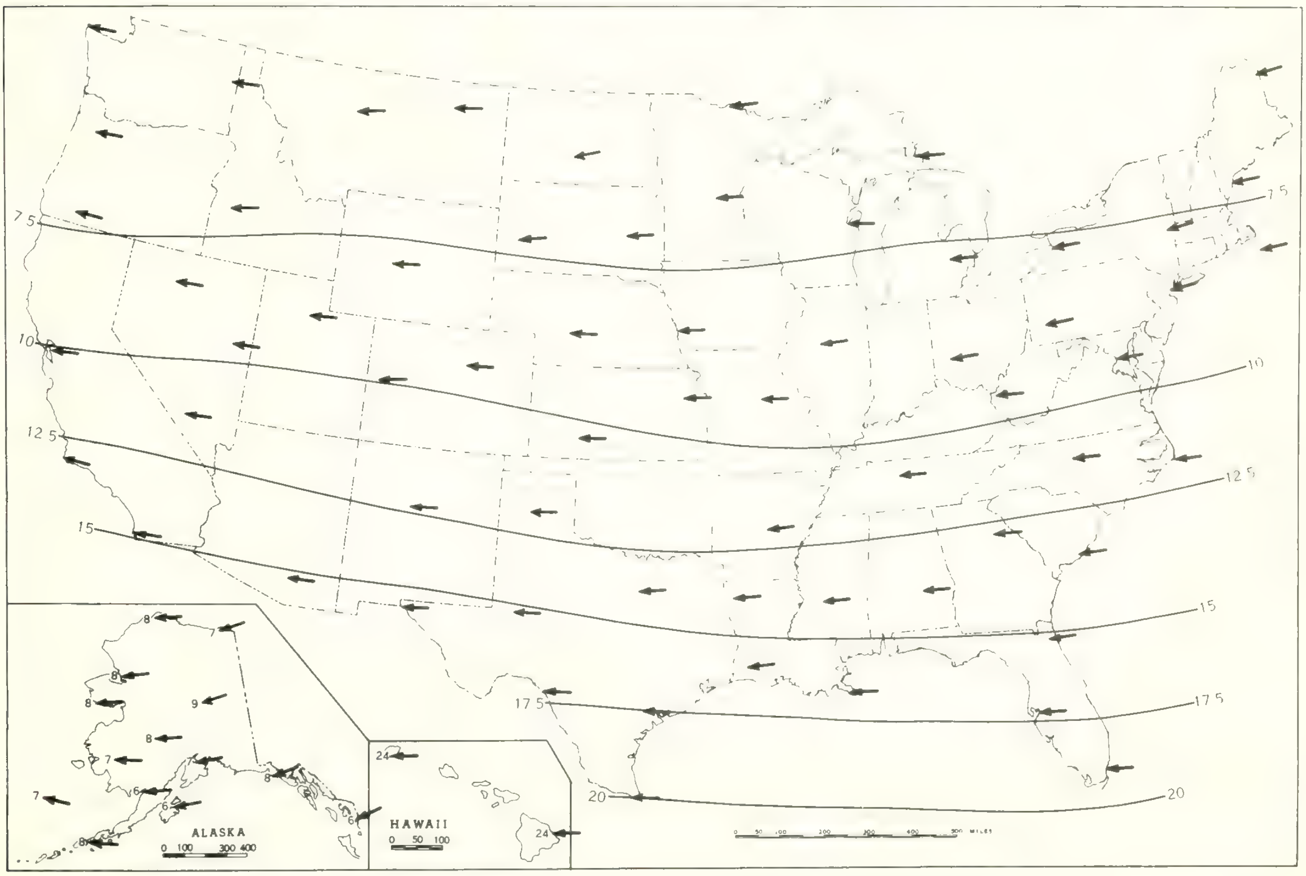


Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XVII. A. 50-mb. Surface, 1200 GMT, July 1968. Resultant Winds.



B. 30-mb. Surface, 1200 GMT, July 1968. Resultant Winds.



Wind speed (isotachs) in meters per second. Arrows show resultant wind direction. All wind data are based on rawin observations.

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CLIMATOLOGICAL DATA

NATIONAL SUMMARY

AUGUST 1968
Volume 19 No. 8

ASHEVILLE: 1968

CONTENTS

NOTE: Delayed data and corrections will be carried in the June and December issues of this publication. An explanatory page "Description of Charts" will be carried in the January and July issues.

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CLIMATOLOGICAL DATA

NATIONAL SUMMARY

Volume 19 No. 8 AUGUST 1968

GENERAL SUMMARY OF WEATHER CONDITIONS

HIGHLIGHTS:

1. Unusually heavy rainfall occurred over the northwest quarter of the Nation and in the northern and southern portions of the Florida Peninsula.
2. Cool weather persisted over much of the West; the weather over the Southeast was abnormally hot and humid.

TEMPERATURE.--August temperatures averaged slightly above normal along the California coast, below normal from the Pacific States to the Mississippi River, and above normal east of the Mississippi River. Much of the Great Basin and the Rocky Mountains averaged 4° to 6° cooler than normal. Coastal portions of the Pacific States were warmer than normal throughout most of the month except for a few days shortly after midmonth. The central part of the Country was relatively cool except for a few days beginning the 19th. The East experienced 3 1/2 weeks of very warm weather before a cold front brought relief on the 26th. The high relative humidity made the last 10 days of the hot spell especially enervating.

Temperatures in the southwestern deserts climbed to 100° or higher on several afternoons early in August. Cool,comfortable temperatures prevailed over the Central and East but the weather soon became hot and humid. Russell, Kans., registered 78° on August 2 and 101° on the 3d. Once established, sweltering heat and humidity continued for several days its firm grip over most of the Nation from the Rocky Mountains to the Atlantic coast. Temperatures reached 100° to 105° from southern South Dakota to northern Texas on several consecutive days.

Beloit, Wis., registered 100° on August 8, the first time in several years with so high a temperature, and North Carolina experienced the hottest weather in 2 years. A cold front moved in, however, and by the morning of August 12, numerous locations in the Northeast had cooled to the 40's.

For several days, about midmonth, a front, stretching from west of the central Rockies to the Northeast, separated cool, comfortable, dry air in the North from the hot, humid, tropical air that covered the South. Maximums in the 90's were common along the Gulf and reached 100° or higher on the 18th from central Georgia to central South Carolina. This tropical air was especially humid; dewpoints reached 70% as far north as the Ohio River. The unusually high temperatures and high humidities in the Southeast continued into the fourth week of August. Columbia, S. C., registered 106° on the 23d. In parts of the East, this was the hottest week in many years. The persistence of the combination of high temperature and high humidity made the weather especially uncomfortable to the people whose work kept them out of doors. A cold front passage near the end of the month ended the long hot spell in the Southeast. Atlanta, Ga., registered 65° on the afternoon of August 31, compared to 98° a week earlier. The month ended with clear skies and pleasantly cool weather predomination over most of the Nation.

PRECIPITATION.--Rainfall amounts ranged widely over the United States in August, exceeding 8 inches in spots from Nebraska and Iowa to the middle Gulf coast and twice that amount at Jacksonville, Fla., but totaling less than 1/2 inch over much of southern California and nearby portions of neighboring States. Several inches of rain fell along the northern Pacific coast. These amounts would not be unusual in December but are unusual for August. For instance, Salem, Ore., received over 4 inches as compared to the August normal of less than 1/2 inch. The 16.24-inch total at Jacksonville, Fla., was slightly over twice the August normal but a "trace" at Los Angeles equaled the normal and 1.18 inches at Red Bluff, Calif., was almost 20 times the August normal for that location. Numerous stations in the Northwest received more rain in August 1968 than in any previous August: Seattle, 4.28 inches; Olympia, 5.45 inches; Portland 4.25 inches; Eugene, 5.79 inches; Eureka, 1.98 inches; Boise, 2.37 inches; Pocatello, 3.98 inches; Missoula, 2.38 inches; and Sheridan, 3.02 inches. At the other extreme, Port Arthur, Texas, received only 0.98 inch, less than in any previous August.

Heavy thundershowers drenched the Arizona-Utah border on August 1. More than 3 1/2 inches at Monticello and 4 1/2 inches at Blanding, both in Utah, caused flooding along the San Juan River. Flash floods also occurred in northeastern Kansas early in August due to the torrential downpours in that area. Heavy showers fell on August 2 in Mississippi, Alabama, and Florida. On August 3, as sand and duststorms whipped across Phoenix, Ariz., tornadoes dipped across the countryside of Minnesota.

Heavy downpours sent small streams in parts of Iowa and northern Missouri on a rapid rise late on the 4th and violent weather, including a few tornadeos, occurred from South Dakota and Iowa to Lower Michigan on the night of August 6-7. Most of the tornadoes struck rural areas with damage confined to farmsteads and trees. Mankato, Minn., received 7.09 inches of rain during the night. On Friday, August 9, a severe thunderstorm at Burlington, Vt., dropped hail up to 3 inches in diameter. More heavy downpours fell on the same date in southeastern Nebraska, eastern Kansas, southwestern Missouri, and northern Arkansas, with spots receiving 4 to 5 inches by Saturday morning.

Light rains began falling in the Far Northwest on the 13th, bringing a welcome interruption to the dry season and lessening the forest fire hazard in that area. On the 14th, violent weather occurred in the central Great Plains from Nebraska to northern Texas. Heavy thundershowers drenched a few spots with 5 to 9 inches of rain in the afternoon and evening. Hail and high winds accompanied many of the storms. As the thunderstorms continued in the tropical air that covered the South and along a cold front, that separated this air mass from the polar air which moved into the northern States, a few tornadoes occurred at scattered midwestern localities. A tornado caused widespread minor damage in the St. Louis, Mo., area on the 15th and several tornadoes struck the western and northern suburbs of Chicago and the other localities in northern Illinois on the 16th. The violent weather continued through the night from northern Missouri to Michigan.

Generous rains fell on the Pacific coast shortly after midmonth, as numerous air-mass thunderstorms occurred in the Deep South and along the Ohio River.

AUGUST 1968

Frontal storms dropped more precipitation in the third week of August. A tornado leveled barns and other buildings near Kenyon, Minn., on the 19th as other twisters struck near Marinette, Wis. On the 20th and 21st, generous rains--1 to 2 inches--fell in spots of normally-dry Arizona and in southern Utah.

The central Great Plains received heavy rains in the last few days of August. Six-hour totals on the 26th ranged from over an inch to about 4 inches in southeastern Nebraska, western Iowa, and northern Kansas. Spots in the Oklahoma and Texas Panhandles received 6- to 8-inch totals on the 29th. Water flooded highways, homes, and business establishments as the streams overflowed. The month ended as a tropical disturbance dumped torrential rain over the norther part of the Florida Peninsula--over 15 inches at Jacksonville in 96 hours.

CONDENSED CLIMATOLOGICAL SUMMARY

AUGUST 1968

Section	Temperature						Precipitation			
	Monthly extremes						Monthly extremes			
	Station	Highest	Date	Station	Lowest	Date	Station	Greatest	Station	Least
		°F			°F			In.		In.
Alabama	Bridgeport 2W	104	24	Waterloo	39	27	Wetumpka	9.78	Guntersville	0.60
Alaska	Brooks River	89	7	Tyonek	11	29	Little Port Walter	23.82	3 Stations	.03
Arizona	Willow Beach	111	4	Fort Valley	20	22	Miami	8.06	7 Stations	.00
Arkansas	Beedeville	102	24	2 Stations	46	28	El Dorado FAA AP	7.89	Georgetown	T
California	Death Valley	116	31+	do	16	22	Fort Dick	6.05	116 Stations	.00
Colorado	2 Stations	101	6	Fraser	15	24	Wolf Creek Pass 1E	7.92	Lime 3SE	.15
Connecticut	Hartford WBAP	95	25	Coventry	36	30	Norwalk Gas Plant	5.15	West Hartford	.53
Delaware	3 Stations	99	25	Bridgeville 1NW	44	31	Dover	2.42	Wilmington Porter Resvr	.41
Florida	Niceville	103	24	Loxahatchee	57	27	Starke	17.21	De Soto City 8SW	1.56
Georgia	3 Stations	105	25+	Clayton 1W	40	29	Montezuma	9.67	Hartwell	.13
Hawaii	2 Stations	94	31+	Mauna Loa Slope Obs.	35	20+	Honomu Mauka 138	15.52	10 Stations	.00
Idaho	Riggins Ranger Station	103	4	Warren	24	29	Island Park Dam	6.16	Potlatch 3NNE	.91
Illinois	Harrisburg	101	23	Marengo	40	28	Park Forest	8.35	Avon 5NE	.52
Indiana	Jeffersonville	99	24	5 Stations	40	28+	Monticello	8.55	Charlestown Ord Plant	1.35
Iowa	Hawarden	100	22	Le Mars 2N	40	11	Belle Plaine	8.55	Alton	.79
Kansas	Aetna 2S	109	9+	Russell Springs	42	30	Coldwater	12.06	Richfield 1NE	.43
Kentucky	Barren River Reservoir	100	24	3 Stations	41	30+	Jackson	8.96	Murray	.51
Louisiana	2 Stations	99	24+	Monroe FAA AP	51	28	Franklin 3NW	12.32	Gloster 1W	1.01
Maine	do	92	25+	Squa Pan Dam	30	19	Bridgewater	3.28	St Francis	.70
Maryland	4 Stations	100	25+	Oakland 1SE	35	29	Fort George G Meade	7.84	2 Stations	1.11
Massachusetts	2 Stations	96	26+	Birch Hill Dam	36	31+	Chester 2	4.16	Barre Falls Dam	.60
Michigan	Traverse City FAA AP	98	23	Herman	27	27	St James Beaver Island	8.10	Frankfort 2NE	.47
Minnesota	3 Stations	99	6+	Cotton 11E	26	27	St Peter 2SW	10.62	Chaska 1NE	.55
Mississippi	Water Valley 1NNE	101	25	Holly Springs 4N	46	28	Rockport	10.61	Arkabutla Dam	.15
Missouri	2 Stations	100	24+	Fredericktown	38	28	Butler	8.85	Freedom	.58
Montana	Miles City	103	6	Cooke City	24	29	Bozeman 12NE	7.46	Melville 4W	.83
Nebraska	2 Stations	106	6+	Harrisburg 10NW	35	24	Harbine	13.45	Winnebago	1.12
Nevada	Sunrise Manor Las Vegas	108	4	Diamond Valley-Pollard	23	23	Owyhee	4.07	Currant Hiway Sta	.00
New Hampshire	Windham	94	25	Mount Washington	27	11	Mount Washington	5.53	First Conn Lake	1.17
New Jersey	Hammonton 2NNE	99	26	Newton	38	29	Somerville	7.24	Fortescue	.48
New Mexico	Jal	102	15+	Wolf Canyon	23	24	Kelly Ranch	7.47	Shiprock	.15
New York	2 Stations	96	25+	4 Stations	32	31+	Cortland	7.31	Riverbank	.72
North Carolina	do	104	24+	Transou	33	29	Wilson 2W	7.05	Pinehurst	.20
North Dakota	5 Stations	99	22+	3 Stations	29	14	Bottineau	10.52	Napoleon	.96
Ohio	2 Stations	98	21	Millport 2NW	34	28	Ironton	8.84	Greer	.95
Oklahoma	6 Stations	108	10+	Boise City 2E	48	11	Clinton	10.40	Ardmore FAA AP	.53
Oregon	4 Stations	102	31+	Fremont	24	15	Valsetz	8.78	Echo	.44
Pennsylvania	3 Stations	100	24+	2 Stations	29	29+	East Brady	6.89	Marcus Hook	.67
Puerto Rico	Manati	96	23	Guineo Reservoir	53	26	Maricao	22.92	Mona Island	1.27
Rhode Island	Providence WBAP	93	25	Kingston	39	31+	Greenville	2.80	Newport	.44
South Carolina	Columbia WBAP	106	23	Union 8SW	46	31+	Ninety Nine Islands	5.97	Rimini	.20
South Dakota	3 Stations	105	7+	Mt Rushmore Natl Mem	33	18	Harrington	5.28	Wetonka	.58
Tennessee	Savannah	105	24+	Mountain City No 2	36	3	Gatlinburg 2SW	6.17	Brownsville	.05
Texas	Pecos	108	11	Mount Locke	47	30	Canyon	10.86	5 Stations	.00
Utah	Saint George	102	30+	Cedar Breaks Nat Mon	25	23	Silver Lake Brighton	5.65	Antimony	.18
Vermont	2 Stations	94	26	Mount Mansfield	30	15	Mount Mansfield	4.93	Newfane	1.05
Virginia	Partlow 3WNW	105	22	Floyd 2NE	33	29	Pulaski 2E	8.27	Chase City	.18
Washington	2 Stations	103	2+	Rainier Paradise RS	32	20	Palmer 3ESE	9.52	Connell 12SE	.45
West Virginia	3 Stations	99	23+	2 Stations	28	29+	Branchland	9.24	Brushy Run	.98
Wisconsin	2 Stations	100	20+	3 Stations	29	27	Monroe 1W	6.21	Fairchild Ranger Sta	.59
Wyoming	3 Stations	103	7	Crandall Creek	19	12	Grass Creek	5.09	Gas Hills 4E	.16

\+ And also on an earlier date or dates.

NOTE: Dates in the above Condensed Climatological Summary apply to the period 24 hours prior to time of observation. In some cases the actual occurrence is on the calendar date preceding that shown. (See individual Climatological Data for times of observations).

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	No. of days: Max. 90°F. or above	No. of days: Min. 32°F. or below	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	No. of days: .01 inch or more	No. of days: With thunderstorms	Snow, Sleet: Total	Snow, Sleet: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Fastest mile: Speed	Fastest mile: Direction	Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	Ft.	Mb.	Mb.	°F.	°F.	°F.	°F.	°F.		°F.				°F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
ALABAMA																																
BIRMINGHAM	620	996.6	1018.7	90	69	79.4	-1.7	98	23	55	30	20	0	58	73	1.81	-3.04	0.58	8	16	0.0	0	1.0	3	26	N	2	5	16	10	5.6	75
HUNTSVILLE	624	995.9	1018.7	92	70	81.0	0.8	101	23	59	28+	19	0	68	72	0.94	-2.35	0.40	7	10	0.0	0	0.9	9	31	31	1	8	14	9	5.5	
MOBILE	211	1010.2	1017.9	93	73	83.1	1.0	102	22	65	30	26	0	70	72	4.59	-1.85	1.48	16	16	0.0	0	1.5	8	23	8	22	3	20	8	6.1	
MONTGOMERY	183	1011.2	1018.3	93	71	81.8	0.1	100	24+	57	30	24	0	70	73	2.50	-1.60	1.07	9	15	0.0	0	0.7	32	33	SE	24	4	18	9	5.8	55
ALASKA																																
ANCHORAGE	114	1008.1	1012.9	66	51	58.2	2.3	82	6	40	31	B 6	0	49	72	0.69	-1.88	0.34	10	0	0.0	0	1.2	19	23	18	9	3	8	20	7.4	50
ANNETTE	110	1010.5	1014.5	68	52	59.7	1.3	81	9	47	26	13	0	50	75	6.42	-1.09	1.66	19	1	0.0	0	2.2	14	29	15	28	6	7	18	6.8	
BARROW	31	1015.2	1015.9	46	37	41.6	3.7	76	8	30	30	1	4	39	90	0.09	-0.81	0.03	5	0	0.3	T	9.7	9	28	8	16	4	4	23	8.1	
BARTER ISLAND	39	1014.6	1016.5	45	37	40.9	0.9	64	8	31	30	0	2	38	91	0.83	-0.22	0.52	6	0	0.7	T	9.9	9	30	9	17+	4	3	24	8.0	
BETHEL	125	1006.8	1012.5	62	46	53.8	1.5	82	5	37	30+	2	0	48	81	1.83	-2.37	0.72	14	0	0.0	0	1.4	22	29	18	4	1	2	28	9.1	
COLD BAY	96	1008.5	1012.5	55	49	52.0	0.7	60	27+	45	9+	0	0	47	84	3.53	-0.72	0.61	21	0	0.0	0	4.3	20	44	16	7	0	0	31	9.8	
FAIRBANKS	436	995.9	1012.7	70	47	58.5	4.2	84	13	31	30	15	1	48	73	0.96	-1.24	0.35	8	0	0.0	0	0.5	18	16	10	8+	9	7	15	6.2	
JUNEAU	12	1012.9	1013.6	66	46	55.7	1.6	77	4	38	27+	10	0	49	82	2.39	-2.63	0.73	10	0	0.0	0	2.1	9	26	12	31	7	3	21	7.3	48
KING SALMON	49	1009.5	1011.4	63	46	54.6	0.0	84	5	32	30	5	1	43	66	2.20	-1.23	0.49	12	0	0.0	0	1.8	17	31	9	13+	3	6	22	7.9	
KOTZEBUE	10	1011.9	1012.2	61	51	56.0	5.4	80	6	37	29	6	0	51	83	1.38	-0.78	0.45	16	2	0.0	0	3.0	29	30	30	22	4	10	17	7.4	
MC GRATH	344	1000.0	1012.7	68	44	56.4	2.3	87	6	29	30	14	3	44	67	0.80	-2.99	0.43	11	1	0.0	0	1.5	28	15	30	28+	3	9	19	7.2	
NOME	13	1010.8	1011.7	59	45	52.0	3.0	69	6	29	29	0	2	42	67	2.59	-1.21	1.15	14	1	0.0	0	1.1	13	27	13	4	3	6	22	8.0	30
ST. PAUL ISLAND	22	1009.8	1010.6	51	44	47.4	-0.2	53	30+	35	22	0	0	46	95	2.29	-1.00	0.82	16	0	0.0	0	1.4	22	31	15	6	0	0	31	9.9	
SHEMYA	122	1008.1	1012.0	51	45	48.2	-1.5	56	1	41	20	0	0	46	92	1.88	-0.24	1.12	10	0	0.0	0	1.4	1	30	3	18	0	3	28	9.5	
YAKUTAT	28	1012.5	1013.4	62	43	52.6	-1.2	77	5	34	28	3	0	49	87	3.87	-7.05	1.48	11	0	0.0	0	0.4	18	18	11	7	5	6	20	7.3	
ARIZONA																																
FLAGSTAFF	7006	791.4	1017.2	74	45	59.5	-4.4	80	30+	24	23	0	3	44	63	1.13	-1.71	0.34	11	14	0.0	0	3.4	21	20	24	22+	11	8	12	5.0	
PHOENIX	1117	972.9	1010.7	99	74	86.5	-1.0	104	29+	61	23	31	0	56	40	0.59	-0.53	0.26	6	7	0.0	0	1.3	14	56Y	E	3	16	9	6	3.5	87
TUCSON	2584	925.8	1011.8	93	69	81.3	-1.8	98	29+	63	23	27	0	58	49	1.12	-1.76	0.53	11	13	0.0	0	3.5	17	35	E	2	12	13	6	4.4	81
WINSLOW	4895	853.4	1014.1	87	58	72.5	-5.3	94	29	41	24	11	0	44	40	0.15	-1.28	0.05	5	6	0.0	0	3.7	21	32	27	29	14	9	8	4.3	
YUMA	194	1003.1	1010.3	101	77	88.8	-2.8	108	28	63	23	31	0	57	38	0.10	-0.40	0.10	1	1	0.0	0	4.8	19	39	SE	31	21	6	4	2.8	93
ARKANSAS																																
FORT SMITH	447	1001.0	1017.3	94	72	82.7	0.4	100	9+	62	31	25	0	67	64	1.27	-1.65	0.66	9	6	0.0	0	1.1	16	25	W	23	5	15	11	6.0	70
LITTLE ROCK	257	1008.1	1017.6	91	72	81.4	0.1	97	22	58	28	21	0	69	71	0.26	-2.56	0.14	3	4	0.0	0	2.3	20	22	N	8	10	10	11	5.7	72
TEXARKANA	391	1004.4	1017.4	92	72	82.3	-0.3	98	7	60	29	25	0	70	72	2.39	-0.68	1.42	5	5	0.0	0	3.7	17	17	20	16+	13	9	9	4.8	
CALIFORNIA																																
BAKERSFIELD	475	996.3	1013.5	93	66	79.8	-1.9	106	30	58	23+	21	0	50	37	T	0.00	T	0	0	0.0	0	4.0	32	23	31	12	24	4	3	1.9	
BISHOP	4108	873.4		90	53	71.7	-2.6	99	31+	41	23+	16	0			0.39	0.27	0.25	2		0.0	0						20	7	4	3.0	
BLUE CANYON	5280			72	54	62.6	-4.1	87	30	35	20	0	0			2.97	2.91	2.71	3		0.0	0			23	22	19	16	9	6	4.0	
EUREKA U	43			64	55	59.3	2.6	82	30	50	15+	0	0			1.98	1.88	0.89	8		0.0	0			25	NW	28	4	7	20	7.8	44
FRESNO	328	1001.7	1013.4	95	60	77.2	-1.7	105	30	52	26	25	0	51	45	T	-0.01	T	0	1	0.0	0	5.8	30	25	NW	16	24	7	0	1.9	92
LONG BEACH	34	1013.5	1014.9	84	63	73.5	1.2	102	23	57	23+	6	0	56	61	0.00	-0.03	0.00	0	1	0.0	0	3.0	25	18	28	26+	19	10	2	3.2	
LOS ANGELES	105	1010.5	1014.2	74	63	68.5	-0.6	90	23	59	22	1	0	59	75	T	-0.02	T	0	1	0.0	0	6.6	25	23Y	SW	26+	14	12	5	4.0	
LOS ANGELES U	270			83	65	74.1	1.0	100	23	61	22	4	0			0.11	0.07	0.11	1		0.0	0			17	W	26	17	12	2	3.4	76
MT SHASTA R	3544			77	47	61.7	-5.0	94	31+	34	22	2	0			0.78	0.60	0.32	6		0.0	0										
OAKLAND	6	1015.9	1016.0	72	59	65.8	1.6	89	29	55	23	0	0	56	76	0.03	0.00	0.02	2	1	0.0	0	7.2	28	29	27	16	8	14	9	5.5	
RED BLUFF	342	1001.4	1013.6	91	63	76.8	-4.2	110	30	56	24+	17	0	51	46	1.18	1.12	1.01	6	1	0.0	0	2.6	16	25	SE	18	13	10	8	4.5	84
SACRAMENTO	17	1013.2	1013.9	89	57	73.0	-1.1	107	30	50	22	17	0	53	58	0.02	0.00	0.02	1	0	0.0	0	6.6	21	27	SW	19	17	8	6	3.9	92
SANDBERG R	4517	864.5		78	56	66.8	-6.5	93	29	40	22+	2	0			T	-0.09	T	0		0.0	0			33	36	17	23	5	3	2.3	
SAN DIEGO	13	1013.5	1014.5	78	67	72.2	0.4	89	23	60	22	0	0	57	62	T	-0.08	T	0	0	0.0	0	4.2	28	18	NW	21+	18	12	1	3.5	76
SAN FRANCISCO	8	1015.6	1016.2	74	56	64.8	2.0	98	29	52	23+	1	0	54	77	0.06	0.04	0.04	2	0	0.0	0	10.2	28	35	W	16	11	11	9	5.2	
SAN FRANCISCO U	52			68	57	62.3	2.9	96	29	54	24+	1	0			0.03	-0.01	0.03	1		0.0	0			33	SW	16					66
SANTA MARIA	236			75	55	64.7	2.3	92	23	50	23	1	0			T	-0.03	T	0		0.0	0						20	10	1	3.3	
STOCKTON	22	1013.5	1014.6	88	58	72.9	-3.3	105	30	50	22+	15	0	46	44	0.03	0.03	0.03	1	0	0.0	0	7.1	30	28	32	21	15	13	3	3.8	
COLORADO																																
ALAMOSA	7536	776.5		75	46	60.6	-2.4	80	20+	34	24	0	0			2.22	1.24	0.42	12		0.0	0						10	12	9	5.1	
COLORADO SPRINGS	6145	814.8	1015.3	79	53	65.8	-3.4	86	21+	43	30	0	0	45	52	2.12	-0.04	0.67	10	7	0.0	0	1.6	4	30	14	8	10	8	13	5.6	
DENVER	5283	838.8	1013.5	82	54	68.1	-3.4	92	5	42	30+	5	0	47	54	2.53	1.25	1.43	10	8	0.0	0	0.9	17	32	NW	28	9	7	15	5.8	69
GRAND JUNCTION	4855	854.0	1013.9	84	57	70.3	-5.2	91	4	43	23	3	0	46	47	1.37	0.30	0.63	10	11	0.0	0	3.7	15	34	W	22+	8	13	10	5.5	66
PUEBLO	4684	857.4	1013.5	87	56	71.5	-3.1	96	7	40	24	15	0	49	52	0.90	-0.95	0.76	8	6	0.0	0	0.7	28	34	NE	29	10	12	9	5.1	76

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure: Station O	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No of days: Max. 90 F. or above	Temperature: No of days: Min. 32 F. or below	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No of days: .01 inch or more	Precipitation: No of days: With thunderstorms	Snow, Sleet: Total	Snow, Sleet: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile: Speed	Wind: Fastest mile: Direction	Wind: Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	No. of days (sunrise to sunset): Partly cloudy, 4-7	No. of days (sunrise to sunset): Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	Ft.	Mb.	Mb.	F.	F.	F	F.	F.		F.				F.	%	In	In	In			In	In.	M.p.h.		M p.h							%
CONNECTICUT																																
BRIDGEPORT	7	1016.3	1016.8	81	66	73.3	1.0	90	25	53	28	1	0	63	71	4.72	0.27	2.17	12	8	0.0	0	2.8	27	32	23	9	7	12	12	5.9	
HARTFORD	169	1009.8	1016.1	83	59	70.8	- 0.4	95	25	45	31	6	0	58	66	2.53	- 1.48	1.52	6	2	0.0	0	2.6	27	25	W	9	6	12	13	6.4	76
NEW HAVEN	6	1016.3		80	62	71.0	0.4	88	25+	49	28	0	0			3.02	- 1.22	0.92	14		0.0	0			50	W	9	6	13	12	5.8	70
DELAWARE																																
WILMINGTON	74	1014.6	1017.6	87	67	77.1	2.8	96	25	53	30+	14	0	65	65	1.17	- 4.42	0.82	7	6	0.0	0	3.5	25	20	16	31+	9	11	11	5.7	
DIST.OF COLUMBIA																																
WASH NATL AP	14	1015.2	1017.6	89	70	79.5	2.7	98	24	55	31	17	0	65	64	3.95	- 0.95	1.22	10	8	0.0	0	2.1	23	42	SW	1	10	12	9	5.3	69
FLORIDA																																
APALACHICOLA U	13			89	75	81.8	0.3	94	24+	66	29	14	0			4.65	- 3.09	1.93	12	11	0.0	0			34	NE	27	8	15	8	5.4	55
DAYTONA BEACH	31	1017.3	1018.6	88	73	80.8	0.1	92	19+	70	27	15	0	70	75	11.09	4.72	4.31	13	14	0.0	0	3.2	11	23	7	29+	3	20	8	6.1	
FORT MYERS	15	1017.3	1017.7	91	75	82.6	- 0.1	96	14	70	27	23	0	73	77	11.44	4.06	3.26	20	20	0.0	0	2.6	10	32	23	28	2	21	8	5.9	
JACKSONVILLE	20	1017.3	1018.2	92	75	83.4	1.1	98	25+	70	29+	24	0	73	77	16.24	9.39	7.93	13	10	0.0	0	1.3	13	33	NE	28	11	13	7	5.0	64
KEY WEST	4	1016.3	1017.0	89	79	84.1	0.5	92	21	75	27+	10	0	75	75	4.77	0.44	1.49	15	17	0.0	0	5.4	11	27	E	27+	2	17	12	6.3	81
LAKELAND U	214			90	74	81.9	0.0	97	17	63	28+	20	0			9.12	2.04	2.30	15		0.0	0						5	20	6	5.2	68
MIAMI	7	1016.9	1017.3	90	78	83.9	1.6	93	20	74	28	20	0	72	71	8.34	1.37	2.20	18	17	0.0	0	4.9	11	31	34	28	0	21	10	6.2	
ORLANDO	108	1014.2	1018.5	91	74	82.3	- 0.5	94	2[illegible]+	70	28+	23	0	72	77	3.44	- 3.50	1.59	15	16	0.0	0	3.1	12	30	6	17	4	18	9	6.2	
PENSACOLA	112	1013.5	1017.7	90	73	81.5	0.[illegible]	95	22	65	31+	20	0	71	75	8.55	1.58	2.75	13		0.0	0	1.4	7	38	NE	26	4	14	13	6.5	62
TALLAHASSEE	55	1015.9	1018.1	93	73	82.9	1.8	99	24+	68	29	25	0	73	79	5.40	- 1.53	1.25	14	21	0.0	0	1.6	4	31	22	12	2	22	7	5.9	
TAMPA	19	1017.3	1017.5	90	74	82.0	0.0	95	22+	71	1	23	0	72	77	6.79	- 1.45	2.12	15	20	0.0	0	1.9	11	23	8	2	3	18	10	6.3	54
WEST PALM BEACH	15	1016.9	1017.6	90	74	81.9	- 1.1	92	7	70	28	22	0	72	75	8.14	1.40	3.77	13	14	0.0	0	5.1	11	30	9	9	9	12	10	5.9	
GEORGIA																																
ATHENS	832	990.2	1018.6	90	69	79.3	0.3	101	23	54	29	20	0	67	72	3.25	- 0.38	1.54	7	9	0.0	0	1.1	36	20	9	25	12	14	5	4.7	
ATLANTA	1010	982.7	1018.8	89	69	79.0	0.8	98	24	58	29	20	0	66	74	4.13	0.53	1.48	7	7	0.0	0	1.1	1	27	NW	2	9	16	6	5.2	74
AUGUSTA	145	1012.9	1018.1	94	69	81.7	1.5	104	23	54	29	24	0	68	71	1.31	- 2.58	0.89	6	11	0.0	0	1.2	10	28	10	9	8	18	5	5.4	
COLUMBUS	385			91	71	80.8	0.1	101	23	60	29	22	0	69	73	3.64	- 1.00	1.60	11		0.0	0	1.1	3	24	19	9	13	12	6	5.2	
MACON	354	1005.4	1018.3	94	69	81.3	0.0	104	23	57	29	25	0	67	68	1.39	- 2.79	0.50	9	14	0.0	0	0.6	4	29	NW	10	7	17	7	5.7	76
ROME	637			93	67	79.8	1.4	103	23	49	29	23	0			1.08	- 2.68	0.52	7		0.0	0										
SAVANNAH	46	1016.6	1018.2	92	73	82.1	1.1	100	24	64	29+	24	0	73	80	3.83	- 2.79	1.45	8	12	0.0	0	1.0	15	25	N	8	8	16	7	5.7	64
HAWAII																																
HILO	27	1014.9	1016.0	84	69	76.5	0.7	86	6+	67	28+	0	0	70	82	9.62	- 1.83	2.06	27	1	0.0	0	0.8	26	17	E	31+	3	9	19	7.5	38
HONOLULU	7	1014.9	1015.3	90	75	82.9	3.5	92	20+	69	16	25	0	68	64	0.10	- 0.79	0.07	3	0	0.0	0	13.2	5	28	NE	11	11	12	8	5.2	74
KAHULUI	48	1012.5	1014.9	90	72	80.8	1.8	94	30+	66	17+	18	0	68	70	0.26	- 0.09	0.17	2	0	0.0	0	13.3	5	29	NE	24+	13	9	9	5.0	78
LIHUE	103	1011.5	1016.6	85	73	79.0	0.6	86	23	67	4	0	0	71	78	0.70	- 1.76	0.23	14	0	0.0	0	10.8	6	20	E	12	0	21	10	6.8	70
IDAHO																																
BOISE	2838	915.3	1013.7	81	57	68.7	- 3.4	96	8	46	21	10	0	47	52	2.37	2.21	0.74	10	5	0.0	0	1.0	13	33	SE	20	8	9	14	6.0	60
LEWISTON	1413			83	57	69.8	- 1.9	98	3	48	16	10	0			1.64	1.21	0.74	9		0.0	0						8	8	15	6.5	
POCATELLO	4454	864.5	1015.7	78	48	63.0	- 7.1	95	7	39	16	5	0	43	55	3.98	3.43	0.96	13	7	0.0	0	4.7	22	45	SE	4	6	12	13	6.2	63
ILLINOIS																																
CAIRO U	314			87	72	79.5	- 0.4	95	23	57	28	16	0			2.33	- 0.77	1.59	7		0.0	0			20	SW	15	17	4	10	4.7	76
CHICAGO O HARE	658	993.9	1017.9	83	64	73.7	2.4	96	6	50	27	11	0	62	67	5.32	2.11	3.44	9	5	0.0	0	2.0	21	30	25	24+	10	9	12	5.3	
CHICAGO MIDWAY	607	995.6		84	66	74.7	0.5	95	6	51	27	10	0	62	67	5.31	2.15	3.83	8	9	0.0	0	3.1	19	42	NW	16	11	10	10	5.4	69
MOLINE	582	995.9	1017.1	85	63	73.5	- 0.1	96	23+	45	28	11	0	63	72	2.16	- 1.37	1.02	7	6	0.0	0	2.8	19	25	W	24+	13	6	12	5.3	72
PEORIA	652	993.9	1017.6	83	64	73.8	- 0.5	94	23	50	27	9	0	64	75	1.71	- 1.17	0.89	7	7	0.0	0	2.9	19	20	NW	25+	9	12	10	5.7	71
ROCKFORD	724	990.5	1017.2	82	61	71.4	- 1.1	93	6	46	28+	6	0	62	74	6.33	2.19	3.58	9	8	0.0	0	2.3	21	35	30	6	12	7	12	5.3	
SPRINGFIELD	588	995.6	1017.6	85	65	75.2	0.0	96	23+	49	28	13	0	64	70	0.99	- 1.75	0.52	5	5	0.0	0	3.4	19	20	W	24	11	8	12	5.3	71
INDIANA																																
EVANSVILLE	381	1004.7	1018.6	88	67	77.4	0.1	97	24	51	28	16	0	66	71	2.58	- 0.49	1.07	8	9	0.0	0	1.5	23	23	S	15	13	10	8	4.9	73
FORT WAYNE	791	988.8	1018.3	82	63	72.5	0.0	92	21	45	28	7	0	62	72	3.71	0.67	1.51	7	6	0.0	0	2.9	24	42	N	8	9	10	12	6.0	78
INDIANAPOLIS	792	989.8	1018.6	84	65	74.5	0.8	92	24+	48	28+	10	0	66	76	4.45	1.42	1.81	10	8	0.0	0	1.7	23	26	NW	7	9	10	12	6.1	71
SOUTH BEND	773	990.2	1017.9	81	62	71.6	- 0.4	93	23	45	27	5	0	60	68	3.17	- 0.38	2.03	5	6	0.0	0	3.3	24	23	31	8	9	11	11	5.8	

See footnotes at end of table

CLIMATOLOGICAL DATA
ENGLISH UNITS

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	No. of days: Max. 90° F. or above	No. of days: Min. 32° F. or below	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	No. of days: .01 inch or more	No. of days: With thunderstorms	Snow, Sleet: Total	Snow, Sleet: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Fastest mile: Speed	Fastest mile: Direction	Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	Ft.	Mb.	Mb.	F.	F.	F.	F.	F.		F.				F.	%	In.	In.	In.			In	In.	M.p.h.		M.p.h.							%
IOWA																																
BURLINGTON	692			85	64	74.6	0.0	97	23+	51	28	9	0	62	69	1.40	-2.21		7	3	0.0		3.9	20	21	27	24+	8	13	10	5.5	
DES MOINES	938	982.7	1016.8	82	64	73.0	-1.1	96	23+	52	11	7	0	61	70	4.05	0.38	1.78	12	7	0.0	0	4.3	20	42	NW	8	13	5	13	5.4	67
DUBUQUE	1056	978.7		80	61	70.3	-0.2	95	23	46	27	4	0			5.26	1.53	2.60	12		0.0	0						11	6	14	6.0	
SIOUX CITY	1095	975.6	1014.9	86	63	74.4	-0.7	99	5	51	25	9	0	62	70	1.52	-1.14	0.59	9	4	0.0	0	4.9	17	40	SE	26	10	11	10	5.5	74
WATERLOO	868	985.1	1016.5	79	60	69.5	-2.2	93	23	48	26+	5	0	58	70	8.07	4.65	3.79	12	6	0.0	0	3.8	18	44	2	6	10	11	10	5.6	
KANSAS																																
CONCORDIA	1470	962.8	1014.4	87	66	76.4	-2.6	100	22+	54	31+	16	0	63	68	8.31	5.16	4.56	12	10	0.0	0	7.3	16	41	SE	27	13	9	9	4.8	70
DODGE CITY	2582	925.2	1013.8	91	66	78.3	-0.9	104	8	56	30+	20	0	58	57	6.31	3.95	3.08	11	7	0.0	0	7.5	17	34	S	16	10	8	13	5.5	78
GOODLAND	3650	889.3	1013.3	85	58	71.4	-3.3	97	22+	45	30	10	0	56	64	2.09	-0.19	0.86	7	6	0.0	0	4.9	16	32	16	17	15	7	9	4.5	
TOPEKA	876	984.8	1016.0	84	67	75.5	-2.9	94	7	56	31	10	0	67	76	7.40	3.11	3.15	10	8	0.0	0	5.4	16	33	SW	10	11	6	14	5.5	63
WICHITA	1321	968.5	1015.1	88	68	77.9	-2.9	106	9	57	31+	15	0	63	66	6.41	3.54	2.21	12	7	0.0	0	8.5	17	40	SW	16	12	7	12	5.3	70
KENTUCKY																																
COVINGTON	869	987.8	1018.9	85	66	75.3	1.2	94	24+	51	29+	12	0	64	70	2.26	-0.34	0.78	10	7	0.0	0	1.5	23	28	24	4	7	13	11	6.1	
LEXINGTON	966	984.4	1019.3	85	66	75.5	-0.5	93	23	49	29+	12	0	65	72	5.27	2.06	3.56	8	7	0.0	0	1.9	20	21	36	7	10	14	7	5.0	
LOUISVILLE	477	1001.0	1018.2	87	69	77.9	1.7	96	24	54	29+	16	0	66	70	3.68	0.71	1.61	7	6	0.0	0	1.5	22	33	N	7	9	15	7	5.4	71
LOUISIANA																																
ALEXANDRIA	92	1013.9	1018.1	92	70	80.8	-1.3	96	6	58	30	23	0	72	81	5.23	1.75	1.73	10	13	0.0	0	0.7	7	23	22	15+	6	20	5	5.1	
BATON ROUGE	64	1015.2	1017.9	92	72	81.7	-0.7	95	21+	60	30	24	0	71	77	9.19	3.93	2.80	9	12	0.0	0	1.4	6	31	17	22	7	20	4	5.3	
LAKE CHARLES	9	1016.3	1017.4	91	73	81.9	-0.3	93	22+	63	31	24	0	73	80	3.59	-1.21	1.85	8	19	0.0	0	1.9	10	20	25	3	3	21	7	5.7	
NEW ORLEANS	3	1016.9	1018.0	90	72	81.0	-0.9	95	22	60	30	19	0	72	77	4.78	-0.56	2.40	12	11	0.0	0	0.9	5	23	18	24	6	18	7	5.4	
SHREVEPORT	254	1008.5	1017.5	92	72	82.0	-1.8	95	25+	64	29	24	0	70	73	1.89	-0.66	1.09	11	8	0.0	0	2.8	16	30	35	7	11	12	8	5.3	68
MAINE																																
CARIBOU	624	990.9		70	48	59.1	-3.5	83	25	40	20+	0	0			2.01	-1.66	0.74	11		0.0	0						3	12	16	7.1	
PORTLAND	47	1013.2	1015.5	78	55	66.4	-0.4	89	25	45	28+	0	0	54	68	2.00	-0.42	1.17	9	5	0.0	0	2.9	25	26	NW	21	11	8	12	5.5	72
MARYLAND																																
BALTIMORE	148	1012.2	1017.7	89	68	78.7	3.7	98	24+	51	31	17	0	64	65	4.16	-1.03	2.20	11	7	0.0	0	2.7	26	42	N	16	10	13	8	5.4	62
MASSACHUSETTS																																
BLUE HILL OBS R	629			78	59	68.8	-0.6	92	25	48	30+	1	0			2.10	-1.95	1.09	7		0.0	0			66	WSW	9					66
BOSTON	15	1015.2	1016.3	78	63	70.7	-1.0	93	25	57	30+	2	0	58	67	1.63	-2.03	0.77	8	3	0.0	0	3.1	26	30	NW	21	11	6	14	5.7	69
NANTUCKET	43	1016.3	1016.5	75	59	66.9	-1.2	86	21	46	19	0	0	63	86	3.41	-0.27	2.61	9	2	0.0	0	3.0	25	26	NE	18	8	7	16	6.6	56
PITTSFIELD	1170			77	54	65.2	-1.0	87	25+	40	31+	0	0			2.72	-1.18	1.06	10		0.0	0										
WORCESTER	986	980.7	1017.2	76	58	68.0	-0.3	90	25	47	28	1	0	54	62	1.25	-2.99	0.74	8	2	0.0	0	4.7	28	21	31	17+	10	11	10	5.6	
MICHIGAN																																
ALPENA	689	992.2	1017.3	77	51	64.4	-0.1	92	6	36	15	3	0	55	74	5.30	2.27	3.18	10	9	0.0	0	2.1	25	25	N	6	13	10	8	5.0	70
DETROIT	619			84	67	75.3	2.5	96	23+	51	28	9	0	60	60	3.59	0.73	2.68	4	5	0.0		2.9	27	46	30	16					
DETROIT M WAYNE CO	633	993.6	1017.5	82	63	72.5	1.7	93	23+	48	28	5	0	62	71	1.83	-1.01	1.17	6	5	0.0	0	3.0	25	27	NW	16+	9	14	8	5.4	74
DETROIT WILLOW RUN	711	989.8	1017.8	80	60	70.0	-2.6	91	23+	44	28	4	0	59	69	2.17	-0.67	1.22	5	4	0.0	0	3.5	25	24	28	8	10	12	9	5.6	
FLINT	770	989.8	1017.4	79	59	68.9	-0.7	90	24+	45	28+	2	0	61	77	5.35	2.18	4.45	5	4	0.0	0	3.9	24	28	27	16	10	10	11	5.4	
GRAND RAPIDS	784	988.8	1017.5	82	59	70.6	0.2	92	23+	43	27	6	0	60	69	2.86	0.16	0.83	9	7	0.0	0	4.1	24	48	SW	16	10	12	9	5.5	69
HOUGHTON LAKE	1149	976.3	1018.0	78	54	65.6	0.1	91	23	35	28	1	0	57	75	1.32	-1.35	0.93	5	6	0.0	0	3.7	25	23	23	24	9	14	8	5.2	
LANSING	841	986.5	1017.8	81	58	69.5	-0.7	93	24	41	28+	5	0	59	71	2.98	-0.07	0.91	9	7	0.0	0	3.3	25	36	W	16	8	14	9	5.6	71
MARQUETTE J	677			73	55	64.3	-1.5	89	16	41	18	0	0			2.44	-0.59	0.69	12		0.0	0			27	SW	2	10	14	7	5.2	73
MUSKEGON	627	994.6	1017.3	80	60	69.7	-0.6	90	23	43	27	1	0	60	73	1.83	-1.08	0.69	10	10	0.0	0	3.8	24	26	21	16	9	11	11	5.3	
SAULT STE MARIE	721	990.2	1016.7	72	49	60.4	-3.6	84	24	35	15	0	0	54	82	4.65	1.76	2.30	11	7	0.0	0	1.7	27	33	W	20	10	12	9	5.1	64
MINNESOTA																																
DULUTH	1428	965.1	1016.2	73	51	61.7	-2.1	87	6	35	27	0	0	52	75	2.07	-1.74	0.64	15	9	0.0	0	1.8	16	36	W	24	5	17	9	6.0	61
INTERNATIONAL FALLS	1179	972.6	1015.3	73	50	61.3	-1.8	86	5	36	27	0	0	52	75	3.14	-0.50	1.06	14	8	0.0	0	1.4	21	31	35	5	3	16	12	6.6	
MINNEAPOLIS	834	985.4	1015.5	81	61	70.7	0.7	96	23	44	26	6	0	59	68	0.75	-2.43	0.14	8	6	0.0	0	4.0	20	36	SW	23	9	11	11	5.4	72
ROCHESTER	1297	969.5	1016.7	78	57	67.1	-2.7	91	6	44	26+	1	0	59	76	2.06	-1.73	0.73	10	8	0.0	0	5.0	21	32	28	6	10	10	11	5.7	
ST CLOUD	1034	977.3	1014.8	79	57	68.0	-0.6	94	23	40	14	4	0		71	2.13	-1.60	1.25	7		0.0	0						7	13	11	5.5	

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure: Station O	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	No. of days: Max. 90 F. or above	No. of days: Min 32 F. or below	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	No. of days: 01 inch or more	No. of days: With thunderstorms	Snow, Sleet: Total	Snow, Sleet: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Fastest mile: Speed	Fastest mile: Direction	Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	Ft	Mb	Mb.	F.	F.	F.	F.	F.		F.				F	%	In.	In.	In.			In.	In.	M.p.h.		M p h							%
MISSISSIPPI																																
JACKSON	310	1006.4	1018.2	92	70	80.9	- 1.1	97	2+	57	30	23	0	69	72	3.90	0.57	1.59	12	12	0.0	0	0.9	13	29	S	22	6	17	8	5.5	63
MERIDIAN	290	1007.8	1018.7	92	69	80.3	- 0.9	97	24+	54	30	21	0	70	79	5.95	2.41	1.75	10	14	0.0	0	0.3	29	32	14	24	6	15	10	6.1	
MISSOURI																																
COLUMBIA	778	989.2	1017.1	85	68	76.3	- 0.9	95	23	55	28	12	0	65	72	2.13	- 1.68	0.68	9	4	0.0	0	3.6	17	26	SW	8	8	7	16	6.6	68
KANSAS CITY	742	989.8	1016.4	86	69	77.8	- 2.0	98	7	59	31	12	0	66	70	4.32	0.55	1.74	11	7	0.0	0	5.3	17	31	NW	8	12	5	14	5.5	62
ST JOSEPH	811			85	67	76.3	- 1.2	96	7	55	11	10	0			4.78	0.57		10	6	0.0		4.6	17	21	28	23+	12	7	12	5.4	
ST LOUIS	535	998.0	1018.0	87	68	77.5	0.7	98	23	50	28	15	0	65	68	1.60	- 1.42	0.76	8	6	0.0	0	3.0	20	26	W	24	5	10	16	6.7	64
SPRINGFIELD	1268	973.2	1017.9	86	66	76.1	- 1.9	95	8+	56	26	12	0	66	75	6.26	2.94	2.25	9	5	0.0	0	4.8	17	22	NW	9+	12	5	14	5.6	54
MONTANA																																
BILLINGS	3567	891.6	1013.5	79	56	67.6	- 4.3	96	5	50	17+	5	0	48	54	2.35	1.45	0.71	12	6	0.0	0	2.5	27	50	W	14	8	8	15	6.1	59
GLASGOW	2284	933.0	1013.6	78	52	65.0	- 2.8	92	6+	41	9	5	0	47	57	2.00	0.51	1.63	10	7	0.0	0	2.3	6	32	30	11	8	13	10	5.8	
GREAT FALLS	3662	888.9	1014.0	77	52	64.4	- 2.4	92	6	43	13	4	0	43	50	2.16	0.90	1.14	9	4	0.0	0	3.7	24	38	SW	14	8	7	16	6.2	66
HAVRE	2584	923.1	1013.8	79	50	64.4	- 2.6	93	4	42	31	6	0	45	57	3.03	1.93	2.34	9	4	0.0	0	0.3	27	54	NW	11	6	9	16	6.7	81
HELENA	3828	881.5	1015.0	77	49	63.2	- 3.0	90	3+	40	29	3	0	44	54	2.00	1.11	0.93	10	6	0.0	0	3.5	27	42	SW	4	7	9	15	6.2	63
KALISPELL	2965	911.3	1014.9	76	47	61.8	- 1.3	94	2	39	23	4	0	46	64	3.10	2.01	1.38	11	4	0.0	0	0.5	13	37	32	11	6	8	17	6.6	
MILES CITY	2629	921.8	1013.1	83	55	68.9	- 3.7	98	5	47	24	10	0	50	56	3.88	2.64		11	10	0.0		1.0	32								
MISSOULA	3190	904.8	1015.4	78	50	64.2	- 0.6	94	2	41	29	5	0	42	51	2.38	1.66	0.96	15	6	0.0	0	1.1	30	28	S	25	9	9	13	6.4	65
NEBRASKA																																
GRAND ISLAND	1841	949.9	1014.6	86	63	74.4	- 0.9	101	6	50	30	10	0	61	69	4.41	2.06	1.21	9	11	0.0	0	5.3	17	35	19	27+	13	8	10	4.9	
LINCOLN U	1150			85	67	76.0	- 1.7	97	6+	53	11	12	0			3.63	0.25	1.33	14		0.0	0			52	S	26	13	7	11	5.3	69
NORFOLK	1544			84	62	73.3	- 1.9	98	5	50	25	8	0			3.12	0.51	1.25	8		0.0	0						9	13	9	5.4	
NORTH PLATTE	2775	917.7	1013.7	86	57	71.6	- 2.9	102	7+	42	24	12	0	55	62	3.97	1.84	1.36	11	10	0.0	0	3.8	15	34	SE	7	9	13	9	5.2	73
OMAHA	977	980.4	1015.2	85	65	75.0	- 1.2	97	23+	54	25+	9	0	65	73	3.30	- 0.68	0.78	13	8	0.0	0	5.4	16	29	SE	26	11	8	12	5.4	72
SCOTTSBLUFF	3957	880.8	1014.0	83	54	68.7	- 3.9	97	7	43	24	9	0	51	60	2.08	1.07	0.64	10	8	0.0	0	0.8	9	35	28	23	10	10	11	5.8	
VALENTINE	2587			86	57	71.1	- 1.8	104	5	46	17	12	0			3.10	0.81	0.97	9		0.0	0			44	S	14	12	5	14	5.5	70
NEVADA																																
ELKO	5050	846.3	1014.7	82	49	65.6	- 1.3	97	6+	36	23	10	0	42	52	1.94	1.64	0.99	9	5	0.0	0	1.7	27	28	34	9	8	7	16	6.3	
ELY	6253	811.0	1013.5	78	45	61.1	- 5.0	87	6	29	23	0	1	39	49	1.04	0.55	0.58	9	11	0.0	0	4.4	20	40	S	20	8	13	10	5.5	74
LAS VEGAS	2162	936.3	1011.0	97	70	83.5	- 3.7	106	3	56	24	28	0	44	28	0.04	- 0.44	0.04	1	3	0.0	0	5.1	21	34	S	4	15	10	6	3.6	86
RENO	4404	866.9	1014.5	84	46	64.5	- 1.0	94	31+	29	22	11	2	40	45	0.13	- 0.04	0.08	2	4	0.0	0	2.3	30	43	SW	12	11	13	7	4.7	78
WINNEMUCCA	4299	868.6	1014.4	80	48	63.8	- 3.8	95	8	38	23	7	0	33	34	0.69	0.54	0.44	5	5	0.0	0	2.1	24	30	W	16	7	8	16	6.3	62
NEW HAMPSHIRE																																
CONCORD	342	1003.7	1016.2	77	52	64.6	- 2.8	91	25	38	19	1	0	55	71	3.60	0.64	1.31	8	5	0.0	0	2.2	28	52	SW	25	8	10	13	5.8	57
MT WASHINGTON OBS	6262			50	38	44.1	- 3.6	61	25	27	11	0	8			5.53	- 1.12	1.96	15	3	0.0	0			89Y	NW	21	3	4	24	8.5	25
NEW JERSEY																																
ATLANTIC CITY	64	1014.6	1017.1	85	63	73.9	0.2	97	25	46	31+	9	0	63	72	2.20	- 2.70	1.74	6	8	0.0	0	3.0	24	21	33	17+	7	12	12	5.9	71
ATLANTIC CITY U	11			83	70	76.2	2.5	94	25+	57	30	5	0			1.07	- 4.07	0.95	5		0.0				30	SSW	1					
NEWARK	7	1015.6	1016.7	86	68	76.9	2.5	95	25	55	28	9	0	62	63	2.41	- 2.02	0.60	10	7	0.0	0	3.9	25	25	32	9	7	14	10	5.7	
TRENTON U	56			85	67	75.7	1.8	94	25	55	28	8	0			3.02	- 1.75	1.46	10		0.0	0			31	NW	7	9	9	13	5.8	64
NEW MEXICO																																
ALBUQUERQUE	5311	841.2	1014.5	85	60	72.4	- 3.8	91	8	52	24	1	0	51	54	1.49	0.16	0.52	10	14	0.0	0	1.8	20	41	SE	29	13	14	4	4.3	78
CLAYTON	4969			85	58	71.2	- 2.1	93	19+	49	11	9	0			2.12	0.03	0.83	8		0.0	0						14	7	10	5.1	
RATON	6379			79	51	65.1	- 3.1	86	8+	43	31+	0	0			4.91	2.28	2.54	13		0.0	0						6	14	11	5.9	
ROSWELL	3617	893.0		90	61	75.6	- 1.0	98	15	54	19	22	0	57	58	2.67	1.05	0.72	12	7	0.0	0	2.8	15	23	SE	22	5	18	8	6.0	64
SILVER CITY	5373			83	58	70.5	- 4.6	86	23+	52	24+	0	0			1.79	- 0.61	0.68	8		0.0	0						8	16	7	5.5	
NEW YORK																																
ALBANY	275	1006.1	1016.7	81	56	68.6	- 1.4	93	25	41	31+	2	0	56	68	1.77	- 1.30	0.36	8	4	0.0	0	2.9	25	30	W	20	6	13	12	6.3	61
BINGHAMTON	1590	960.0	1018.3	76	58	67.1	0.6	85	25+	45	28	0	0	59	77	2.26	- 1.31	0.63	11	7	0.0	0	4.0	27	23	NW	20	3	14	14	7.0	68
BUFFALO	705	992.2	1017.4	79	60	69.4	1.0	90	5	47	28	1	0	60	72	5.33	2.28	2.04	14	11	0.0	0	5.5	24	29	SW	25+	9	11	11	5.7	68
J.F. KENNEDY	13	1016.3	1017.0	83	68	75.8	1.3	94	25	58	28+	4	0	62	64	2.78	- 2.19	0.79	10	7	0.0	0	3.5	24	26	2	7	6	16	9	5.9	
NEW YORK U	132	1013.2	1016.4	85	67	76.0	0.9	94	7	57	28	8	0	59	60	2.88	- 1.56	0.70	9	6	0.0	0	2.9	26	26	SW	9					65

See footnotes at end of table

CLIMATOLOGICAL DATA

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State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No. of days: Max. 90 F. or above	Temperature: No. of days: Min. 32 F. or below	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No. of days: .01 inch or more	Precipitation: No. of days: With thunderstorms	Snow, Sleet: Total	Snow, Sleet: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile: Speed	Wind: Fastest mile: Direction	Wind: Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	No. of days (sunrise to sunset): Partly cloudy, 4-7	No. of days (sunrise to sunset): Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	Ft.	Mb.	Mb.	F.	F.	F.	F.	F.		F.				F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
NEW YORK																																
NEW YORK LA GUARDIA	11	1015.2	1016.9	83	69	75.9	0.5	94	25	60	29+	6	0	59	57	3.19	- 1.89	0.72	9	8	0.0	0	3.0	28	39	SW	9	5	15	11	6.1	
ROCHESTER	547	997.6	1017.5	80	59	69.4	- 0.3	90	5	46	29	1	0	60	74	5.95	3.23	2.39	11	10	0.0	0	4.2	27	29	SW	20	9	10	12	5.7	72
SYRACUSE	410	1002.4	1016.9	79	59	68.8	- 1.4	89	24+	46	31+	0	0	59	71	4.17	0.92	1.50	10	8	0.0	0	3.3	27	25	W	25	9	10	12	5.7	66
NORTH CAROLINA																																
ASHEVILLE	2140	944.8	1019.7	85	63	74.1	2.6	94	24	43	30	9	0	66	82	3.31	- 1.63	1.73	9	15	0.0	0	2.0	35	29	34	9	11	13	7	5.1	70
CAPE HATTERAS R	7	1018.0	1018.2	87	75	80.9	3.3	94	23+	68	29	11	0	72	77	1.80	- 4.62	1.06	9	8	0.0	0	1.0	29	27	SW	10	8	13	10	5.4	80
CHARLOTTE	736	991.5	1018.4	90	69	79.3	0.6	99	23+	54	30+	19	0	67	71	0.88	- 3.34	0.70	4	8	0.0	0	1.0	1	34	N	11	13	11	7	4.6	81
GREENSBORO	897	987.8	1018.9	89	67	78.1	1.9	98	24	49	30+	20	0	66	72	2.51	- 2.10	1.13	10	10	0.0	0	1.1	30	23	SW	1	7	15	9	5.2	73
RALEIGH	434	1002.7	1018.2	90	68	79.2	2.3	98	22+	52	29	22	0	59	76	2.50	- 2.70	1.11	5	7	0.0	0	0.9	24	23	22	9	12	14	5	4.8	69
WILMINGTON	28	1016.9	1018.3	92	72	81.9	2.5	100	23+	57	29	22	0	71	76	1.66	- 5.20	0.48	10	7	0.0	0	1.6	24	26	NW	25	13	11	7	5.1	66
NORTH DAKOTA																																
BISMARCK	1647	955.0	1014.1	78	51	64.6	- 4.7	93	4	37	14	3	0	52	68	4.56	2.83	2.62	12	8	0.0	0	1.3	1	40	N	23	7	9	15	6.2	78
FARGO	896	981.7	1013.9	81	55	68.1	- 1.4	99	5	35	14	6	0	36	68	1.61	- 1.34	0.58	9	5	0.0	0	0.7	15	35	NW	24	9	16	6	5.2	85
WILLISTON	1899	945.8	1013.6	77	53	64.8	- 3.4	96	4	41	10	3	0	50	63	3.38	1.90	1.41	7	3	0.0	0	1.6	1	34	N	23	9	8	14	6.0	68
OHIO																																
AKRON	1208	974.9	1018.7	83	63	72.9	1.4	94	24	45	28	7	0	63	74	1.61	- 1.50	0.60	6	6	0.0	0	3.1	25	21	24	7	9	10	12	5.6	
CINCINNATI OBS	761			85	66	75.5	- 0.2	94	21	50	27	11	0			4.22	0.94	0.97	12		0.0	0			19	NW	7					63
CLEVELAND	777	989.8	1018.7	81	62	71.7	1.3	93	6	42	28	5	0	62	72	1.82	- 1.46	1.15	10	7	0.0	0	2.9	24	24	W	6	10	5	16	5.8	63
COLUMBUS	812	989.5	1018.9	83	63	73.0	- 0.2	93	24	46	28+	6	0	63	72	3.08	0.22	1.64	8	7	0.0	0	1.4	22	23	S	18	4	13	14	6.1	53
DAYTON	1002	983.1	1018.8	83	64	73.3	- 0.4	92	21	46	27	6	0	64	75	2.89	0.01	0.94	9	7	0.0	0	2.6	23	32	NW	17	8	9	14	6.0	69
MANSFIELD	1295			83	63	73.0	2.8	93	24	49	28+	7	0			1.56	- 1.67	0.53	9	6	0.0	0	3.9	25	18	27	25+	7	14	10	5.5	
TOLEDO	669	993.6	1018.5	85	63	74.0	3.1	96	24+	45	30	9	0	65	76	1.45	- 1.88	0.77	6	6	0.0	0	2.8	25	26	NW	8	8	14	9	5.7	67
YOUNGSTOWN	1178	976.6	1018.8	81	60	70.5	0.5	92	24	46	28+	4	0	61	75	5.08	1.58	1.94	11	6	0.0	0	2.4	26	21	31	19+	8	13	10	5.5	
OKLAHOMA																																
OKLAHOMA CITY	1285	970.5	1015.9	91	69	80.0	- 2.8	103	10+	57	31	23	0	65	66	3.75	1.23	1.84	5	4	0.0	0	6.2	17	26	W	15	12	9	10	5.1	67
TULSA	650	992.6	1016.5	91	71	80.9	- 0.7	103	9	55	31	22	0	67	68	1.90	- 1.14	1.18	6	4	0.0	0	7.0	18	27	S	18	13	8	10	5.0	70
OREGON																																
ASTORIA	8	1015.6	1016.4	68	52	60.1	- 0.9	84	30	45	20	0	0	52	78	5.22	3.73	1.65	15	0	0.0	0	2.8	23	18	18	17+	4	10	17	7.3	
BURNS U	4151	874.0	1015.3	76	48	62.2	- 5.0	92	3	35	21	2	0	41	52	1.73	1.44	0.66	12		0.0	0	3.2	29				8	10	13	6.2	
EUGENE	359	1002.7	1015.9	79	54	66.4	0.5	95	10	48	7	6	0	54	73	5.79	5.39	1.46	14	2	0.0	0	1.9	24	21	26	27	5	12	14	6.8	
MEACHAM	4050	874.4	1014.9	69	49	58.9	- 2.8	85	31	38	21	0	0			3.03	2.50	0.77	14		0.0	0			16	30	14+	6	8	17	6.8	
MEDFORD	1298	968.5	1015.4	84	56	69.8	- 0.9	102	31+	46	20	12	0	52	60	1.33	1.15	0.33	11	4	0.0	0	2.8	31	20	24	20	9	7	15	6.1	
PENDLETON	1482	961.7	1014.6	83	59	70.9	- 1.0	97	2+	52	22+	9	0	46	48	0.61	0.33	0.19	10	0	0.0	0	3.7	25	26	27	14	6	10	15	6.4	
PORTLAND	21	1014.2	1015.6	76	56	65.8	- 0.8	92	10	49	21	2	0	54	70	4.53	3.88	1.38	14	1	0.0	0	2.7	30	19	W	14	5	7	19	7.0	49
SALEM	196	1008.5	1015.8	78	53	65.2	- 0.9	94	10	44	12	5	0	53	71	4.17	3.72	1.21	13	1	0.0	0	1.7	25	23	18	25	5	9	17	6.8	
SEXTON SUMMIT R	3836	884.9	1015.1	70	51	60.8	- 2.4	90	31+	41	20	2	0			2.42	2.17	0.97	11		0.0	0			28	11	30	12	6	13	5.5	
PACIFIC AREA																																
JOHNSTON	7	1012.2	1012.7	86	77	81.7	0.2	88	31+	72	8+	0	0	74	77	6.14	3.88	4.88	18	0	0.0	0	14.7	8	35	SE	8	5	12	14	6.8	42
KOROR R	94	1006.4	1010.0	88	76	81.9	0.9	90	31+	73	29+	3	0	75	83	11.00	- 4.76	3.28	24	1	0.0	0	4.0	23	23	S	19	0	5	26	8.7	63
KWAJALEIN	8	1008.8	1009.7	87	77	82.1	0.2	91	28+	71	1	3	0	76	82	12.15	2.56	4.74	20	2	0.0	0	2.9	12	32	32	1	0	7	24	9.0	
MAJURO	10	1010.2	1010.4	86	77	81.4	1.2	88	24+	73	21	0	0	75	80	11.50	- 0.18	3.15	24	1	0.0	0	1.6	12	24	W	31	1	6	24	8.4	56
PAGO PAGO	12	1012.2	1012.5	83	72	77.4		87	28	65	17+	0	0	71	82	4.57		1.26	15	1	0.0	0	6.1	12	26	SE	6	6	12	13	6.3	49
PONAPE R	123	1004.4	1009.9	88	73	80.4	1.0	91	24+	69	25	8	0	75	87	17.36	1.04	4.68	25	3	0.0	0	1.3	15	19	SW	30	0	8	23	8.3	67
TAGUAC GUAM R	361			87	72	79.5	0.2	91	22	69	20	1	0			14.61	1.77	4.43	27		0.0	0			32	W	29	0	4	27	8.7	49
TRUK MOEN ISLAND	5	1009.1	1009.6	88	75	81.1	0.7	90	31	70	29	1	0	75	82	7.77	- 5.04	1.77	24	1	0.0	0	1.3	21	30	SE	20	0	10	21	8.2	75
WAKE	11	1010.8	1011.2	89	78	83.4	1.0	91	27+	75	14	14	0	75	78	6.10	- 0.98	2.09	19	2	0.0	0	10.2	10	45	E	30	2	8	21	8.3	
YAP R	44	1007.5	1009.3	86	75	80.5	- 0.8	88	30+	71	25	0	0	75	84	10.90	- 3.80	1.97	24	0	0.0	0	4.0	26	23	SW	7	0	2	29	9.5	50
PENNSYLVANIA																																
ALLENTOWN	387	1003.4	1017.3	85	62	73.8	1.8	93	25+	46	28	10	0	60	66	2.74	- 1.73	0.94	9	9	0.0	0	2.6	27	35	24	9	8	13	10	5.6	
ERIE	731	991.9	1018.1	79	63	70.6	0.8	89	24	45	30	0	0	60	70	2.76	- 0.22	0.94	11	8	0.0	0	3.2	26	24	26	20	7	15	9	5.5	
HARRISBURG	338	1005.1	1017.5	88	66	76.7	2.6	98	22	48	30	16	0	63	68	1.77	- 1.88	0.54	8	7	0.0	0	3.0	27	26	W	24	7	14	10	5.7	71
PHILADELPHIA	5	1015.9	1017.0	88	68	77.8	4.2	97	25	53	31+	14	0	62	62	1.24	- 3.39	0.77	6	4	0.0	0	3.5	27	34	N	17	7	14	10	5.8	70

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ENGLISH UNITS

AUGUST 1968

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	No. of days: Max. 90 F. or above	No. of days: Min. 32 F. or below	Average dew point	Average relative humidity	Precipitation: Total	Departure from normal	Greatest in 24 hours	No. of days: 01 inch or more	No. of days: With thunderstorms	Snow, Sleet: Total	Snow, Sleet: Maximum depth on ground	Wind: Resultant speed	Resultant direction	Fastest mile: Speed	Fastest mile: Direction	Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	Ft.	Mb.	Mb.	F.	F.	F	F.	F.		F.				F	%	In	In	In.			In	In	M.p.h.		M.p.h.							%
PENNSYLVANIA																																
PITTSBURGH	1137	975.3	1018.6	82	61	71.8	1.0	92	23	44	28	6	0	59	66	3.97	0.66	2.16	6	5	0.0	0	3.9	27	23	34	7	7	12	12	6.0	78
READING U	266			86	67	76.7	1.9	94	25+	51	28	12	0			2.30	-1.75	1.53	9		0.0	0			35	SW	1	10	11	10	5.3	65
SCRANTON	930	984.1	1018.0	82	61	71.0	1.0	91	22+	46	31+	3	0	60	72	1.43	-2.15	0.50	10	5	0.0	0	2.3	24	29	N	7	7	13	11	6.0	65
WILLIAMSPORT	524	999.0	1017.8	84	60	71.9	0.3	95	22	43	28	8	0	62	76	1.47	-2.15	0.73	9	6	0.0	0	3.5	27	21	26	25+	6	14	11	5.9	
RHODE ISLAND																																
BLOCK ISLAND	110			76	64	69.7	0.1	86	21	55	30+	0	0			1.28	-2.58	0.69	9		0.0	0						9	9	13	6.0	
PROVIDENCE	51	1013.9	1016.3	81	60	70.6	0.1	93	25	47	28	2	0	58	67	1.61	-2.35	0.50	11	6	0.0	0	3.4	27	23	1	7	9	13	9	5.8	58
SOUTH CAROLINA																																
CHARLESTON	40	1016.6	1018.3	90	73	81.5	1.8	99	8	61	29+	24	0	71	75	4.42	-2.19	1.43	12	12	0.0	0	1.1	21	69Y	N	24	8	16	7	5.2	59
CHARLESTON U	9			90	76	82.9	1.9	98	8	63	28	21	0			2.60	-3.47	1.07	10		0.0	0			40	E	8					
COLUMBIA	213	1010.5	1018.4	95	71	82.9	2.4	106	23	60	30+	24	0	59	68	1.11	-4.63	0.30	9	12	0.0	0	0.4	11	18	21	1	13	10	8	4.9	69
GNVLE-SPARTANBURG	957	984.8	1018.8	90	67	78.7	0.5	99	23	52	29	21	0	66	71	1.31	-3.20	0.75	5	9	0.0	0	1.3	36	30	E	19	13	14	4	4.5	76
SOUTH DAKOTA																																
ABERDEEN	1296	967.2	1013.5	83	54	68.2	-3.3	99	21	38	14	7	0	54	63	1.07	-1.09	0.78	6	4	0.0	0	1.1	14	31	32	24	9	15	7	5.1	
HURON	1282	967.8	1013.5	83	57	70.2	-2.6	98	21	43	25	8	0	59	71	3.45	1.38	2.10	6	8	0.0	0	2.8	18	72	NW	7	11	9	11	5.5	70
RAPID CITY	3162	904.8	1014.0	81	53	67.0	-5.0	96	7+	43	17	4	0	50	61	2.46	1.24	0.72	9	8	0.0	0	1.9	32	42	NW	4	9	11	11	5.6	64
SIOUX FALLS	1418	963.8	1014.2	86	60	72.7	0.9	99	5	44	11	14	0	58	63	1.70	-1.89	0.88	6	6	0.0	0	4.7	18	32	29	24+	11	10	10	5.2	
TENNESSEE																																
BRISTOL	1507	966.8	1020.1	87	65	75.5	0.7	94	23+	48	30+	12	0	65	76	2.32	-1.48	0.99	10	8	0.0	0	0.8	34	17	28	10+	8	12	11	5.9	
CHATTANOOGA	665	994.2	1018.4	92	70	80.9	1.1	102	23	56	29	21	0	69	72	2.90	-0.86	0.97	8	15	0.0	0	0.2	4	31	N	5	10	13	8	5.4	59
KNOXVILLE	980	984.1	1018.5	90	67	78.4	1.0	99	23+	53	29	19	0	66	70	1.29	-2.17	0.51	7	6	0.0	0	0.8	30	25	NE	27	8	14	9	5.7	76
MEMPHIS	258	1008.1	1018.0	91	73	82.0	1.5	98	23	57	28	22	0	67	63	1.61	-1.36	0.96	3	7	0.0	0	2.4	20	26	W	1	9	14	8	5.4	75
NASHVILLE	590	997.0	1018.3	91	68	79.5	0.3	99	23	52	29+	19	0	68	72	0.69	-2.17	0.31	4	6	0.0	0	2.0	22	20	NW	10	14	9	8	4.9	70
OAK RIDGE R	905			90	67	78.3	2.2	99	23+	52	31	17	0			1.25	-3.37	0.45	8		0.0	0			30Y		8	10	13	8	5.2	
TEXAS																																
ABILENE	1762	955.0	1015.1	93	72	82.5	-0.5	98	10	66	29+	27	0	53	55	0.89	-0.58	0.56	7	5	0.0	0	8.6	17	28	SE	12+	14	6	11	5.0	88
AMARILLO	3604	893.0	1013.3	89	65	77.0	-2.5	99	8	55	11	18	0	59	60	3.35	0.77	1.65	11	6	0.0	0	9.4	19	43	SE	29	11	9	11	5.5	68
AUSTIN	597	994.6	1016.2	95	73	84.1	-0.6	98	23+	65	29	30	0	67	63	0.74	-1.20	0.33	3	5	0.0	0	5.7	17	26	SE	24	8	21	2	4.9	76
BROWNSVILLE	19	1014.9	1015.6	93	75	84.3	0.2	96	15+	73	31+	29	0	73	74	2.78	0.01	1.34	8	8	0.0	0	7.9	13	34	S	17	9	15	7	5.2	75
CORPUS CHRISTI	41	1014.6	1016.1	92	75	83.6	-0.6	96	12+	70	28	28	0	73	74	0.62	-2.15	0.33	5	5	0.0	0	7.8	14	36	S	17	4	22	5	5.6	75
DALLAS	481	999.3	1016.4	94	76	85.1	0.1	101	10	66	29	26	0	67	58	2.77	0.84	2.45	4	4	0.0	0	7.1	16	24	SE	17	14	11	6	4.5	79
DEL RIO	1026	979.0	1014.3	97	74	85.5	-0.3	103	12	68	31	30	0	65	55	0.25	-1.27	0.18	2	3	0.0	0	9.7	13	26	13	16	8	19	4	5.1	
EL PASO	3918	883.5	1012.8	87	66	76.5	-3.9	94	16	60	31	9	0	57	53	1.71	0.52	0.68	12	15	0.0	0	2.2	17	33	SE	16	12	9	10	5.2	81
FORT WORTH	537	996.3	1016.5	94	73	83.5	-1.9	101	10	63	29	25	0	69	65	2.71	1.03	2.42	5	4	0.0	0	6.1	18	21	21	18+	15	10	6	4.3	
GALVESTON U	7			88	81	84.4	1.1	91	22	73	30	6	0			3.17	-1.22	1.44	7		0.0	0			23	S	14					74
HOUSTON	50	1014.9	1017.1	93	75	84.0	0.8	96	22+	67	29	28	0	73	74	2.90	-1.37	1.24	10	8	0.0	0	4.2	15	22	14	20	10	14	7	5.1	69
LUBBOCK	3254	905.9	1014.9	86	62	74.2	-4.6	94	9	56	31	8	0	60	67	2.72	1.04	1.57	9	8	0.0	0	6.5	18	32	3	28	10	12	9	5.6	
MIDLAND	2851	917.7	1014.1	91	68	79.2	-3.0	99	9	64	31	23	0	57	51	2.10	0.62	0.76	7	9	0.0	0	7.2	16	24	22	23	10	12	9	5.3	
PORT ARTHUR	16	1016.9	1017.6	93	74	83.2	0.9	97	12	65	31+	29	0	72	73	0.98	-4.51	0.32	11	11	0.0	0	2.4	13	34	SW	6	9	14	8	5.5	72
SAN ANGELO	1903	949.2	1014.3	97	72	84.1	-1.0	104	12	61	29	28	0	53	55	1.87	0.60	1.38	5	3	0.0	0	8.6	17	30	20	13	15	9	7	4.4	
SAN ANTONIO	788	988.8	1016.2	96	73	84.2	0.4	99	12+	63	29+	30	0	67	63	0.94	-1.42	0.65	2	2	0.0	0	6.9	15	39	S	17	7	21	3	5.4	75
VICTORIA	104	1012.2	1016.5	94	75	84.1	0.7	96	22+	67	29+	30	0	73	74	1.92	-1.21	0.64	9	5	0.0	0	6.0	15	39Y	SSE	17	7	19	5	5.4	
WACO	501	998.6	1016.3	96	75	85.6	0.1	100	10	64	29	30	0	68	59	0.87	-0.81	0.56	5	4	0.0	0	7.8	15	23	15	26+	10	16	5	4.6	
WICHITA FALLS	994	979.3	1015.2	96	71	83.5	-2.2	107	10	58	31	24	0	66	61	2.35	0.56	1.03	6	7	0.0	0	8.3	16	29	8	24+	11	10	10	5.1	
UTAH																																
MILFORD	5028	848.0		83	53	67.9	-4.3	92	4	34	23	3	0			0.98	0.25	0.33	8		0.0	0						10	10	11	5.4	
SALT LAKE CITY	4220	872.7	1014.3	82	56	69.4	-5.1	95	6	45	23+	8	0	47	52	3.66	2.79	0.94	12	12	0.0	0	4.3	16	37	W	3	9	11	11	5.5	72
WENDOVER	4237	871.7	1014.8	81	59	70.1	-7.1	95	6	44	23	5	0			0.49	0.13	0.15	8		0.0	0										
VERMONT																																
BURLINGTON	332	1003.4	1015.9	74	53	63.7	-3.0	88	25	41	19	0	0	35	74	2.36	-1.01	0.94	10	5	0.0	0	1.6	24	36	W	9	5	16	10	6.3	75

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	No. of days: Max. 90 F. or above	No. of days: Min. 32 F. or below	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	No. of days: .01 inch or more	No. of days: With thunderstorms	Snow, Sleet: Total	Snow, Sleet: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Fastest mile: Speed	Fastest mile: Direction	Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	Ft.	Mb.	Mb.	F.	F.	F.	F.	F.		F.				F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
VIRGINIA																																
LYNCHBURG	916			88	66	77.0	2.2	98	22+	49	30	16	0			1.53	- 2.88	0.66	9		0.0	0			29	N	24	12	12	7	4.7	72
NORFOLK	22	1016.9	1018.0	89	72	80.5	3.0	99	25	59	31	18	0	69	71	2.04	- 3.93	0.73	8	9	0.0	0	0.3	8	33	W	10	10	13	8	5.1	82
RICHMOND	164	1012.2	1018.1	90	68	78.9	2.9	99	25	51	31	21	0	68	73	3.71	- 1.83	1.10	12	10	0.0	0	0.4	26	21	SW	10+	8	16	7	5.5	76
ROANOKE	1149	977.7	1019.0	86	65	75.2	- 0.2	93	24+	47	30+	13	0	64	73	5.36	0.73	1.59	13	10	0.0	0	3.0	30	37	33	18	10	15	6	4.9	
WALLOPS ISLAND	9			85	70	77.4		99	23	56	31	7	0			0.55		0.17	8		0.0	0			38Y	S	10					
WASHINGTON																																
OLYMPIA	195	1008.5	1015.8	74	49	61.7	- 1.7	91	10+	40	6	2	0	53	77	5.45	4.56	1.10	14	3	0.0	0	2.4	22	18	21	22	6	6	19	7.1	
QUILLAYUTE	179	1008.5	1016.0	67	50	58.6	- 1.1	86	30	44	29	0	0	53	87	4.61	2.53	1.53	16	0	0.0	0	1.4	22	17	S	22	4	7	20	7.3	37
SEATTLE TACOMA	400	999.7	1015.9	72	55	63.7	- 0.4	90	1	52	21+	1	0	53	73	4.58	3.63	1.75	12	1	0.0	0	2.2	22	17	22	17+	7	7	17	6.9	50
SPOKANE	2356	930.9	1013.6	77	53	65.1	- 2.9	94	2+	44	22	4	0	43	53	1.35	0.94	0.50	10	1	0.0	0	5.0	19	26	SW	25+	8	7	16	6.3	56
STAMPEDE PASS R	3958	880.1		60	47	53.6	- 2.0	78	10+	41	19+	0	0			7.14	5.10	1.42	20		0.0	0						6	6	19	7.2	
WALLA WALLA U	949			82	60	70.9	- 2.9	97	1	53	19	8	0			0.98	0.68	0.37	10		0.0	0			23	NW	23	8	7	16	6.5	65
YAKIMA	1052	975.6	1013.5	79	52	65.3	- 3.3	95	1	41	21	5	0	48	57	1.71	1.51	0.60	9	1	0.0	0	3.1	28	22	22	25	11	5	15	5.7	
WEST INDIES																																
SAN JUAN P.R.	13	1015.2	1017.5	88	76	82.0	1.1	90	22+	74	31+	3	0	77	86	7.36	0.23	2.23	19	12	0.0	0	6.7	9	25	E	18+	5	18	8	5.7	82
SWAN ISLAND	28			89	79	83.7	0.6	90	11+	74	4	2	0			2.43	- 1.23	0.84	13		0.0	0						3	18	10	6.2	
WEST VIRGINIA																																
BECKLEY	2504	933.3	1019.6	79	60	69.6	- 0.1	87	24+	42	28	0	0	62	82	3.50	- 0.49	0.63	11	10	0.0	0	3.1	25	35	34	7	5	15	11	6.4	
CHARLESTON	939	985.1	1018.9	84	65	74.1	0.3	91	24+	46	28	6	0	66	80	5.42	1.47	1.59	10	8	0.0	0	1.7	22	29	34	7	6	15	10	6.1	
ELKINS	1970	949.9		81	59	69.9	1.1	87	23+	39	29	0	0			4.07	- 0.16	1.24	13		0.0	0			35	25	7	3	13	15	7.0	
HUNTINGTON	827	989.5	1019.3	84	64	73.6	- 0.4	95	20	48	29	7	0	65	80	6.03	3.21	2.20	9	10	0.0	0	1.9	21	29	30	18	5	16	10	6.1	
PARKERSBURG U	615			84	66	75.3	0.9	94	21	51	29+	7	0			4.15	0.37	1.28	10		0.0	0			27	W	26					62
WISCONSIN																																
GREEN BAY	682	991.5	1016.8	79	56	67.5	- 1.4	94	23	39	28+	2	0	58	74	2.66	- 0.09	1.09	8	5	0.0	0	2.3	24	42	NW	6	10	12	9	5.4	66
LA CROSSE	651	992.6	1016.7	83	61	72.0	0.4	98	6	47	28+	7	0	62	74	1.96	- 1.67	0.61	7	6	0.0	0	4.0	17	23	30	6	10	10	11	5.7	
MADISON	858	986.1	1017.0	81	57	68.8	- 0.7	94	6	35	27	4	0	60	75	2.58	- 0.79	0.91	8	7	0.0	0	3.1	23	29	SW	24+	10	14	7	5.0	72
MILWAUKEE	672	992.6	1017.5	80	63	71.4	3.6	94	23+	48	28	7	0	63	76	2.59	- 0.47	1.24	9	7	0.0	0	2.7	23	31	SW	24+	12	11	8	4.6	76
WYOMING																																
CASPER	5338	839.5	1014.1	80	49	64.9	- 5.2	95	7	39	30	3	0	40	47	0.61	- 0.11	0.27	8	1	0.0	0	6.1	23	38	24	15	10	7	14	6.1	
CHEYENNE	6126	815.4	1015.1	79	50	64.5	- 3.2	92	7	41	30+	2	0	40	46	1.21	- 0.23	0.42	8	4	0.0	0	3.2	27	47	SW	23	7	12	12	6.2	59
LANDER	5563	831.0	1013.8	78	51	64.5	- 4.3	91	7	38	16	3	0	40	45	0.93	0.46	0.89	2	4	0.0	0	3.1	24	38	SW	19+	6	11	14	6.4	72
SHERIDAN	3964	879.8	1014.8	79	50	64.5	- 5.0	95	5	42	1	3	0	46	57	3.02	2.12	1.04	10	10	0.0	0	1.5	30	37	W	18	8	10	13	5.9	65

Data from airport unless otherwise specified. U indicates Urban, R indicates Rural, sites.

Precipitation data in column headed "Greatest in 24 hours" are computed on a 24-hour basis without regard to calendar day - data may include precipitation with a measurable amount from the last day of the previous month or the first day of the following month.

Wind directions under resultant direction are in tens of degrees.

Value entered in column "Fastest Mile" is the highest observed 1-minute wind speed when the direction is in tens of degrees. These stations are not equipped with a recording anemometer from which "Fastest Mile" data can be evaluated.

B Number of days maximum 70 F. or above for Alaskan Stations.
Y Peak Gust.
\+ And also on an earlier date or dates.
Ø Station pressures apply to elevations shown in the "Elevations - Station Pressure" table of the annual issue of this publication.

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure: Station ⊙	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	No. of days: Max 32.2 °C or above	No. of days: Min 0 C or lower	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	No. of days: 25 mm or more	No. of days: With thunderstorms	Snow Sleet: Total	Snow Sleet: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Fastest mile (1.6 kilometers): Speed	Fastest mile: Direction	Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	M.	Mb.	Mb.	C	C	C.	C.	C		C.				C	%	Mm.	Mm	Mm.			Mm	Mm	M.p.s.		M.p.s							%
ALABAMA																																
BIRMINGHAM	189	996.6	1018.7	32.2	20.6	26.3	-0.9	36.7	23	12.8	30	20	0	20.0	73	46	- 77	15	8	16	0	0	0.4	3	11.6	N	2	5	16	10	5.6	75
HUNTSVILLE	190	995.9	1018.7	33.3	21.1	27.2	0.4	38.3	23	15.0	28+	19	0	20.0	72	24	- 60	10	7	10	0	0	0.4	9	13.9	31	1	8	14	9	5.5	
MOBILE	64	1010.2	1017.9	33.9	22.8	28.4	0.6	38.9	22	18.3	30	26	0	21.1	72	117	- 47	38	16	16	0	0	0.7	8	10.3	8	22	3	20	8	6.1	
MONTGOMERY	56	1011.2	1018.3	33.9	21.7	27.7	0.1	37.8	24+	13.9	30	24	0	21.1	73	64	- 41	27	9	15	0	0	0.3	32	14.8	SE	24	4	18	9	5.8	55
ALASKA																																
ANCHORAGE	35	1008.1	1012.9	18.9	10.6	14.6	1.3	27.8	6	4.4	31	6	0	9.4	72	18	- 48	9	10	0	0	0	0.5	19	10.3	18	9	3	8	20	7.4	50
ANNETTE	34	1010.5	1014.5	20.0	11.1	15.4	0.7	27.2	9	8.3	26	13	0	10.0	75	163	- 28	42	19	1	0	0	1.0	14	13.0	15	28	6	7	18	6.8	
BARROW	9	1015.2	1015.9	7.8	2.8	5.3	2.1	24.4	8	- 1.1	30	1	4	3.9	90	2	- 21	1	5	0	8	T	4.3	9	12.5	8	16	4	4	23	8.1	
BARTER ISLAND	12	1014.6	1016.5	7.2	2.8	4.9	0.5	17.8	8	- 0.6	30	0	2	3.3	91	21	- 6	13	6	0	18	T	4.4	9	13.4	9	17+	4	3	24	8.0	
BETHEL	38	1006.8	1012.5	16.7	7.8	12.1	0.8	27.8	5	2.8	30+	2	0	8.9	81	46	- 60	18	14	0	0	0	0.6	22	13.0	18	4	1	2	28	9.1	
COLD BAY	29	1008.5	1012.5	12.8	9.4	11.1	0.4	15.6	27+	7.2	29+	0	0	8.3	84	90	- 18	15	21	0	0	0	1.9	20	19.7	16	7	0	0	31	9.8	
FAIRBANKS	133	995.9	1012.7	21.1	8.3	14.7	2.3	28.9	13	- 0.6	30	15	1	8.9	73	24	- 31	9	8	0	0	0	0.2	18	7.2	10	8+	9	7	15	6.2	
JUNEAU	4	1012.9	1013.6	18.9	7.8	13.2	0.9	25.0	4	3.3	27+	10	0	9.4	82	61	- 67	19	10	0	0	0	0.9	9	11.6	12	31	7	3	21	7.3	48
KING SALMON	15	1009.5	1011.4	17.2	7.8	12.6	0.0	28.9	5	0.0	30	5	1	6.1	66	56	- 31	12	12	0	0	0	0.8	17	13.9	9	13+	3	6	22	7.9	
KOTZEBUE	3	1011.9	1012.2	16.1	10.6	13.3	3.0	26.7	6	2.8	29	6	0	10.6	83	35	- 20	11	16	2	0	0	1.3	29	13.4	30	22	4	10	17	7.4	
MC GRATH	105	1000.0	1012.7	20.0	6.7	13.6	1.3	30.6	6	- 1.7	30	14	3	6.7	67	20	- 76	11	11	1	0	0	0.7	28	6.7	30	28+	3	9	19	7.2	
NOME	4	1010.8	1011.7	15.0	7.2	11.1	1.7	20.6	6	- 1.7	29	0	2	5.6	67	66	- 31	29	14	1	0	0	0.5	13	12.1	13	4	3	6	22	8.0	30
ST. PAUL ISLAND	7	1009.8	1010.8	10.6	6.7	8.6	-0.1	11.7	30+	1.7	22	0	0	7.8	95	58	- 25	21	16	0	0	0	0.6	22	13.9	15	6	0	0	31	9.9	
SHEMYA	37	1008.1	1012.0	10.6	7.2	9.0	-0.8	13.3	1	5.0	20	0	0	7.8	92	48	- 6	28	10	0	0	0	0.6	1	13.4	3	18	0	3	28	9.5	
YAKUTAT	9	1012.5	1013.4	16.7	6.1	11.4	-0.7	25.0	5	1.1	28	3	0	9.4	87	98	-179	38	11	0	0	0	0.2	18	8.0	11	7	5	6	20	7.3	
ARIZONA																																
FLAGSTAFF	2135	791.4	1017.2	23.3	7.2	15.3	-2.4	26.7	30+	- 4.4	23	0	3	6.7	63	29	- 43	9	11	14	0	0	1.5	21	8.9	24	22+	11	8	12	5.0	
PHOENIX	340	972.9	1010.7	37.2	23.3	30.3	-0.6	40.0	29+	16.1	23	31	0	13.3	40	15	- 13	7	6	7	0	0	0.6	14	25.0Y	E	3	16	9	6	3.5	87
TUCSON	788	925.8	1011.8	33.9	20.6	27.4	-1.0	36.7	29+	17.2	23	27	0	14.4	49	28	- 45	13	11	13	0	0	1.6	17	15.6	E	2	12	13	6	4.4	81
WINSLOW	1492	853.4	1014.1	30.6	14.4	22.5	-2.9	34.4	29	5.0	24	11	0	6.7	40	4	- 33	1	5	6	0	0	1.7	21	14.3	27	29	14	9	8	4.3	
YUMA	59	1003.1	1010.3	38.3	25.0	31.6	-1.6	42.2	28	17.2	23	31	0	13.9	38	3	- 10	3	1	1	0	0	2.1	19	17.4	SE	31	21	6	4	2.8	93
ARKANSAS																																
FORT SMITH	136	1001.0	1017.3	34.4	22.2	28.2	0.2	37.8	9+	16.7	31	25	0	19.4	64	32	- 42	17	9	6	0	0	0.5	16	11.2	W	23	5	15	11	6.0	70
LITTLE ROCK	78	1008.1	1017.6	32.8	22.2	27.4	0.1	36.1	22	14.4	28	21	0	20.6	71	7	- 65	4	3	4	0	0	1.0	20	9.8	N	8	10	10	11	5.7	72
TEXARKANA	119	1004.4	1017.4	33.3	22.2	27.9	-0.2	36.7	7	15.6	29	25	0	21.1	72	61	- 17	36	5	5	0	0	1.7	17	7.6	20	16+	13	9	9	4.8	
CALIFORNIA																																
BAKERSFIELD	145	996.3	1013.5	33.9	18.9	26.6	-1.1	41.1	30	14.4	23+	21	0	10.0	37	T	0	T	0	0	0	0	1.8	32	10.3	31	12	24	4	3	1.9	
BISHOP	1252	873.4		32.2	11.7	22.1	-1.4	37.2	31+	5.0	23+	16	0			10	7	6	2		0	0						20	7	4	3.0	
BLUE CANYON	1609			22.2	12.2	17.0	-2.3	30.6	30	1.7	20	0	0			75	74	69	3		0	0			10.3	22	19	16	9	6	4.0	
EUREKA U	13			17.8	12.8	15.2	1.4	27.8	30	10.0	15+	0	0			50	48	23	8		0	0			11.2	NW	28	4	7	20	7.8	44
FRESNO	100	1001.7	1013.4	35.0	15.6	25.1	-0.9	40.6	30	11.1	26	25	0	10.6	45	T	0	T	0	1	0	0	2.6	30	11.2	NW	16	24	7	0	1.9	92
LONG BEACH	10	1013.5	1014.9	28.9	17.2	23.1	0.7	38.9	23	13.9	23+	6	0	13.3	61	0	- 1	0	0	1	0	0	1.3	25	8.0	28	26+	19	10	2	3.2	
LOS ANGELES	32	1010.5	1014.2	23.3	17.2	20.3	-0.3	32.2	23	15.0	22	1	0	15.0	75	T	- 1	T	0	1	0	0	3.0	25	10.3Y	SW	26+	14	12	5	4.0	
LOS ANGELES U	82			28.3	18.3	23.4	0.6	37.8	23	16.1	22	4	0			3	2	3	1		0	0			7.6	W	26	17	12	2	3.4	76
MT SHASTA R	1080			25.0	8.3	16.5	-2.8	34.4	31+	1.1	22	2	0			20	15	8	6		0	0										
OAKLAND	2	1015.9	1016.0	22.2	15.0	18.8	0.9	31.7	29	12.8	23	0	0	13.3	76	1	0	1	2	1	0	0	3.2	28	13.0	27	16	8	14	9	5.5	
RED BLUFF	104	1001.4	1013.6	32.8	17.2	24.9	-2.3	43.3	30	13.3	24+	17	0	10.6	46	30	28	26	6	1	0	0	1.2	16	11.2	SE	18	13	10	8	4.5	84
SACRAMENTO	5	1013.2	1013.9	31.7	13.9	22.8	-0.6	41.7	30	10.0	22	17	0	11.7	58	1	0	1	1	0	0	0	3.0	21	12.1	SW	19	17	8	6	3.9	92
SANDBERG R	1377	864.5		25.6	13.3	19.3	-3.6	33.9	29	4.4	22+	2	0			T	- 2	T	0		0	0			14.8	36	17	23	5	3	2.3	
SAN DIEGO	4	1013.5	1014.5	25.6	19.4	22.3	0.2	31.7	23	15.6	22	0	0	13.9	62	T	- 2	T	0	0	0	0	1.9	28	8.0	NW	21+	18	12	1	3.5	76
SAN FRANCISCO	2	1015.6	1016.2	23.3	13.3	18.2	1.1	36.7	29	11.1	23+	1	0	12.2	77	2	1	1	2	0	0	0	4.6	28	15.6	W	16	11	11	9	5.2	
SAN FRANCISCO U	16			20.0	13.9	16.8	1.6	35.6	29	12.2	24+	1	0			1	0	1	1		0	0			14.8	SW	16					66
SANTA MARIA	72			23.9	12.8	18.2	1.3	33.3	23	10.0	23	1	0			T	- 1	T	0		0	0						20	10	1	3.3	
STOCKTON	7	1013.5	1014.6	31.1	14.4	22.7	-1.8	40.6	30	10.0	22+	15	0	7.8	44	1	1	1	1	0	0	0	3.2	30	12.5	32	21	15	13	3	3.8	
COLORADO																																
ALAMOSA	2297	776.5		23.9	7.8	15.9	-1.3	26.7	20+	1.1	24	0	0			56	31	11	12		0	0						10	12	9	5.1	
COLORADO SPRINGS	1873	814.8	1015.3	26.1	11.7	18.8	-1.9	30.0	21+	6.1	30	0	0	7.2	52	54	- 1	17	10	7	0	0	0.7	4	13.4	14	8	10	8	13	5.6	
DENVER	1610	838.8	1013.5	27.8	12.2	20.1	-1.9	33.3	5	5.6	30+	5	0	8.3	54	64	32	36	10	8	0	0	0.4	17	14.3	NW	28	9	7	15	5.8	69
GRAND JUNCTION	1480	854.0	1013.9	28.9	13.9	21.3	-2.9	32.8	4	6.1	23	3	0	7.8	47	35	8	16	10	11	0	0	1.7	15	15.2	W	22+	8	13	10	5.5	66
PUEBLO	1428	857.4	1013.5	30.6	13.3	21.9	-1.7	35.6	7	4.4	24	15	0	9.4	52	23	- 24	19	8	6	0	0	0.3	28	15.2	NE	29	10	12	9	5.1	76
CONNECTICUT																																
BRIDGEPORT	2	1016.3	1016.8	27.2	18.9	22.9	0.6	32.2	25	11.7	28	1	0	17.2	71	120	7	55	12	8	0	0	1.3	27	14.3	23	9	7	12	12	5.9	

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	No. of days: Max 32.2 °C or above	No. of days: Min. 0 C or lower	Average dew point	Average relative humidity	Precipitation: Total	Departure from normal	Greatest in 24 hours	No. of days: 25 mm. or more	No. of days: With thunderstorms	Snow, Sleet: Total	Snow, Sleet: Maximum depth on ground	Wind: Resultant speed	Resultant direction	Fastest mile (1.6 kilometers): Speed	Direction	Date	No. of days (sunrise to sunset): Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	M.	Mb.	Mb.	C.	C.	C.	C	C.		C.				C.	%	Mm.	Mm.	Mm.			Mm.	Mm.	M.p.s.		M.p.s							%
CONNECTICUT																																
HARTFORD	52	1009.8	1016.1	28.3	15.0	21.6	-0.2	35.0	25	7.2	31	6	0	14.4	66	64	- 38	39	6	2	0	0	1.2	27	11.2	W	9	6	12	13	6.4	76
NEW HAVEN	2	1016.3		26.7	16.7	21.7	0.2	31.1	25+	9.4	28	0	0			77	- 31	23	14		0	0			22.4	W	9	6	13	12	5.8	70
DELAWARE																																
WILMINGTON	23	1014.6	1017.6	30.6	19.4	25.1	1.6	35.6	25	11.7	30+	14	0	17.2	65	30	-112	21	7	6	0	0	1.6	25	8.9	16	31+	9	11	11	5.7	
DIST.OF COLUMBIA																																
WASH NATL AP	4	1015.2	1017.6	31.7	21.1	26.2	1.5	36.7	24	12.8	31	17	0	18.3	64	100	- 24	31	10	8	0	0	0.9	23	18.8	SW	1	10	12	9	5.3	69
FLORIDA																																
APALACHICOLA U	4			31.7	23.9	27.7	0.2	34.4	24+	18.9	29	14	0			118	- 78	49	12	11	0	0			15.2	NE	27	8	15	8	5.4	55
DAYTONA BEACH	9	1017.3	1018.6	31.1	22.8	27.1	0.1	33.3	19+	21.1	27	15	0	21.1	75	282	120	109	13	14	0	0	1.4	11	10.3	7	29+	3	20	8	6.1	
FORT MYERS	5	1017.3	1017.7	32.8	23.9	28.1	-0.1	35.6	14	21.1	27	23	0	22.8	79	291	103	83	20	20	0	0	1.2	10	14.3	23	28	2	21	8	5.9	
JACKSONVILLE	6	1017.3	1018.2	33.3	23.9	28.6	0.6	36.7	25+	21.1	29+	24	0	22.8	77	412	239	201	13	10	0	0	0.6	13	14.8	NE	28	11	13	7	5.0	64
KEY WEST	1	1016.3	1017.0	31.7	26.1	28.9	0.3	33.3	21	23.9	27+	10	0	23.9	75	121	11	38	15	17	0	0	2.4	11	12.1	E	27+	2	17	12	6.3	81
LAKELAND U	65			32.2	23.3	27.7	0.0	36.1	17	20.0	28+	20	0			232	52	58	15		0	0						5	20	6	5.2	68
MIAMI	2	1016.9	1017.3	32.2	25.6	28.8	0.9	33.9	20	23.3	28	20	0	22.2	71	212	35	56	18	17	0	0	2.2	11	13.9	34	28	0	21	10	6.2	
ORLANDO	33	1014.2	1018.5	32.8	23.3	27.9	-0.3	34.4	20+	21.1	28+	23	0	22.2	77	87	- 89	40	15	16	0	0	1.4	12	13.4	6	17	4	18	9	6.2	
PENSACOLA	34	1013.5	1017.7	32.2	22.8	27.5	0.0	35.0	22	18.3	31+	20	0	21.7	75	217	40	70	13		0	0	0.6	7	17.0	NE	26	4	14	13	6.5	62
TALLAHASSEE	17	1015.9	1018.1	33.9	22.8	28.3	1.0	37.2	24+	20.0	29	25	0	22.8	79	137	- 39	32	14	21	0	0	0.7	4	13.9	22	12	2	22	7	5.9	
TAMPA	6	1017.3	1017.5	32.2	23.3	27.8	0.0	35.0	22+	21.7	1	23	0	22.2	77	172	- 37	54	15	20	0	0	0.8	11	10.3	8	2	3	18	10	6.3	54
WEST PALM BEACH	5	1016.9	1017.6	32.2	23.3	27.7	-0.6	33.3	7	21.1	28	22	0	22.2	75	207	36	96	13	14	0	0	2.3	11	13.4	9	9	9	12	10	5.9	
GEORGIA																																
ATHENS	244	990.2	1018.6	32.2	20.6	26.3	0.2	38.3	23	12.2	29	20	0	19.4	73	83	- 10	39	7	9	0	0	0.5	36	8.9	9	25	12	14	5	4.7	
ATLANTA	308	982.7	1018.8	31.7	20.6	26.1	0.4	36.7	24	14.4	29	20	0	20.0	74	105	13	38	7	7	0	0	0.5	1	12.1	NW	2	9	16	6	5.2	74
AUGUSTA	44	1012.9	1018.1	34.4	20.6	27.6	0.8	40.0	23	12.2	29	24	0	20.0	71	33	- 66	23	6	11	0	0	0.5	10	12.5	10	9	8	18	5	5.4	
COLUMBUS	117			32.8	21.7	27.1	0.1	38.3	23	15.6	29	22	0	20.6	73	92	- 25	41	11		0	0	0.5	3	10.7	19	9	13	12	6	5.2	
MACON	108	1005.4	1018.3	34.4	20.6	27.4	0.0	40.0	23	13.9	29	25	0	19.4	68	35	- 71	13	9	14	0	0	0.3	4	13.0	NW	10	7	17	7	5.7	76
ROME	194			33.9	19.4	26.6	0.8	39.4	23	9.4	29	23	0			27	- 68	13	7		0	0										
SAVANNAH	14	1016.6	1018.2	33.3	22.8	27.8	0.6	37.8	24	17.8	29+	24	0	22.8	80	97	- 71	37	8	12	0	0	0.4	15	11.2	N	8	8	16	7	5.7	64
HAWAII																																
HILO	8	1014.9	1016.0	28.9	20.6	24.7	0.4	30.0	6+	19.4	28+	0	0	21.1	82	244	- 46	52	27	1	0	0	0.4	26	7.6	E	31+	3	9	19	7.5	38
HONOLULU	2	1014.9	1015.3	32.2	23.9	28.3	1.9	33.3	20+	20.6	16	25	0	20.0	64	3	- 20	2	3	0	0	0	5.9	5	12.5	NE	11	11	12	8	5.2	74
KAHULUI	15	1012.5	1014.9	32.2	22.2	27.1	1.0	34.4	30+	18.9	17+	18	0	20.0	70	7	- 2	4	2	0	0	0	5.9	5	13.0	NE	24+	13	9	9	5.0	78
LIHUE	31	1011.5	1016.6	29.4	22.8	26.1	0.3	30.0	23	19.4	4	0	0	21.7	78	18	- 45	6	14	0	0	0	4.8	6	8.9	E	12	0	21	10	6.8	70
IDAHO																																
BOISE	865	915.3	1013.7	27.2	13.9	20.4	-1.9	35.6	8	7.8	21	10	0	8.3	52	60	56	19	10	5	0	0	0.4	13	14.8	SE	20	8	9	14	6.0	60
LEWISTON	431			28.3	13.9	21.0	-1.1	36.7	3	6.9	16	10	0			42	31	19	9		0	0						8	8	15	6.5	
POCATELLO	1358	864.5	1015.7	25.6	8.9	17.2	-3.9	35.0	7	3.9	16	5	0	6.1	55	101	87	24	13	7	0	0	2.1	22	20.1	SE	4	6	12	13	6.2	63
ILLINOIS																																
CAIRO U	96			30.6	22.2	26.4	-0.2	35.0	23	13.9	28	16	0			59	- 20	40	7		0	0			8.9	SW	15	17	4	10	4.7	76
CHICAGO O HARE	201	993.9	1017.9	28.3	17.8	23.2	1.3	35.6	6	10.0	27	11	0	16.7	67	135	54	87	9	5	0	0	0.9	21	13.4	25	24+	10	9	12	5.3	
CHICAGO MIDWAY	185	995.6		28.9	18.9	23.7	0.3	35.0	6	10.6	27	10	0	16.7	67	135	55	97	6	9	0	0	1.4	19	18.8	NW	16	11	10	10	5.4	69
MOLINE	177	995.9	1017.1	29.4	17.2	23.1	-0.1	35.6	23+	7.2	28	11	0	17.2	72	55	- 35	26	7	6	0	0	1.3	19	11.2	W	24+	13	6	12	5.3	72
PEORIA	199	993.9	1017.6	28.3	17.8	23.2	-0.3	34.4	23	10.0	27	9	0	17.8	75	43	- 30	23	7	7	0	0	1.3	19	8.9	NW	25+	9	12	10	5.7	71
ROCKFORD	221	990.5	1017.2	27.8	16.1	21.9	-0.6	33.9	6	7.8	28+	6	0	16.7	74	161	56	91	9	8	0	0	1.0	21	15.6	30	6	12	7	12	5.3	
SPRINGFIELD	179	995.6	1017.6	29.4	18.3	24.0	0.0	35.6	23+	9.4	28	13	0	17.8	70	25	- 44	13	5	5	0	0	1.5	19	8.9	W	24	11	8	12	5.3	71
INDIANA																																
EVANSVILLE	116	1004.7	1018.6	31.1	19.4	25.2	0.1	36.1	24	10.6	28	16	0	18.9	71	66	- 12	27	8	9	0	0	0.7	23	10.3	S	15	13	10	8	4.9	73
FORT WAYNE	241	988.8	1018.3	27.8	17.2	22.5	0.0	33.3	21	7.2	28	7	0	16.7	72	94	17	38	7	6	0	0	1.3	24	18.8	N	8	9	10	12	6.0	78
INDIANAPOLIS	241	989.8	1018.6	28.9	18.3	23.6	0.4	33.3	24+	8.9	28+	10	0	18.9	76	113	36	46	10	8	0	0	0.8	23	11.6	NW	7	9	10	12	6.1	71
SOUTH BEND	236	990.2	1017.9	27.2	16.7	22.0	-0.2	33.9	23	7.2	27	5	0	15.6	68	81	- 10	52	5	6	0	0	1.5	24	10.3	31	8	9	11	11	5.8	
IOWA																																
BURLINGTON	211			29.4	17.8	23.7	0.0	36.1	23+	10.6	28	9	0	16.7	69	36	- 56		7	3	0		1.7	20	9.4	27	24+	8	13	10	5.5	
DES MOINES	286	982.7	1016.8	27.8	17.8	22.8	-0.6	35.6	23+	11.1	11	7	0	16.1	70	103	10	45	12	7	0	0	1.9	20	18.8	NW	8	13	5	13	5.4	67
DUBUQUE	322	978.7		26.7	16.1	21.3	-0.1	35.0	23	7.8	27	4	0			134	39	66	12		0	0						11	6	14	6.0	
SIOUX CITY	334	975.6	1014.9	30.0	17.2	23.6	-0.4	37.2	5	10.6	25	9	0	16.7	70	39	- 29	15	9	4	0	0	2.2	17	17.9	SE	26	10	11	10	5.5	74

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure: Station	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	No. of days: Max 32.2 °C or above	No. of days: Min 0 C or lower	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	No. of days: 25 mm or more	No. of days: With thunderstorms	Snow Sleet: Total	Snow Sleet: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Fastest mile (1.6 kilometers): Speed	Fastest mile: Direction	Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	No. of days: Partly cloudy, 4-7	No. of days: Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	M	Mb	Mb	C	C	C	C	C		C				C	%	Mm	Mm	Mm			Mm	Mm	M p s		M p s							%
IOWA																																
WATERLOO	265	985.1	1016.5	26.1	15.6	20.8	-1.2	33.9	23	8.9	26+	5	0	14.4	70	205	118	96	12	6	0	0	1.7	18	19.7	2	6	10	11	10	5.6	
KANSAS																																
CONCORDIA	448	962.8	1014.4	30.6	18.9	24.7	-1.4	37.8	22+	12.2	31+	16	0	17.2	68	211	131	116	12	10	0	0	3.3	16	18.3	SE	27	13	9	9	4.8	70
DODGE CITY	787	925.2	1013.8	32.8	18.9	25.7	-0.5	40.0	8	13.3	30+	20	0	14.4	57	160	100	78	11	7	0	0	3.4	17	15.2	S	16	10	8	13	5.5	78
GOODLAND	1113	889.3	1013.3	29.4	14.4	21.9	-1.8	36.1	22+	7.2	30	10	0	13.3	64	53	-5	22	7	6	0	0	2.2	16	14.3	16	17	15	7	9	4.5	
TOPEKA	267	984.8	1016.0	28.9	19.4	24.2	-1.6	34.4	7	13.3	31	10	0	19.4	76	188	79	80	10	8	0	0	2.4	16	14.8	SW	10	11	6	14	5.5	63
WICHITA	403	968.5	1015.1	31.1	20.0	25.5	-1.6	41.1	9	13.9	31+	15	0	17.2	66	163	90	56	12	7	0	0	3.8	17	17.9	SW	16	12	7	12	5.3	70
KENTUCKY																																
COVINGTON	265	987.8	1018.9	29.4	18.9	24.1	0.7	34.4	24+	10.6	29+	12	0	17.8	70	57	-9	20	10	7	0	0	0.7	23	12.5	24	4	7	13	11	6.1	
LEXINGTON	294	984.4	1019.3	29.4	18.9	24.2	-0.3	33.9	23	9.4	29+	12	0	18.3	72	134	52	90	8	7	0	0	0.8	20	9.4	36	7	10	14	7	5.0	
LOUISVILLE	145	1001.0	1018.2	30.6	20.6	25.5	0.9	35.6	24	12.2	29+	16	0	18.9	70	93	18	41	7	6	0	0	0.7	22	14.8	N	7	9	15	7	5.4	71
LOUISIANA																																
ALEXANDRIA	28	1013.9	1018.1	33.3	21.1	27.1	-0.7	35.6	6	14.4	30	23	0	22.2	81	133	44	44	10	13	0	0	0.3	7	10.3	22	15+	6	20	5	5.1	
BATON ROUGE	20	1015.2	1017.9	33.3	22.2	27.6	-0.4	35.0	21+	15.6	30	24	0	21.7	77	233	100	71	9	12	0	0	0.6	6	13.9	17	22	7	20	4	5.3	
LAKE CHARLES	3	1016.3	1017.4	32.8	22.8	27.7	-0.2	33.9	22+	17.2	31	24	0	22.8	80	91	-31	47	8	19	0	0	0.8	10	8.9	25	3	3	21	7	5.7	
NEW ORLEANS	1	1016.9	1018.0	32.2	22.2	27.2	-0.5	35.0	22	15.6	30	19	0	22.2	77	121	-14	61	12	11	0	0	0.4	5	10.3	18	24	6	18	7	5.4	
SHREVEPORT	77	1008.5	1017.5	33.3	22.2	27.8	-1.0	35.0	25+	17.8	29	24	0	21.1	73	48	-17	28	11	8	0	0	1.3	16	13.4	35	7	11	12	8	5.3	68
MAINE																																
CARIBOU	190	990.9		21.1	8.9	15.1	-1.9	28.3	25	4.4	20+	0	0			51	-42	19	11		0	0						3	12	16	7.1	
PORTLAND	14	1013.2	1015.5	25.6	12.8	19.1	-0.2	31.7	25	7.2	28+	0	0	12.2	68	51	-11	30	9	5	0	0	1.3	25	11.6	NW	21	11	8	12	5.5	72
MARYLAND																																
BALTIMORE	45	1012.2	1017.7	31.7	20.0	25.9	2.1	36.7	24+	10.6	31	17	0	17.8	65	106	-26	56	11	7	0	0	1.2	26	18.8	N	16	10	13	8	5.4	62
MASSACHUSETTS																																
BLUE HILL OBS R	192			25.6	15.0	20.4	-0.3	33.3	25	8.9	30+	1	0			53	-50	28	7		0	0			29.5	WSW	9					66
BOSTON	5	1015.2	1016.3	25.6	17.2	21.5	-0.6	33.9	25	13.9	30+	2	0	14.4	67	41	-52	20	8	3	0	0	1.4	26	13.4	NW	21	11	6	14	5.7	69
NANTUCKET	13	1016.3	1016.5	23.9	15.0	19.4	-0.7	30.0	21	7.8	19	0	0	17.2	86	87	-7	66	9	2	0	0	1.3	25	11.6	NE	18	8	7	16	6.6	56
PITTSFIELD	357			25.0	12.2	18.4	-0.6	30.6	25+	4.4	31+	0	0			69	-30	27	10		0	0										
WORCESTER	301	980.7	1017.2	25.6	14.4	20.0	-0.2	32.2	25	8.3	28	1	0	12.2	62	32	-76	19	8	2	0	0	2.1	28	9.4	31	17+	10	11	10	5.6	
MICHIGAN																																
ALPENA	210	992.2	1017.3	25.0	10.6	18.0	-0.1	33.3	6	2.2	15	3	0	12.8	74	135	58	81	10	9	0	0	0.9	25	11.2	N	6	13	10	8	5.0	70
DETROIT	189			28.9	19.4	24.1	1.4	35.6	23+	10.6	28	9	0	15.6	60	91	19	68	4	5	0		1.3	27	20.6	30	16					
DETROIT M WAYNE CO	193	993.6	1017.5	27.8	17.2	22.5	0.9	33.9	23+	8.9	28	5	0	16.7	71	46	-26	30	6	5	0	0	1.3	25	12.1	NW	16+	9	14	8	5.4	74
DETROIT WILLOW RUN	217	989.8	1017.8	26.7	15.6	21.1	-1.4	32.8	23+	6.7	28	4	0	15.0	69	55	-17	31	5	4	0	0	1.6	25	10.7	28	8	10	12	9	5.6	
FLINT	235	989.8	1017.4	26.1	15.0	20.5	-0.4	32.2	24+	7.2	28+	2	0	16.1	77	136	55	113	5	4	0	0	1.7	24	12.5	27	16	10	10	11	5.4	
GRAND RAPIDS	239	988.8	1017.5	27.8	15.0	21.4	0.1	33.3	23+	6.1	27	6	0	15.6	69	73	4	21	9	7	0	0	1.8	24	21.5	SW	16	10	12	9	5.5	69
HOUGHTON LAKE	350	976.3	1018.0	25.6	12.2	18.7	0.1	32.8	23	1.7	28	1	0	13.9	75	34	-34	24	5	6	0	0	1.7	25	10.3	23	24	9	14	8	5.2	
LANSING	256	986.5	1017.8	27.2	14.4	20.8	-0.4	33.9	24	5.0	28+	5	0	15.0	71	76	-2	23	9	7	0	0	1.5	25	16.1	W	16	8	14	9	5.6	71
MARQUETTE U	206			22.8	12.8	17.9	-0.8	31.7	16	5.0	18	0	0			62	-15	18	12		0	0			12.1	SW	2	10	14	7	5.2	73
MUSKEGON	191	994.6	1017.3	26.7	15.6	20.9	-0.3	32.2	23	6.1	27	1	0	15.6	73	46	-27	18	10	10	0	0	1.7	24	11.6	21	16	9	11	11	5.3	
SAULT STE MARIE	220	990.2	1016.7	22.2	9.4	15.8	-2.0	28.9	24	1.7	15	0	0	12.2	82	118	45	58	11	7	0	0	0.8	27	14.8	W	20	10	12	9	5.1	64
MINNESOTA																																
DULUTH	435	965.1	1016.2	22.8	10.6	16.5	-1.2	30.6	6	1.7	27	0	0	11.1	75	53	-44	16	15	9	0	0	0.8	16	16.1	W	24	5	17	9	6.0	61
INTERNATIONAL FALLS	359	972.6	1015.3	22.8	10.0	16.3	-1.0	30.0	5	2.2	27	0	0	11.1	75	80	-13	27	14	8	0	0	0.6	21	13.9	35	5	3	16	12	6.6	
MINNEAPOLIS	254	985.4	1015.5	27.2	16.1	21.5	0.4	35.6	23	6.7	26	6	0	15.0	68	19	-62	4	8	6	0	0	1.8	20	16.1	SW	23	9	11	11	5.4	72
ROCHESTER	395	969.5	1016.7	25.6	13.9	19.5	-1.5	32.8	6	6.7	26+	1	0	15.0	76	52	-44	19	10	8	0	0	2.2	21	14.3	28	6	10	10	11	5.7	
ST CLOUD	315	977.3	1014.8	26.1	13.9	20.0	-0.3	34.4	23	4.4	14	4	0		71	54	-41	32	7		0	0						7	13	11	5.5	
MISSISSIPPI																																
JACKSON	94	1006.4	1018.2	33.3	21.1	27.2	-0.6	36.1	2+	13.9	30	23	0	20.6	72	99	14	40	12	12	0	0	0.4	13	13.0	S	22	6	17	8	5.5	63
MERIDIAN	88	1007.8	1018.7	33.3	20.6	26.8	-0.5	36.1	24+	12.2	30	21	0	21.1	79	151	61	44	10	14	0	0	0.1	29	14.3	14	24	6	15	10	6.1	
MISSOURI																																
COLUMBIA	237	989.2	1017.1	29.4	20.0	24.6	-0.5	35.0	23	12.8	28	12	0	18.3	72	54	-43	17	9	4	0	0	1.6	17	11.6	SW	8	8	7	16	6.6	68
KANSAS CITY	226	989.8	1016.4	30.0	20.6	25.4	-1.1	36.7	7	15.0	31	12	0	18.9	70	110	14	44	11	7	0	0	2.4	17	13.9	NW	8	12	5	14	5.5	62
ST JOSEPH	247			29.4	19.4	24.6	-0.7	35.6	7	12.8	11	10	0			121	14		10	6	0		2.1	17	9.4	28	23+	12	7	12	5.4	

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

AUGUST 1968

State and Station	Elevation (ground)	Pressure: Station	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Date	Temperature: Lowest	Date	No. of days: Max 32.2 °C or above	No. of days: Min 0 C or lower	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	No. of days: 25 mm or more	No. of days: With thunderstorms	Snow, Sleet: Total	Snow, Sleet: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Fastest mile (1.6 kilometers): Speed	Fastest mile: Direction	Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	M.	Mb.	Mb.	C.	C.	C.	C.	C		C.				C.	%	Mm.	Mm.	Mm			Mm	Mm	M p.s.		M.p.s							%
MISSOURI																																
ST LOUIS	163	998.0	1018.0	30.6	20.0	25.3	0.4	36.7	23	10.0	28	15	0	18.3	68	41	- 36	19	8	6	0	0	1.3	20	11.6	W	24	5	10	16	6.7	64
SPRINGFIELD	386	973.2	1017.9	30.0	18.9	24.5	-1.1	35.0	8+	13.3	26	12	0	18.9	75	159	75	57	9	5	0	0	2.1	17	9.8	NW	9+	12	5	14	5.6	54
MONTANA																																
BILLINGS	1087	891.6	1013.5	26.1	13.3	19.8	-2.4	35.6	5	10.0	17+	5	0	8.9	54	60	37	18	12	6	0	0	1.1	27	22.4	W	14	8	8	15	6.1	59
GLASGOW	696	933.0	1013.6	25.6	11.1	18.3	-1.6	33.3	6+	5.0	9	5	0	8.3	57	51	13	41	10	7	0	0	1.0	6	14.3	30	11	8	13	10	5.8	
GREAT FALLS	1116	888.9	1014.0	25.0	11.1	18.0	-1.3	33.3	6	6.1	13	4	0	6.1	50	55	23	29	9	4	0	0	1.7	24	17.0	SW	14	8	7	16	6.2	66
HAVRE	788	923.1	1013.8	26.1	10.0	18.0	-1.4	33.9	4	5.6	31	6	0	7.2	57	77	49	59	9	4	0	0	0.1	27	24.1	NW	11	6	9	16	6.7	81
HELENA	1167	881.5	1015.0	25.0	9.4	17.3	-1.7	32.2	3+	4.4	29	3	0	6.7	54	51	28	24	10	6	0	0	1.6	27	18.8	SW	4	7	9	15	6.2	63
KALISPELL	904	911.3	1014.9	24.4	8.3	16.6	-0.7	34.4	2	2.9	23	4	0	7.8	64	79	51	35	11	4	0	0	0.2	13	16.5	32	11	6	8	17	6.6	
MILES CITY	801	921.8	1013.1	28.3	12.8	20.5	-2.1	36.7	5	8.3	24	10	0	10.0	56	99	67		11	10	0		0.4	32								
MISSOULA	972	904.8	1015.4	25.6	10.0	17.9	-0.3	34.4	2	5.0	29	5	0	5.6	51	60	42	24	15	6	0	0	0.5	30	12.5	S	25	9	9	13	6.4	65
NEBRASKA																																
GRAND ISLAND	561	949.9	1014.6	30.0	17.2	23.6	-0.5	38.3	6	10.0	30	10	0	16.1	69	112	52	31	9	11	0	0	2.4	17	15.6	19	27+	13	8	10	4.9	
LINCOLN U	351			29.4	19.4	24.4	-0.9	36.1	6+	11.7	11	12	0			92	6	34	14		0	0			23.2	S	26	13	7	11	5.3	69
NORFOLK	471			28.9	16.7	22.9	-1.1	36.7	5	10.0	25	8	0			79	13	32	8		0	0						9	13	9	5.4	
NORTH PLATTE	846	917.7	1013.7	30.0	13.9	22.0	-1.6	38.9	7+	5.6	24	12	0	12.8	62	101	47	35	11	10	0	0	1.7	15	15.2	SE	7	9	13	9	5.2	73
OMAHA	298	980.4	1015.2	29.4	18.3	23.9	-0.7	36.1	23+	12.2	25+	9	0	18.3	73	84	- 17	20	13	8	0	0	2.4	16	13.0	SE	26	11	8	12	5.4	72
SCOTTSBLUFF	1206	880.8	1014.0	28.3	12.2	20.4	-2.2	36.1	7	6.1	24	9	0	10.6	60	53	27	16	10	8	0	0	0.4	9	15.6	28	23	10	10	11	5.8	
VALENTINE	789			30.0	13.9	21.7	-1.0	40.0	5	7.8	17	12	0			79	21	25	9		0	0			19.7	S	14	12	5	14	5.5	70
NEVADA																																
ELKO	1539	846.3	1014.7	27.8	9.4	18.7	-0.7	36.1	6+	2.2	23	10	0	5.6	52	49	42	25	9	5	0	0	0.8	27	12.5	34	9	8	7	16	6.3	
ELY	1906	811.0	1013.5	25.6	7.2	16.2	-2.8	30.6	6	- 1.7	23	0	1	3.9	49	26	14	15	9	11	0	0	2.0	20	17.9	S	20	8	13	10	5.5	74
LAS VEGAS	659	936.3	1011.0	36.1	21.1	28.6	-2.1	41.1	3	13.3	24	28	0	6.7	28	1	- 11	1	1	3	0	0	2.3	21	15.2	S	4	15	10	6	3.6	86
RENO	1342	866.9	1014.5	28.9	7.8	18.1	-0.6	34.4	31+	- 1.7	22	11	2	4.4	45	3	- 1	2	2	4	0	0	1.0	30	19.2	SW	12	11	13	7	4.7	78
WINNEMUCCA	1310	868.6	1014.4	26.7	8.9	17.7	-2.1	35.0	8	3.3	23	7	0	0.6	34	18	14	11	5	5	0	0	0.9	24	13.4	W	16	7	8	16	6.3	62
NEW HAMPSHIRE																																
CONCORD	104	1003.7	1016.2	25.0	11.1	18.1	-1.6	32.8	25	3.3	19	1	0	12.8	71	91	16	33	8	5	0	0	1.0	28	23.2	SW	25	8	10	13	5.8	57
MT WASHINGTON OBS	1909			10.0	3.3	6.7	-2.0	16.1	25	- 2.8	11	0	8			140	- 28	50	15	3	0	0			39.8Y	NW	21	3	4	24	8.5	25
NEW JERSEY																																
ATLANTIC CITY	20	1014.6	1017.1	29.4	17.2	23.3	0.1	36.1	25	7.8	31+	9	0	17.2	72	56	- 69	44	6	8	0	0	1.3	24	9.4	33	17+	7	12	12	5.9	71
ATLANTIC CITY U	3			28.3	21.1	24.6	1.4	34.4	25+	13.9	30	5	0			27	-103	24	5		0				13.4	SSW	1					
NEWARK	2	1015.6	1016.7	30.0	20.0	24.9	1.4	35.0	25	12.8	28	9	0	16.7	63	61	- 51	15	10	7	0	0	1.7	25	11.2	32	9	7	14	10	5.7	
TRENTON U	17			29.4	19.4	24.3	1.0	34.4	25	12.8	28	8	0			77	- 44	37	10		0	0			13.9	NW	7	9	9	13	5.8	64
NEW MEXICO																																
ALBUQUERQUE	1619	841.2	1014.5	29.4	15.6	22.4	-2.1	32.8	8	11.1	24	1	0	10.6	54	38	4	13	10	14	0	0	0.8	20	18.3	SE	29	13	14	4	4.3	78
CLAYTON	1515			29.4	14.4	21.8	-1.2	33.9	19+	9.4	11	9	0			54	1	21	8		0	0						14	7	10	5.1	
RATON	1944			26.1	10.6	18.4	-1.7	30.0	8+	6.1	31+	0	0			125	58	65	13		0	0						6	14	11	5.9	
ROSWELL	1102	893.0		32.2	16.1	24.2	-0.6	36.7	15	12.2	19	22	0	13.9	58	68	27	18	12	7	0	0	1.3	15	10.3	SE	22	5	18	8	6.0	64
SILVER CITY	1638			28.3	14.4	21.4	-2.6	30.0	23+	11.1	24+	0	0			45	- 15	17	8		0	0						8	16	7	5.5	
NEW YORK																																
ALBANY	84	1006.1	1016.7	27.2	13.3	20.3	-0.8	33.9	25	5.0	31+	2	0	13.3	68	45	- 33	9	8	4	0	0	1.3	25	13.4	W	20	6	13	12	6.3	61
BINGHAMTON	485	960.0	1018.3	24.4	14.4	19.5	0.3	29.4	25+	7.2	28	0	0	15.0	77	57	- 33	16	11	7	0	0	1.8	27	10.3	NW	20	3	14	14	7.0	68
BUFFALO	215	992.2	1017.4	26.1	15.6	20.8	0.6	32.2	5	8.3	28	1	0	15.6	72	135	58	52	14	11	0	0	2.5	24	13.0	SW	25+	9	11	11	5.7	68
J.F. KENNEDY	4	1016.3	1017.0	28.3	20.0	24.3	0.7	34.4	25	14.4	28+	4	0	16.7	64	71	- 56	20	10	7	0	0	1.6	24	11.6	2	7	6	16	9	5.9	
NEW YORK U	40	1013.2	1016.4	29.4	19.4	24.4	0.5	34.4	7	13.9	28	8	0	15.0	60	73	- 40	18	9	6	0	0	1.3	26	11.6	SW	9					65
NEW YORK LA GUARDIA	3	1015.2	1016.9	28.3	20.6	24.4	0.3	34.4	25	15.6	29+	6	0	15.0	57	81	- 48	18	9	8	0	0	1.3	28	17.4	SW	9	5	15	11	6.1	
ROCHESTER	167	997.6	1017.5	26.7	15.0	20.8	-0.2	32.2	5	7.8	29	1	0	15.6	74	151	82	61	11	10	0	0	1.9	27	13.0	SW	20	9	10	12	5.7	72
SYRACUSE	125	1002.4	1016.9	26.1	15.0	20.4	-0.8	31.7	24+	7.8	31+	0	0	15.0	71	106	23	38	10	8	0	0	1.5	27	11.2	W	25	9	10	12	5.7	66
NORTH CAROLINA																																
ASHEVILLE	652	944.8	1019.7	29.4	17.2	23.4	1.4	34.4	24	6.1	30	9	0	18.9	82	84	- 41	44	9	15	0	0	0.9	35	13.0	34	9	11	13	7	5.1	70
CAPE HATTERAS R	2	1018.0	1018.2	30.6	23.9	27.2	1.8	34.4	23+	20.0	29	11	0	22.2	77	46	-117	27	9	8	0	0	0.4	29	12.1	SW	10	8	13	10	5.4	8[illegible]
CHARLOTTE	224	991.5	1018.4	32.2	20.6	26.3	0.3	37.2	23+	12.2	30+	19	0	19.4	71	22	- 85	18	4	8	0	0	0.4	1	15.2	N	11	13	11	7	4.6	81
GREENSBORO	273	987.8	1018.9	31.7	19.4	25.6	1.1	36.7	24	9.4	30+	20	0	18.9	72	64	- 53	29	10	10	0	0	0.5	30	10.3	SW	1	7	15	9	5.2	73
RALEIGH	132	1002.7	1018.2	32.2	20.0	26.2	1.3	36.7	22+	11.1	29	22	0	20.6	76	64	- 69	28	5	7	0	0	0.4	24	10.3	22	9	12	14	5	4.8	69
WILMINGTON	9	1016.9	1018.3	33.3	22.2	27.7	1.4	37.8	23+	13.9	29	22	0	21.7	76	42	-132	12	10	7	0	0	0.7	24	11.6	NW	25	13	11	7	5.1	66

See footnotes at end of table

CLIMATOLOGICAL DATA
METRIC UNITS

State and Station	Elevation (ground)	Pressure: Station	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Date	Temperature: Lowest	Date	No. of days: Max 32.2 °C or above	No. of days: Min 0 °C or lower	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	No. of days: 25 mm or more	No. of days: With thunderstorms	Snow Sleet: Total	Snow Sleet: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Fastest mile (1.6 kilometers): Speed	Fastest mile: Direction	Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	M.	Mb.	Mb.	C.	C.	C.	C	C		C.				C	%	Mm	Mm	Mm			Mm	Mm	M p s		M.p.s							%
NORTH DAKOTA																																
BISMARCK	502	955.0	1014.1	25.6	10.6	18.1	-2.6	33.9	4	2.8	14	3	0	11.1	68	116	72	67	12	8	0	0	0.6	1	17.9	N	23	7	9	15	6.2	78
FARGO	273	981.7	1013.9	27.2	12.8	20.1	-0.8	37.2	5	1.7	14	6	0	13.3	68	41	- 34	15	4	5	0	0	0.3	15	15.6	NW	24	9	16	6	5.2	85
WILLISTON	579	945.8	1013.6	25.0	11.7	18.2	-1.9	35.6	4	5.0	10	3	0	10.0	63	66	48	36	7	3	0	0	0.7	1	15.2	N	23	9	8	14	6.0	68
OHIO																																
AKRON	368	974.9	1018.7	28.3	17.2	22.7	0.8	34.4	24	7.2	28	7	0	17.2	74	41	- 38	15	6	6	0	0	1.4	25	9.4	24	7	9	10	12	5.6	
CINCINNATI OBS	232			29.4	18.9	24.2	-0.1	34.4	21	10.0	27	11	0			107	24	25	12		0	0			8.5	NW	7					63
CLEVELAND	237	989.8	1018.7	27.2	16.7	22.1	0.7	33.9	6	5.6	28	5	0	16.7	72	46	- 37	29	10	7	0	0	1.3	24	10.7	W	6	10	5	16	5.8	63
COLUMBUS	247	989.5	1018.9	28.3	17.2	22.8	-0.1	33.9	24	7.8	28+	6	0	17.2	72	78	6	42	8	7	0	0	0.6	22	10.3	S	18	4	13	14	6.1	53
DAYTON	305	983.1	1018.8	28.3	17.8	22.9	-0.2	33.3	21	7.8	27	6	0	17.8	75	73	T	24	9	7	0	0	1.2	23	14.3	NW	17	8	9	14	6.0	69
MANSFIELD	395			28.3	17.2	22.8	1.6	33.9	24	9.4	28+	7	0			40	- 42	13	9	6	0	0	1.7	25	8.0	27	25+	7	14	10	5.5	
TOLEDO	204	993.6	1018.5	29.4	17.2	23.3	1.7	35.6	24+	7.2	30	9	0	18.3	76	37	- 48	20	6	6	0	0	1.3	25	11.6	NW	8	8	14	9	5.7	67
YOUNGSTOWN	359	976.6	1018.8	27.2	15.6	21.4	0.3	33.3	24	7.8	28+	4	0	16.1	75	129	40	49	11	6	0	0	1.1	26	9.4	31	19+	8	13	10	5.5	
OKLAHOMA																																
OKLAHOMA CITY	392	970.5	1015.9	32.8	20.6	26.7	-1.6	39.4	10+	13.9	31	23	0	18.3	66	95	31	47	5	4	0	0	2.8	17	11.6	W	15	12	9	10	5.1	67
TULSA	198	992.6	1016.5	32.8	21.7	27.2	-0.4	39.4	9	12.8	31	22	0	19.4	68	48	- 29	30	6	4	0	0	3.1	18	12.1	S	18	13	8	10	5.0	70
OREGON																																
ASTORIA	2	1015.6	1016.4	20.0	11.1	15.6	-0.5	28.9	30	7.2	20	0	0	11.1	78	153	95	42	15	0	0	0	1.3	23	8.0	18	17+	4	10	17	7.3	
BURNS U	1265	874.0	1015.3	24.4	8.9	16.8	-2.8	33.3	3	1.7	21	2	0	5.0	52	44	37	17	12		0	0	1.4	29				8	10	13	6.2	
EUGENE	109	1002.7	1015.9	26.1	12.2	19.1	0.3	35.0	10	8.9	7	6	0	12.2	73	147	137	37	14	2	0	0	0.8	24	9.4	26	27	5	12	14	6.8	
MEACHAM	1234	874.4	1014.9	20.6	9.4	14.9	-1.6	29.4	31	3.3	21	0	0			77	64	20	14		0	0			7.2	30	14+	6	8	17	6.8	
MEDFORD	396	968.5	1015.4	28.9	13.3	21.0	-0.5	38.9	31+	7.8	20	12	0	11.1	60	34	29	8	11	4	0	0	1.3	31	8.9	24	20	9	7	15	6.1	
PENDLETON	452	961.7	1014.6	28.3	15.0	21.6	-0.6	36.1	2+	11.1	22+	9	0	7.8	48	15	8	5	10	0	0	0	1.7	25	11.6	27	14	6	10	15	6.4	
PORTLAND	6	1014.2	1015.6	24.4	13.3	18.8	-0.4	33.3	10	9.4	21	2	0	12.2	70	115	99	35	14	1	0	0	1.2	30	8.5	W	14	5	7	19	7.0	49
SALEM	60	1008.5	1015.8	25.6	11.7	18.4	-0.5	34.4	10	6.7	12	5	0	11.7	71	106	94	31	13	1	0	0	0.8	25	10.3	18	25	5	9	17	6.8	
SEXTON SUMMIT R	1169	884.9	1015.1	21.1	10.6	16.0	-1.3	32.2	31+	5.0	20	2	0			61	55	25	11		0	0			12.5	11	30	12	6	13	5.5	
PACIFIC AREA																																
JOHNSTON	2	1012.2	1012.7	30.0	25.0	27.6	0.1	31.1	31+	22.2	8+	0	0	23.3	77	156	99	73	18	0	0	0	6.6	8	15.6	SE	8	5	12	14	6.8	42
KOROR R	29	1006.4	1010.0	31.1	24.4	27.7	0.5	32.2	31+	22.8	29+	3	0	23.9	83	279	121	83	24	1	0	0	1.8	23	10.3	S	19	0	5	26	8.7	63
KWAJALEIN	2	1008.8	1009.7	30.6	25.0	27.8	0.1	32.8	28+	21.7	1	3	0	24.4	82	309	65	120	20	2	0	0	1.3	12	14.3	32	1	0	7	24	9.0	
MAJURO	3	1010.2	1010.4	30.0	25.0	27.4	0.7	31.1	24+	22.8	21	0	0	23.9	80	292	- 5	80	24	1	0	0	0.7	12	10.7	W	31	1	6	24	8.4	56
PAGO PAGO	4	1012.2	1012.5	28.3	22.2	25.2		30.6	28	18.3	17+	0	0	21.7	82	116		32	15	1	0	0	2.7	12	11.6	SE	6	6	12	13	6.3	49
PONAPE R	37	1004.4	1009.9	31.1	22.8	26.9	0.6	32.8	24+	20.6	25	8	0	23.9	87	441	26	68	25	3	0	0	0.6	15	8.5	SW	30	0	8	23	8.3	67
TAGUAC GUAM R	110			30.6	22.2	26.4	0.1	32.8	22	20.6	20	1	0			80	26	31	11		0	0			8.9	SE	30+	0	21	10	6.4	68
TRUK MOEN ISLAND	2	1009.1	1009.6	31.1	23.9	27.3	0.4	32.2	31	21.1	29	1	0	23.9	82	197	-128	45	24	1	0	0	0.6	21	13.4	SE	20	0	10	21	8.2	75
WAKE	3	1010.8	1011.2	31.7	25.6	28.6	0.6	32.8	27+	23.9	14	14	0	23.9	78	155	- 25	53	19	2	0	0	4.6	10	20.1	E	30	2	8	21	8.3	
YAP R	13	1007.5	1009.3	30.0	23.9	26.9	-0.4	31.1	30+	21.7	25	0	0	23.9	84	277	- 97	50	24	0	0	0	1.8	26	10.3	SW	7	0	2	29	9.5	50
PENNSYLVANIA																																
ALLENTOWN	118	1003.4	1017.3	29.4	16.7	23.2	1.0	33.9	25+	7.8	28	10	0	15.6	66	70	- 44	24	9	9	0	0	1.2	27	15.6	24	9	8	13	10	5.6	
ERIE	223	991.9	1018.1	26.1	17.2	21.4	0.4	31.7	24	7.2	30	0	0	15.6	70	70	- 6	24	11	8	0	0	1.4	26	10.7	26	20	7	15	9	5.5	
HARRISBURG	103	1005.1	1017.5	31.1	18.9	24.8	1.4	36.7	22	8.9	30	16	0	17.2	68	45	- 48	14	8	7	0	0	1.3	27	11.6	W	24	7	14	10	5.7	71
PHILADELPHIA	2	1015.9	1017.0	31.1	20.0	25.4	2.3	36.1	25	11.7	31+	14	0	16.7	62	31	- 86	20	6	4	0	0	1.6	27	15.2	N	17	7	14	10	5.8	70
PITTSBURGH	347	975.3	1018.6	27.8	16.1	22.1	0.6	33.3	23	6.7	28	6	0	15.0	66	101	17	55	6	5	0	0	1.7	27	10.3	34	7	7	12	12	6.0	78
READING U	81			30.0	19.4	24.8	1.1	34.4	25+	10.6	28	12	0			58	- 44	39	9		0	0			15.6	SW	1	10	11	10	5.3	65
SCRANTON	283	984.1	1018.0	27.8	16.1	21.7	0.6	32.8	22+	7.8	31+	3	0	15.6	72	36	- 55	13	10	5	0	0	1.0	24	13.0	N	7	7	13	11	6.0	65
WILLIAMSPORT	160	999.0	1017.8	28.9	15.6	22.2	0.2	35.0	22	6.1	28	8	0	16.7	76	37	- 55	19	9	6	0	0	1.6	27	9.4	26	25+	6	14	11	5.9	
RHODE ISLAND																																
BLOCK ISLAND	34			24.4	17.8	20.9	0.1	30.0	21	12.8	30+	0	0			33	- 66	18	9		0	0						9	9	13	6.0	
PROVIDENCE	16	1013.9	1016.3	27.2	15.6	21.4	0.1	33.9	25	8.3	28	2	0	14.4	67	41	- 60	13	11	6	0	0	1.5	27	10.3	1	7	9	13	9	5.8	58
SOUTH CAROLINA																																
CHARLESTON	12	1016.6	1018.3	32.2	22.8	27.5	1.0	37.2	8	16.1	29+	24	0	21.7	75	112	- 56	36	12	12	0	0	0.5	21	30.8Y	N	24	8	16	7	5.2	59
CHARLESTON U	3			32.2	24.4	28.3	1.1	36.7	8	17.2	28	21	0			66	- 88	27	10		0	0			17.9	E	8					
COLUMBIA	65	1010.5	1018.4	35.0	21.7	28.3	1.3	41.1	23	15.6	30+	24	0	20.6	68	28	-118	8	9	12	0	0	0.2	11	8.0	21	1	13	10	8	4.9	69
GNVLE-SPARTANBURG	292	984.8	1018.8	32.2	19.4	25.9	0.3	37.2	23	11.1	29	21	0	18.9	71	33	- 81	19	5	9	0	0	0.6	36	13.4	E	19	13	14	4	4.5	76
SOUTH DAKOTA																																
ABERDEEN	395	967.2	1013.5	28.3	12.2	20.1	-1.8	37.2	21	3.3	14	7	0	12.2	63	27	- 28	20	6	4	0	0	0.5	14	13.9	32	24	9	15	7	5.1	

See footnotes at end of table

CLIMATOLOGICAL DATA
METRIC UNITS

State and Station	Elevation (ground)	Pressure		Temperature								No. of days			Average relative humidity	Precipitation			No. of days		Snow, Sleet		Wind		Fastest mile (1 6 kilometers)			No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max 32 2 °C or above	Min. 0 C or lower	Average dew point		Total	Departure from normal	Greatest in 24 hours	25 mm or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	M.	Mb.	Mb.	C.	C.	C.	C	C.		C.				C.	%	Mm.	Mm.	Mm.			Mm.	Mm.	M.p.s.		M.p.s.							%
SOUTH DAKOTA																																
HURON	391	967.8	1013.5	28.3	13.9	21.2	-1.4	36.7	21	6.1	25	8	0	15.0	71	88	35	53	6	8	0	0	1.3	18	32.2	NW	7	11	9	11	5.5	70
RAPID CITY	964	904.8	1014.0	27.2	11.7	19.4	-2.8	35.6	7+	6.1	17	4	0	10.0	61	62	31	18	9	8	0	0	0.8	32	18.8	NW	4	9	11	11	5.6	64
SIOUX FALLS	432	963.8	1014.2	30.0	15.6	22.6	0.5	37.2	5	6.7	11	14	0	14.4	63	43	- 48	22	6	6	0	0	2.1	18	14.3	29	24+	11	10	10	5.2	
TENNESSEE																																
BRISTOL	459	966.8	1020.1	30.6	18.3	24.2	0.4	34.4	23+	8.9	30+	12	0	18.3	76	59	- 38	25	10	8	0	0	0.4	34	7.6	28	10+	8	12	11	5.9	
CHATTANOOGA	203	994.2	1018.4	33.3	21.1	27.2	0.6	38.9	23	13.3	29	21	0	20.6	72	74	- 22	25	8	15	0	0	0.1	4	13.9	N	5	10	13	8	5.4	59
KNOXVILLE	299	984.1	1018.5	32.2	19.4	25.8	0.6	37.2	23+	11.7	29	19	0	18.9	70	33	- 55	13	7	6	0	0	0.4	30	11.2	NE	27	8	14	9	5.7	76
MEMPHIS	79	1008.1	1018.0	32.8	22.8	27.8	0.8	36.7	23	13.9	28	22	0	19.4	63	41	- 35	24	3	7	0	0	1.1	20	11.6	W	1	9	14	8	5.4	75
NASHVILLE	180	997.0	1018.3	32.8	20.0	26.4	0.2	37.2	23	11.1	29+	19	0	20.0	72	18	- 55	8	4	6	0	0	0.9	22	8.9	NW	10	14	9	8	4.9	70
OAK RIDGE R	276			32.2	19.4	25.7	1.2	37.2	23+	11.1	31	17	0			32	- 86	11	8		0	0			13.4Y		8	10	13	8	5.2	
TEXAS																																
ABILENE	537	955.0	1015.1	33.9	22.2	28.1	-0.3	36.7	10	18.9	29+	27	0	17.2	55	23	- 15	14	7	5	0	0	3.8	17	12.5	SE	12+	14	6	11	5.0	88
AMARILLO	1098	893.0	1013.3	31.7	18.3	25.0	-1.4	37.2	8	12.8	11	18	0	15.0	60	85	20	42	11	6	0	0	4.2	19	19.2	SE	29	11	9	11	5.5	68
AUSTIN	182	994.6	1016.2	35.0	22.8	28.9	-0.3	36.7	23+	18.3	29	30	0	19.4	63	19	- 30	8	3	5	0	0	2.5	17	11.6	SE	24	8	21	2	4.9	76
BROWNSVILLE	6	1014.9	1015.6	33.9	23.9	29.1	0.1	35.6	15+	22.8	31+	29	0	22.8	74	71	T	34	8	8	0	0	3.5	13	15.2	S	17	9	15	7	5.2	75
CORPUS CHRISTI	12	1014.6	1016.1	33.3	23.9	28.7	-0.3	35.6	12+	21.1	28	28	0	22.8	74	16	- 55	8	5	5	0	0	3.5	14	16.1	S	17	4	22	5	5.6	75
DALLAS	147	999.3	1016.4	34.4	24.4	29.5	0.1	38.3	10	18.9	29	26	0	19.4	58	70	21	62	4	4	0	0	3.2	16	10.7	SE	17	14	11	6	4.5	79
DEL RIO	313	979.0	1014.3	36.1	23.3	29.7	-0.2	39.4	12	20.0	31	30	0	18.3	55	6	- 32	5	2	3	0	0	4.3	13	11.6	13	16	8	19	4	5.1	
EL PASO	1194	883.5	1012.8	30.6	18.9	24.7	-2.2	34.4	16	15.6	31	9	0	13.9	53	43	13	17	12	15	0	0	1.0	17	14.8	SE	16	12	9	10	5.2	81
FORT WORTH	164	996.3	1016.5	34.4	22.8	28.6	-1.1	38.3	10	17.2	29	25	0	20.6	65	69	26	61	5	4	0	0	2.7	18	9.4	21	18+	15	10	6	4.3	
GALVESTON U	2			31.1	27.2	29.1	0.6	32.8	22	22.8	30	6	0			81	- 31	37	7		0	0			10.3	S	14					74
HOUSTON	15	1014.9	1017.1	33.9	23.9	28.9	0.4	35.6	22+	19.4	29	28	0	22.8	74	74	- 35	31	10	8	0	0	1.9	15	9.8	14	20	10	14	7	5.1	69
LUBBOCK	992	905.9	1014.9	30.0	16.7	23.4	-2.6	34.4	9	13.3	31	8	0	15.6	67	69	26	40	9	8	0	0	2.9	18	14.3	3	28	10	12	9	5.6	
MIDLAND	869	917.7	1014.1	32.8	20.0	26.2	-1.7	37.2	9	17.8	31	23	0	13.9	51	53	16	19	7	9	0	0	3.2	16	10.7	22	23	10	12	9	5.3	
PORT ARTHUR	5	1016.9	1017.6	33.9	23.3	28.4	0.5	36.1	12	18.3	31+	29	0	22.2	73	25	-115	8	11	11	0	0	1.1	13	15.2	SW	6	9	14	8	5.5	72
SAN ANGELO	580	949.2	1014.3	36.1	22.2	28.9	-0.6	40.0	12	16.1	29	28	0	17.2	55	47	15	35	5	3	0	0	3.8	17	13.4	20	13	15	9	7	4.4	
SAN ANTONIO	240	988.8	1016.2	35.6	22.8	29.0	0.2	37.2	12+	17.2	29+	30	0	19.4	63	24	- 36	17	2	2	0		3.1	15	17.4	S	17	7	21	3	5.4	75
VICTORIA	32	1012.2	1016.5	34.4	23.9	28.9	0.4	35.6	22+	19.4	29+	30	0	22.8	74	49	- 31	16	9	5	0	0	2.7	15	17.4Y	SSE	17	7	19	5	5.4	
WACO	153	998.6	1016.3	35.6	23.9	29.8	0.1	37.8	10	17.8	29	30	0	20.0	59	22	- 21	14	5	4	0	0	3.5	15	10.3	15	26+	10	16	5	4.6	
WICHITA FALLS	303	979.3	1015.2	35.6	21.7	28.6	-1.2	41.7	10	14.4	31	24	0	18.9	61	60	14	26	6	7	0	0	3.7	16	13.0	8	24+	11	10	10	5.1	
UTAH																																
MILFORD	1533	848.0		28.3	11.7	19.9	-2.4	33.3	4	1.1	23	3	0			25	6	8	8		0	0						10	10	11	5.4	
SALT LAKE CITY	1286	872.7	1014.3	27.8	13.3	20.8	-2.8	35.0	6	7.2	23+	8	0	8.3	52	93	71	24	12	12	0	0	1.9	16	16.5	W	3	9	11	11	5.5	72
WENDOVER	1291	871.7	1014.8	27.2	15.0	21.2	-3.9	35.0	6	6.7	23	5	0			12	3	4	8		0	0										
VERMONT																																
BURLINGTON	101	1003.4	1015.9	23.3	11.7	17.6	-1.7	31.1	25	5.0	19	0	0	12.8	74	60	- 26	24	10	5	0	0	0.7	24	16.1	W	9	5	16	10	6.3	75
VIRGINIA																																
LYNCHBURG	279			31.1	18.9	25.0	1.2	36.7	22+	9.4	30	16	0			39	- 73	17	9		0	0			13.0	N	24	12	12	7	4.7	72
NORFOLK	7	1016.9	1018.0	31.7	22.2	26.9	1.7	37.2	25	15.0	31	18	0	20.6	71	52	-100	19	8	9	0	0	0.1	8	14.8	W	10	10	13	8	5.1	82
RICHMOND	50	1012.2	1018.1	32.2	20.0	26.1	1.6	37.2	25	10.6	31	21	0	20.0	73	94	- 46	28	12	10	0	0	0.2	26	9.4	SW	10+	8	16	7	5.5	76
ROANOKE	350	977.7	1019.0	30.0	18.3	24.0	-0.1	33.9	24+	8.3	30+	13	0	17.8	73	136	19	40	13	10	0	0	1.3	30	16.5	33	18	10	15	6	4.9	
WALLOPS ISLAND	3			29.4	21.1	25.2		37.2	23	12.3	31	7	0			14		4	8		0	0			17.0Y	S	10					
WASHINGTON																																
OLYMPIA	59	1008.5	1015.8	23.3	9.4	16.5	-0.9	32.8	10+	4.4	6	2	0	11.7	77	138	116	28	14	3	0	0	1.1	22	8.0	21	22	6	6	19	7.1	
QUILLAYUTE	55	1008.5	1016.0	19.4	10.0	14.8	-0.6	30.0	30	6.7	29	0	0	11.7	87	117	64	39	16	0	0	0	0.6	22	7.6	S	22	4	7	20	7.3	37
SEATTLE TACOMA	122	999.7	1015.9	22.2	12.8	17.6	-0.2	32.2	1	11.1	21+	1	0	11.7	73	116	92	44	12	1	0	0	1.0	22	7.6	22	17+	7	7	17	6.9	50
SPOKANE	718	930.9	1013.6	25.0	11.7	18.4	-1.6	34.4	2+	6.7	22	4	0	6.1	53	34	24	13	10	1	0	0	2.2	19	11.6	SW	25+	8	7	16	6.3	56
STAMPEDE PASS R	1206	880.1		15.6	8.3	12.0	-1.1	25.6	10+	5.0	19+	0	0			181	130	36	20		0	0						6	6	19	7.2	
WALLA WALLA U	289			27.8	15.6	21.6	-1.6	36.1	1	11.7	19	8	0			25	17	9	10		0	0			10.3	NW	23	8	7	16	6.5	65
YAKIMA	321	975.6	1013.5	26.1	11.1	18.5	-1.8	35.0	1	5.0	21	5	0	8.9	57	43	38	15	9	1	0	0	1.4	28	9.8	22	25	11	5	15	5.7	
WEST INDIES																																
SAN JUAN P.R.	4	1015.2	1017.5	31.1	24.4	27.8	0.6	32.2	22+	23.3	31+	3	0	25.0	86	187	6	57	19	12	0	0	3.0	9	11.2	E	18+	5	18	8	5.7	82
SWAN ISLAND	9			31.7	26.1	28.7	0.3	32.2	11+	23.3	4	2	0			62	- 31	21	13		0	0						3	18	10	6.2	
WEST VIRGINIA																																
BECKLEY	763	933.3	1019.6	26.1	15.6	20.9	-0.1	30.6	24+	5.6	28	0	0	16.7	82	89	- 12	16	11	10	0	0	1.4	25	15.6	34	7	5	15	11	6.4	

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No. of days: Max 32.2 °C or above	Temperature: No. of days: Min. 0 °C or lower	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No of days: 25 mm or more	Precipitation: No of days: With thunderstorms	Precipitation: Snow, Sleet: Total	Precipitation: Snow, Sleet: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile (1.6 kilometers): Speed	Wind: Fastest mile: Direction	Wind: Fastest mile: Date	No of days (sunrise to sunset): Clear, 0-3	No of days: Partly cloudy, 4-7	No of days: Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	M.	Mb.	Mb.	C.	C.	C.	C.	C.		C.				C.	%	Mm	Mm.	Mm.			Mm.	Mm.	M p.s.		M.p.s							%
WEST VIRGINIA																																
CHARLESTON	286	985.1	1018.9	28.9	18.3	23.4	0.2	32.8	24+	7.8	28	6	0	18.9	80	138	37	40	10	8	0	0	0.8	22	13.0	34	7	6	15	10	6.1	
ELKINS	600	949.9		27.2	15.0	21.1	0.6	30.6	23+	3.9	29	0	0			103	- 4	31	13		0	0			15.6	25	7	3	13	15	7.0	
HUNTINGTON	252	989.5	1019.3	28.9	17.8	23.1	-0.2	35.0	20	8.9	29	7	0	18.3	80	153	82	56	9	10	0	0	0.8	21	13.0	30	18	5	16	10	6.1	
PARKERSBURG U	187			28.9	18.9	24.1	0.5	34.4	21	10.6	29+	7	0			105	9	33	10		0	0			12.1	W	26					62
WISCONSIN																																
GREEN BAY	208	991.5	1016.8	26.1	13.3	19.7	-0.8	34.4	23	3.9	28+	2	0	14.4	74	68	- 2	28	8	5	0	0	1.0	24	18.8	NW	6	10	12	9	5.4	66
LA CROSSE	198	992.6	1016.7	28.3	16.1	22.2	0.2	36.7	6	8.3	28+	7	0	16.7	74	50	- 42	15	7	6	0	0	1.8	17	10.3	30	6	10	10	11	5.7	
MADISON	262	986.1	1017.0	27.2	13.9	20.4	-0.4	34.4	6	1.7	27	4	0	15.6	75	66	- 20	23	8	7	0	0	1.4	23	13.0	SW	24+	10	14	7	5.0	72
MILWAUKEE	205	992.6	1017.5	26.7	17.2	21.9	2.0	34.4	23+	8.9	28	7	0	17.2	76	66	- 12	31	9	7	0	0	1.2	23	13.9	SW	24+	12	11	8	4.6	76
WYOMING																																
CASPER	1627	839.5	1014.1	26.7	9.4	18.3	-2.9	35.0	7	3.9	30	3	0	4.4	47	15	- 3	7	8	1	0	0	2.7	23	17.0	24	15	10	7	14	6.1	
CHEYENNE	1867	815.4	1015.1	26.1	10.0	18.1	-1.8	33.3	7	5.0	30+	2	0	4.4	46	31	- 6	11	8	4	0	0	1.4	27	21.0	SW	23	7	12	12	6.2	59
LANDER	1696	831.0	1013.8	25.6	10.6	18.1	-2.4	32.8	7	3.3	16	3	0	4.4	45	24	12	23	2	4	0	0	1.4	24	17.0	SW	19+	6	11	14	6.4	72
SHERIDAN	1208	879.8	1014.8	26.1	10.0	18.1	-2.8	35.0	5	5.6	1	3	0	7.8	57	77	54	26	10	10	0	0	0.7	30	16.5	W	18	8	10	13	5.9	65

Data from airport unless otherwise specified. U indicates Urban, R indicates Rural, sites.

Precipitation data in column headed "Greatest in 24 hours" are computed on a 24-hour basis without regard to calendar day - data may include precipitation with a measurable amount from the last day of the previous month or the first day of the following month.

Wind directions under resultant direction are in tens of degrees.

Value entered in column "Fastest Mile" is the highest observed 1-minute wind speed when the direction is in tens of degrees. These stations are not equipped with a recording anemometer from which "Fastest Mile" data can be evaluated.

B Number of days maximum 21.1°C. or above for Alaskan Stations.
Y Peak Gust.
\+ And also on an earlier date or dates.
Ø Station pressures apply to elevations shown in the "Elevations - Station Pressure" table of the annual issue of this publication.

Data in this table are obtained by conversion from data in the English Units table.

HEATING DEGREE DAYS

(Base 65°F.)

AUGUST 1968

State and station	Current season: This month	Current season: Period July through this month	Normals July through this month
ALABAMA			
BIRMINGHAM	0	0	0
HUNTSVILLE	0	0	0
MOBILE	0	0	0
MONTGOMERY	0	0	0
ALASKA			
ANCHORAGE	208	361	493
ANNETTE	161	297	450
BARROW	718	1415	1643
BARTER ISLAND	739	1422	1510
BETHEL	343	564	713
COLD BAY	394	762	899
FAIRBANKS	208	258	503
JUNEAU	281	529	639
KING SALMON	314	600	635
KOTZEBUE	282	529	827
MC GRATH	275	417	546
NOME	396	731	977
ST. PAUL ISLAND	539	1128	1144
SHEMYA	512	1088	1052
YAKUTAT	381	735	685
ARIZONA			
FLAGSTAFF	164	202	114
PHOENIX	0	0	0
TUCSON	0	0	0
WINSLOW	3	3	0
YUMA	0	0	0
ARKANSAS			
FORT SMITH	0	0	0
LITTLE ROCK	0	0	0
TEXARKANA	0	0	0
CALIFORNIA			
BAKERSFIELD	0	0	0
BISHOP	15	15	0
BLUE CANYON	163	169	84
EUREKA U	179	439	527
FRESNO	0	0	0
LONG BEACH	0	0	0
LOS ANGELES	0	3	35
LOS ANGELES U	0	0	0
MT SHASTA R	145	150	59
OAKLAND	17	89	103
RED BLUFF	3	3	0
SACRAMENTO	3	3	0
SANDBERG R	91	96	0
SAN DIEGO	0	0	6
SAN FRANCISCO	42	150	159
SAN FRANCISCO U	98	311	366
SANTA MARIA	25	59	192
STOCKTON	4	4	0
COLORADO			
ALAMOSA	134	183	164
COLORADO SPRINGS	52	74	34
DENVER	35	45	15
GRAND JUNCTION	12	12	0
PUEBLO	10	17	0
CONNECTICUT			
BRIDGEPORT	1	1	0
HARTFORD	16	16	6
NEW HAVEN	8	8	12
DELAWARE			
WILMINGTON	0	0	0
DIST.OF COLUMBIA			
WASH NATL AP	0	0	0
FLORIDA			
APALACHICOLA U	0	0	0
DAYTONA BEACH	0	0	0
FORT MYERS	0	0	0
JACKSONVILLE	0	0	0
KEY WEST	0	0	0
LAKELAND U	0	0	0
MIAMI	0	0	0
ORLANDO	0	0	0
PENSACOLA	0	0	0
TALLAHASSEE	0	0	0
TAMPA	0	0	0
WEST PALM BEACH	0	0	
GEORGIA			
ATHENS	2	2	0
ATLANTA	2	2	0
AUGUSTA	0	0	0
COLUMBUS	0	0	0
MACON	0	0	0
ROME	2	2	0
SAVANNAH	0	0	0
IDAHO			
BOISE	59	59	0
LEWISTON	30	30	0
POCATELLO	143	152	0
ILLINOIS			
CAIRO U	0	0	0
CHICAGO O HARE	12	26	12
CHICAGO MIDWAY	9	13	0
MOLINE	15	23	9
PEORIA	7	12	6
ROCKFORD	21	36	15
SPRINGFIELD	2	3	0
INDIANA			
EVANSVILLE	0	0	0
FORT WAYNE	23	30	9
INDIANAPOLIS	13	17	0
SOUTH BEND	27	38	6
IOWA			
BURLINGTON	2	4	0
DES MOINES	11	13	9
DUBUQUE	22	35	43
SIOUX CITY	2	7	9
WATERLOO	35	49	31
KANSAS			
CONCORDIA	6	6	0
DODGE CITY	1	1	0
GOODLAND	22	27	6
TOPEKA	1	1	0
WICHITA	5	5	0
KENTUCKY			
COVINGTON	4	4	0
LEXINGTON	5	5	0
LOUISVILLE	1	1	0
LOUISIANA			
ALEXANDRIA	0	0	0
BATON ROUGE	0	0	0
LAKE CHARLES	0	0	0
NEW ORLEANS	0	0	0
SHREVEPORT	0	0	0
MAINE			
CARIBOU	191	239	193
PORTLAND	46	54	65
MARYLAND			
BALTIMORE	1	1	0
MASSACHUSETTS			
BLUE HILL OBS R	21	23	22
BOSTON	9	10	9
NANTUCKET	34	48	34
PITTSFIELD	89	113	84
WORCESTER	31	39	40
MICHIGAN			
ALPENA	119	201	173
DETROIT	4	8	0
DETROIT M WAYNE CO	17	20	11
DETROIT WILLOW RUN	38	51	0
FLINT	52	88	33
GRAND RAPIDS	36	66	35
HOUGHTON LAKE	100	171	138
LANSING	57	81	28
MARQUETTE U	106	187	140
MUSKEGON	40	75	40
SAULT STE MARIE	165	314	201
MINNESOTA			
DULUTH	140	230	180
INTERNATIONAL FALLS	149	219	183
MINNEAPOLIS	28	38	53
ROCHESTER	68	101	59
ST CLOUD	53	84	75
MISSISSIPPI			
JACKSON	0	0	0
MERIDIAN	0	0	0
MISSOURI			
COLUMBIA	0	0	0
KANSAS CITY	1	1	0
ST JOSEPH	0	1	6
ST LOUIS	2	2	0
SPRINGFIELD	0	0	0
MONTANA			
BILLINGS	42	58	21
GLASGOW	78	116	78
GREAT FALLS	93	131	81
HAVRE	69	111	81
HELENA	102	125	90
KALISPELL	133	213	149
MILES CITY	34	45	12
MISSOULA	97	107	108
NEBRASKA			
GRAND ISLAND	9	11	6
LINCOLN	4	4	6
NORFOLK	6	10	9
NORTH PLATTE	18	35	6
OMAHA	1	3	6
SCOTTSBLUFF	35	46	0
VALENTINE	24	39	21
NEVADA			
ELKO	94	97	43
ELY	151	161	71
LAS VEGAS	0	0	0
RENO	91	91	130
WINNEMUCCA	118	121	34
NEW HAMPSHIRE			
CONCORD	92	110	56
MT WASHINGTON OBS	651	1135	1029
NEW JERSEY			
ATLANTIC CITY	18	18	0
ATLANTIC CITY U	0	0	0
NEWARK	0	0	0
TRENTON U	0	0	0
NEW MEXICO			
ALBUQUERQUE	0	2	0
CLAYTON	13	24	6
RATON	41	62	37
ROSWELL	0	0	0
SILVER CITY	0	0	0
NEW YORK			
ALBANY	45	52	19
BINGHAMTON	62	91	87
BUFFALO	29	40	56
J.F. KENNEDY	0	0	0
NEW YORK U	0	0	0
NEW YORK LA GUARDIA	0	0	0
ROCHESTER	36	51	40
SYRACUSE	41	68	34
NORTH CAROLINA			
ASHEVILLE	20	20	0
CAPE HATTERAS R	0	0	0
CHARLOTTE	0	0	0
GREENSBORO	1	1	0
RALEIGH	0	0	0
WILMINGTON	0	0	0
NORTH DAKOTA			
BISMARCK	82	116	62
FARGO	66	97	65
WILLISTON	90	116	74
OHIO			
AKRON	19	28	9
CINCINNATI OBS	6	7	0
CLEVELAND	34	60	21
COLUMBUS	20	26	6
DAYTON	14	20	6
MANSFIELD	17	26	31
TOLEDO	17	25	16
YOUNGSTOWN	39	71	25
OKLAHOMA			
OKLAHOMA CITY	0	0	0
TULSA	0	0	0
OREGON			
ASTORIA	151	275	276
BURNS U	162	173	49
EUGENE	39	48	68
MEACHAM	224	314	208
MEDFORD	31	31	0
PENDLETON	15	15	0
PORTLAND	43	60	53
SALEM	49	96	68
SEXTON SUMMIT R	201	279	162
PENNSYLVANIA			
ALLENTOWN	7	7	0
ERIE	26	46	25
HARRISBURG	3	3	0
PHILADELPHIA	0	0	0
PITTSBURGH	31	39	9
PITTSBURGH U	9	10	6
READING U	0	0	0
SCRANTON	28	28	19
WILLIAMSPORT	22	26	9
RHODE ISLAND			
BLOCK ISLAND	10	17	16
PROVIDENCE	16	18	16
SOUTH CAROLINA			
CHARLESTON	0	0	0
CHARLESTON U	0	0	0
COLUMBIA	0	0	0
GRVLE-SPARTANBURG	1	1	0
SOUTH DAKOTA			
ABERDEEN	60	81	50
HURON	35	48	21
RAPID CITY	46	72	34
SIOUX FALLS	14	28	44
TENNESSEE			
BRISTOL	4	4	0
CHATTANOOGA	0	0	0
KNOXVILLE	0	0	0
MEMPHIS	0	0	0
NASHVILLE	0	0	0
OAK RIDGE R	0	0	0
TEXAS			
ABILENE	0	0	0
AMARILLO	0	0	0
AUSTIN	0	0	0
BROWNSVILLE	0	0	0
CORPUS CHRISTI	0	0	0
DALLAS	0	0	0
DEL RIO	0	0	0
EL PASO	0	0	0
FORT WORTH	0	0	0
GALVESTON U	0	0	0
HOUSTON	0	0	0
LUBBOCK	1	1	0
MIDLAND	0	0	0
PORT ARTHUR	0	0	0
SAN ANGELO	0	0	0
SAN ANTONIO	0	0	0
VICTORIA	0	0	0
WACO	0	0	0
WICHITA FALLS	0	0	0
UTAH			
MILFORD	35	36	0
SALT LAKE CITY	49	52	0
WENDOVER	38	38	0
VERMONT			
BURLINGTON	104	136	93
VIRGINIA			
LYNCHBURG	2	2	0
NORFOLK	0	0	0
RICHMOND	0	0	0
ROANOKE	12	12	0
WALLOPS ISLAND	0	0	
WASHINGTON			
OLYMPIA	113	177	139
QUILLAYUTE	195	342	334
SEATTLE TACOMA	70	103	118
SPOKANE	89	108	34
STAMPEDE PASS R	359	571	564
WALLA WALLA U	12	12	0
YAKIMA	64	84	12
WEST VIRGINIA			
BECKLEY	53	63	34
CHARLESTON	11	13	0
ELKINS	46	62	34
HUNTINGTON	11	11	0
PARKERSBURG U	3	3	0
WISCONSIN			
GREEN BAY	82	121	78
LA CROSSE	15	22	31
MADISON	66	100	65
MILWAUKEE	23	54	90
WYOMING			
CASPER	81	111	22
CHEYENNE	82	122	50
LANDER	89	107	25
SHERIDAN	75	110	56

Data from airport unless otherwise specified.
U indicates Urban, R indicates Rural, sites.

STORM SUMMARY

AUGUST 1968

STATE	TORNADOES					HAILSTORMS				WINDSTORMS				LIGHTNING				‡ HEAVY SNOWSTORMS AND BLIZZARDS				# ICE STORMS				∅ ALL OTHER			
	NUMBER	DAYS	DEATHS	INJURIES	† DAMAGE	DEATHS	INJURIES	† DAMAGE PROPERTY	† DAMAGE CROPS	DEATHS	INJURIES	† DAMAGE PROPERTY	† DAMAGE CROPS	DEATHS	INJURIES	† DAMAGE PROPERTY	† DAMAGE CROPS	DEATHS	INJURIES	† DAMAGE PROPERTY	† DAMAGE CROPS	DEATHS	INJURIES	† DAMAGE PROPERTY	† DAMAGE CROPS	DEATHS	INJURIES	† DAMAGE PROPERTY	† DAMAGE CROPS
Alabama										0	0	5	4	0	5	5	0									0	0	4	3
Alaska						0	0	?	?																	1	2	5	0
Arizona										0	0	4	0													0	0	5	0
Arkansas														1	0	0	0												
California *																													
Colorado						0	0	4	5	0	1	°3	C	0	3	3	0									0	0	°5	C
Connecticut	3	3	0	4	3					0	1	5	0	0	0	5	0									0	1	2	0
Delaware										0	0	4	0																
Florida	5	4	0	0	5									5	12	0	0									0	0	8	0
Georgia	2	2	0	7	5	0	0	4	3	0	1	5	3	1	3	5	0												
Hawaii *																													
Idaho												4		1	1											1			6
Illinois						0	0	?	?	0	9	°6	C																
Indiana	1	1	0	0	4					0	4	4	0	3	5	3	0												
Iowa						0	0	5	5	0	0	5	5													1	1	6	5
Kansas						0	0	4	5	0	0	4	5	0	0	4	3									0	0	5	5
Kentucky						0	0	0	4	0	0	4	5	1	1	5	0									0	0	5	6
Louisiana										0	1	3	0	2	0	4	0												
Maine						0	0	0	4	0	0	4	0	1	28	4	0									0	0	3	0
Maryland						0	0	0	3	0	0	5	0	1	2	6	0									0	0	4	0
Massachusetts	3	1	0	4	4	0	0	0	4	0	0	5	0	0	1	5	0									0	0	4	0
Michigan	9	6	0	0	5	0	0	3	0	0	7	6	0	0	2	6	0									0	0	3	0
Minnesota	4	3	0	1	5	0	0	5	6	0	3	5	?	0	0	4	0									0	0	6	?
Mississippi										0	0	4	0	1	0	4	0									0	0	?	0
Missouri	1	1	0	1	5					0	7	4	0	1	0	4	0												
Montana						0	0	0	5	1	0	3	3																
Nebraska	1	1	0	?	6	0	0	4	6	1	15	6	6	0	1	4	0												
Nevada																										0	2	6	0
New Hampshire	2	1	0	1	4	0	0	0	3	1	0	4	0	0	0	4	0									0	0	3	0
New Jersey *																													
New Mexico														1	0	0	0									0	0	4	0
New York	2	2		4	5					1	4	5		1		5													
North Carolina						0	0	3	5	0	0	5	4	0	1	5	0									0	0	4	4
North Dakota	6	3	0	3	5	0	0	4	6	0	0	4	5													0	0	0	?
Ohio	1	1	0	0	3			?		0	34	5		0	7	5										0	0	5	
Oklahoma	1	1	0	0	4	0	0	?	0	0	1	5	0	2	0	4	0									0	0	4	?
Oregon																										0	0	3	7
Pacific Area *																													
Pennsylvania	2	2	0	0	4	0	0	0	2	0	1	5	2	5	78	6	0									0	0	4	0
Puerto Rico																										0	0	5	0
Rhode Island *																													
South Carolina	1	1	0	0	1					0	0	5	0																
South Dakota	4	3	0	0	0	0	0	4	6	0	1	6	0																
Tennessee						0	0	?	0	0	2	5	0	0	0	4	0									0	0	°4	C
Texas	8	5	0	0	3	0	0	4	4	0	1	4	0	0	1	5	0									1	2	0	0
Utah	3	1	0	1	5	0	0	3	5					0	2	4	0									0	0	5	4
Vermont						0	0	3	3	0	0	4	0	0	0	4	0												
U.S. Virgin Is. *																													
Virginia	1	1	0	0	0	0	0	3	4	0	0	4	4	1	1	4	0												
Washington *																													
West Virginia														0	1	5	0											4	0
Wisconsin	10	4	2	10	6	0	0	5	5	1	15	6	6	2	1	5	0									0	0	5	0
Wyoming *																													

° Includes crop damage
C Crop damage

* No occurrence of storms or unusual weather phenomena.
‡ Includes heavy sleet storm.
\# Freezing drizzle and freezing rain, commonly known as glaze.
∅ For breakdown of "All Others", and for detailed listing of other storms, see the Environmental Data Service, ESSA, monthly publication STORM DATA.

† Storm damages are placed in categories varying from 1 to 9 as follows:
1 Less than $50
2 $50 to $500
3 $500 to $5,000
4 $5,000 to $50,000
5 $50,000 to $500,000
6 $500,000 to $5,000,000
7 $5,000,000 to $50,000,000
8 $50,000,000 to $500,000,000
9 $500,000,000 to $5,000,000,000

GENERAL SUMMARY OF RIVER AND FLOOD CONDITIONS

AUGUST 1968

Elmer R. Nelson, Office of Hydrology

The most significant flooding during August occurred in the Missouri Basin. The upper Wakarusa River near Auburn, Kans., observed its highest water in 20 years. Mill Creek at Paxico, Kans., reached its second highest stage and Bow Creek near Stockton, Kans., its highest stage since 1951. The Little Blue River reached its highest stage since 1960. The heaviest flooding in the memory of residents occurred on Beaver Creek in the vicinity of Norway, Kans. Moderate damages occurred along the Kansas River tributaries.

ST. LAWRENCE DRAINAGE

Lake Erie.--Minor rises occurred on the Maumee River at the Anthony Boulevard Bridge, Fort Wayne, Ind., and on the St. Marys River at Decatur, Ind., on the 10th and 18th due to substantial rainfall. Some local flooding resulted but no damage.

Street flooding was reported on the 6th and 22d in Metropolitan Buffalo, New York. Some small streams reached flood conditions in low-lying areas on the 22d. Some brief flooding occurred on Silver Creek on the 24th.

ATLANTIC SLOPE DRAINAGE

Rivers were low in the beginning of August in eastern North Carolina and remained low throughout the month. The Haw River at Haw River, N. C., reached a record low stage of 1.4 feet during the month. The previous record low stage was 1.5 feet in 1966. The Cape Fear River at Fort Bragg, N. C., reached a record low stage of 0.3 foot during August. The previous record low stage at Fort Bragg was 1.1 feet in 1963.

MISSISSIPPI SYSTEM

Upper Mississippi Basin.--Minor flooding occurred on the Cottonwood River near New Ulm, Minn., on the 2d. Exceptionally heavy rain fell over the three-county area (Blue Earth, Nicollet, and Le Sueur) in Minnesota on the 6-7th. The storm was centered over the Mankato-St. Peter line along the Minnesota River. The Weather Bureau Cooperative Observer at Mankato, Minn., recorded approximately 6.5 inches of rain from 5:40 p.m. on the 6th to 3:00 a.m. on the 7th and a storm total of 7.09 inches. A local radio station at Mankato, Minn., observed 8 inches of rain for the storm. Heavy runoff from the hills of Mankato caused mud slides that flooded much of the residential and lower business establishments. The total damage was estimated at over $1 million in the four-county area including Freeborn County. The loss in Mankato was estimated at $271,000. The Governor of Minnesota declared the four-county area a "disaster area". The Minnesota River crested 5.7 feet below flood stage on the 7th and at or near flood stage in the reach from LeSueur, Minn., through Jordan, Minn.

Minor flooding occurred on the Wapsipinicon River at DeWitt, Iowa, on the 8-16th. The crest on the 15th was 0.5 foot above flood stage. No additional damage resulted from the flooding in August.

Heavy rains on the 4-5th caused flash flooding on the Black Hawk River at Hudson, Iowa, and on Prairie Creek at Fairfax, Iowa, on the 6th. Rainfall amounts of 3.5 to 5 inches were common over the area with a few reports in excess of 5 inches. The crests on the 6th ranged from 3.3 to 2.5 feet above flood stage.

Heavy rains in northeast Missouri in the beginning of August produced a rapid rise on the Salt River at New London, Mo., to above flood stage on the 4th. It continued in flood to the 6th. The crest on the 5th was 5.2 feet above flood stage.

Missouri Basin.--Heavy rains in southwestern Nebraska and northeastern Colorado caused some tributary flooding in the upper South Platte and North Platte Basins on August 14-16. The main flooding occurred in Nebraska on Cow and Lodgepole Creeks, tributaries of the South Platte and Rush Creek, tributary of the North Platte. Some flooding occurred along the South Platte River in and around Sterling, Colo. Communities downstream from Sterling were threatened but no flooding developed. This flooding was due to rainfall ranging from 1.5 inches at Potter, Nebr., to 7 inches near Oshkosh, Nebr., on the 14th. The storm system extended from the Sand Hills north of Oshkosh, Nebr., southward to Eads, Colo., a distance of 200 miles. The damages to roads and bridges on Cow Creek were severe. Damage along Lodgepole Creek was severe below its junction with Cow Creek. Many bridges were washed out to the extent that they were closed to traffic. Some of these will have to be completely replaced. Several dams were destroyed. The total estimates of flood damage were placed at $750,000.

Heavy rains in northern Kansas resulted in moderate to locally heavy flooding on smaller tributaries to the Kansas, Smoky Hill, and Solomon Rivers. Light to moderate overflows of the main channels developed on the lower Marais des Cygnes from Osawatomie to La Cygne and on the Republican River from Scandia to Concordia, Kans. The highest water in 20 years occurred in the upper Wakarusa River near Auburn, Kans., from the 3 to 4 inches of rain on the 2d. Heavy flooding occurred on Mill Creek and on Mission Creek in the Dover, Kans., area. The crest of 26.1 feet on Mill Creek at Paxico, Kans., on the 2d was the second highest since 1951. Dragoon Creek in the upper Marais des Cygnes Basin also overflowed on the same date. Subsequent rains of 2 to 4 inches brought a crest of 30.4 feet, 7.4 feet above flood stage on the Wakarusa River near Lawrence, Kans., on the 10th. This crest was nearly as high as in June 1967 and was otherwise only exceeded in 1951 since records began in 1929.

Overflow and backwater from Cross Creek spread into much of Rossville, Kans., on the 10-11th with 3 to 4 feet of water in parts of the town as a result of 5 to 6 inches of rain. Moderate to locally heavy flooding occurred on upper Stranger Creek, Vermillion Creek, and Soldier Creek on the 10-11th. Ward Martin Creek in Topeka overflowed for the 7th time this year with local surface water accumulation reportedly at record levels in parts of South Topeka.

The most significant overflow in the Blue River basin was at Fairbury, Nebr., where the Little Blue River crested 3.2 feet above flood stage on the 19th. This was the highest stage since 1960 and followed 4.5 to 7.5 inches in the Fairbury-Harbine, Nebr., area. Mostly light overflows occurred on the Black Vermillion River, Fancy Creek, and Mill Creek at Washington, Kans., during August.

In the Republican River Valley, the first overflow in 10 years was observed at Scandia, Kans., where a crest of 11.4 feet, 1.4 feet above flood stage occurred on the 19th. Rains of 4 to 7 inches preceded the rise in the Scandia-Courtland area. The heaviest rain was observed at Montrose, Kans., where as much as 15 inches was reported. The heaviest flooding in the memory of residents occurred on Beaver Creek in the vicinity of Norway, Kans., about daybreak on the

19th. Many cattle were drowned. Buffalo Creek overflowed farmland from above Jamestown, Kans., to the Republican River on the 20th.

Overflow in the Solomon River basin on Bow Creek near Stockton, Kans., which crested 3.4 feet above flood stage on the 15th, had not been exceeded since 1951 when it was a foot higher. The North Fork of the Solomon River crested 8 feet above flood stage at Glade and Portis, Kans., on the 15th and 16th.

A local overflow of Big Creek near Ogallah, Kans., in the Smoky Hill basin on the 10th was 2 feet above flood stage. According to the U. S. Geological Survey, a 2-foot overflow can be expected once in 50 years.

Moderate damage occurred along the Kansas River tributaries. Elsewhere only local areas sustained very much loss.

Heavy rains from the 8th to the 11th caused flooding along streams in northwestern Missouri and on the Nemaha River at Falls City, Nebr. The heaviest flooding occurred on the Little Platte River at Smithville, Mo., and on the Blackwater River at Valley City, Mo., where the crests ranged from 4.4 to 5.9 feet above flood stage between the 9th and 11th. The flooding on the Little Blue River at Lake City, Mo., and on the Crooked River at Richmond, Mo., on the 9th was minor. The only overflow along the Missouri River occurred at Waverly, Mo., on the 11th to the 13th.

Big Creek at Blairstown, Mo., rose 2.7 feet above flood stage on the 9th and receded within its banks on the 10th. The Osage River at Schell City, Mo., was out of its banks from the 11th to the 16th. It crested 3.3 feet above flood stage on the 15th.

Ohio Basin.--Minor flooding occurred along the Wabash River in the reach from Montezuma to Terre Haute, Ind., on the 5-6th. A small amount of cultivated acreage was flooded but the crop damage was small. Some flash flooding of smaller streams occurred in the Danville, Ill., area. However, the Vermillion River at Danville crested slightly below flood stage. Rainfall in the Danville area during the 24 hours ending on the 4th totaled 4.8 inches. A small area centered at Wabash, Ind., received 3.21 inches of rain during the same period.

Arkansas Basin.--The Chikaskia River and its tributaries in south central Kansas and north Central Oklahoma were in flood on the 17-19th. At Corbin, Kans., the crest of 12.5 feet on the 17th was 2.5 feet above flood stage. This was the highest stage at this point since June 1965 and the first flood since June 1965. Several Alfalfa fields were inundated causing some crop damage. Downstream at Blackwell, Okla., the crest of 31.0 feet on the 18th was 5 feet above flood stage. This was the highest stage at Blackwell since Nov. 1964 and the first flood since June 1965. Two children were swept from the rear window of a car and drowned when their father attempted to ford a flooded road about 5 miles southeast of Blackwell. Some homes and railroads were flooded. Small bridges and roads sustained some damage. While the rainfall average causing this flood was 3 inches, a portion of the area contributing to the peak flow was near 6.5 inches.

Major flooding occurred on the Arkansas River at Arkansas City, Kans., on the 18th. The crest was 0.9 foot above flood stage and no significant damage resulted. In the reach below, the main stem crested 1 foot below flood stage at Ponca City, Okla., and 2 feet below flood stage at Ralston, Okla.

Red Basin.--A flash flood occurred on the Prairies Dog Town Fork of the Red River east of Canyon, Tex., on the evening of the 28th. Some families were stranded for 2 days and nights beyond the water crossings due to the high water. This flash rise was due to 7.87 inches of rain at Canyon, Tex., between 6:00 p.m. on the 28th and 1:00 a.m. on the 29th. Damage was confined to a few houses.

Flooding was in progress on the Sulphur River at Hagansport, Tex., in the beginning of August. It went above flood stage on July 30 and receded within its banks on Aug. 2. The crest on July 30 was 6 feet above flood stage.

Heavy rains associated with a cold front moving through southwestern Oklahoma and northwestern Texas on the 30th resulted in minor flooding on the Red River at Burkburnett, Tex., on the 31st. Near bankfull conditions occurred on the Washita River at Clinton, Okla., during the morning of the 15th due to 3 to 6 inches of rain during the night. Heavy intermittent rainfall on the 27-29th in the panhandle of Oklahoma and over northwest Oklahoma resulted in near bankfull conditions on the North Canadian River near Woodward, Okla., on the 30th.

WEST GULF OF MEXICO DRAINAGE

The San Jacinto River at Lake Houston, Tex., continued above flood stage from Apr. 9 to Aug. 4, a period of 117 calendar days. The crest of 47.5 feet on June 26 (flood stage 44.5 feet) was the second highest stage of record. The record crest of 47.87 feet occurred on Sept. 12, 1961.

GULF OF CALIFORNIA DRAINAGE

Colorado Basin.--Record precipitation amounts occurred in the Monticello-Blanding, Utah, area on August 1. More than 6 inches were reported in the Blue Mountains to the west. Dry washes and creeks were filled and some minor flooding occurred in the streets of Blanding and along highway #95 west of the city. Cottonwood Wash about 7 miles west of Blanding rose 12 to 14 feet. The U. S. Geological Survey stream gage below the bridge was washed away. The computed flows were about 4 times greater than any previously recorded. A wave of water 10 feet high moved down Cottonwood Wash and inundated the Bluff, Utah, area early in the afternoon of Aug. 1. The channel under the bridge on highway #74, west of Bluff, was insufficient to carry the flow and about 3 feet of flood waters covered most of the town. Mud and debris were deposited on floors of homes and business establishments. Relief came when the last approach to the bridge was washed away and a break 15 feet wide allowed the flood waters to return to the channel. Damages were estimated between $30,000 and $40,000.

Several streets, basements, and the ballpark at Helper, Utah, were flooded on the same date. Minor damage was reported to irrigation works. At Levan, Utah, the culinary water system was damaged on August 1 by a flash flood in Pigeon Creek Canyon. The total damages at Levan were estimated at $30,000.

An intense thunderstorm on the 5th, centering near the headwaters of the Willow Creek drainage north and west of Richfield, Utah, caused the largest flood in this drainage in recent years. Canyon road was blocked for over 2 hours. Farm irrigation systems were damaged.

Flash floods were reported in the following drainages on August 8:

1. Cottonwood drainage near Richfield, Utah, - damages $6,000.
2. Parowan Creek in Iron County, Utah, - damages $1,000.
3. Coal Creek near Cedar City, Utah, - damages $6,000.

A heavy downpour of 1 inch in 30 minutes caused heavy street flooding in Moab, Utah, on the 15th. Some homes and stores were damaged. U. S. Highway #60 was closed briefly. The damages that resulted to the orchards were primarily due to the hail associated with the storm.

Locally heavy rains during the month caused considerable street flooding in Phoenix and on the 3d, 5th, 11th, 12th, and 20th and in Tucson, Ariz., on the 6th, 10th, and 19th. Many cars in Tucson were trapped or submerged in flooded dips and underpasses. The occupants of at least 12 cars were rescued by the police. Street flooding in Flagstaff, Ariz., on the 2d resulted in heavy damage to the Casa Grande Sewer System. Damage was estimated at $100,000. One death occurred on the 3d in the Globe-Miami, Ariz., area when a car was swept off the road. There was some street flooding in Prescott on the 1st.

Some flash flooding occurred in the San Jose Wash east of Safford, Ariz., on the 3d.

GREAT BASIN

A flash flood occurred at Alazon, Nev., 10 miles west of Wendover, Utah, on the 11th. A section of the Western Pacific Railroad tracks was washed out and a freight train, 4 engines and 37 cars were derailed. The total loss was estimated at $879,000.

PACIFIC SLOPE DRAINAGE

Columbia Basin.--Weather was warm and dry in the Columbia Basin during the first 2 weeks of August. The natural flow of the Willamette River at Salem, Oreg., had to be augmented by reservoir releases to maintain normal flow. At midmonth, the fair weather pattern changed to one of excessive rain. Repeated surges of cool moist air penetrated coastal and interior areas, causing record or near record rainfall on the 14-28th at stations both east and west of the Cascades. Precipitation accumulations during this 2-week period broke August monthly rainfall records at Eugene and Portland, Oreg., and at Yakima, Wash. The Willamette River at Salem, Oreg., reached a peak flow of near 20,000 c.f.s. late on the 27th which was more than 3 times the early-month flows. Streamflows of this magnitude at Salem and similar high flows on other west slope Cascade streams were unprecedented for the season of the year. There were a few reports of flash flooding along ungaged streams in Idaho.

FLOOD STAGE DATA

(All dates in August unless otherwise specified)

River and station	Flood stage	Above flood stages -dates		Crest*	
		From–	To–	Stage	Date
MISSISSIPPI SYSTEM	*Ft.*			*Ft.*	
Upper Mississippi Basin					
Cottonwood: New Ulm (nr), Minn.	11	2	2	11.1	2
Minnesota: Jordan (nr), Minn.	20	11	11	20.0	11
Wapsipinicon: DeWitt, Iowa	10	8	16	10.5	15
Black Hawk Creek: Hudson, Iowa	12	6	6	15.25	6
Prairie Creek: Fairfax, Iowa	9	6	6	11.5	6
Salt River: New London, Mo.	19	4	6	24.2	5
Missouri Basin					
Nemaha: Falls City, Nebr.	20	9	9	20.65	9
Little Platte: Smithville, Mo.	24	10	11	28.4	11
Sappa Creek: Oberlin, Kans.	11	28	29	13.0	28
Buffalo Creek: Jamestown, Kans.	16	20	20	17.9	20
Republican Scandia, Kans.	10	19	19	11.4	19
Concordia, Kans.	10	19	19	10.65	19
Clay Center, Kans.	15	11	11	#15.2	11
Big Creek: Ogallah 5S, Kans.	14	10	10	16.0	10
Bow Creek: Stockton 9N, Kans.	9	15	15	12.4	15
North Fork Solomon: Lenora, Kans.	10	29	29	11.0	29
Glade, Kans.	9	15	15	17.05	15
Portis, Kans.	15	16	16	23.0	16
Mill Creek: Washington, Kans.	18	11	12	21.0	12
Little Blue: Fairbury, Nebr.	10	18	19	13.2	19
Black Vermillion: Frankfort, Kans.	19	2	3	20.9	3
Fancy Creek: Winkler, Kans.	11	2	2	11.8	2
Vermillion Creek: Wamega 11NE, Kans.	24	2 9	3 11	25.85 (24.2 (27.5	3 10 11
Mill Creek: Paxico, Kans.	19	2	2	26.1	2
Soldier Creek: Delia 6SE, Kans.	17	2 10	3 11	20.8 21.75	3 10
MISSISSIPPI SYSTEM	*Ft.*			*Ft.*	
Wakarusa: Lawrence 4S, Kans.	23	2 9	4 11	27.7 30.4	4 10
Stranger Creek: Easton, Kans.	15	Jul. 31 3 10	2 3 11	19.4 17.5 18.0	1 3 10
Tonganoxie, Kans.	22	2	4	22.95	3
Little Blue: Lake City, Mo.	18	9	9	19.8	9
Crooked: Richmond, Mo.	20	9	9	20.0	9
Blackwater: Valley City, Mo.	20	9	11	25.85	10
Pottawatomie Creek: Lane, Kans.	23	10	10	23.4	10
Big Creek: Blairstown, Mo.	20	9	10	22.7	9
Marais des Cygnes: Osawatomie, Kans.	28	11	12	30.0	11
LaCygne, Kans.	25	11	13	27.1	12
Osage: Schell City, Mo.	25	11	16	28.3	15
Missouri: Waverly, Mo.	18	11	13	19.4	12
Ohio Basin					
Wabash Montezuma, Ind.	14	5	6	16.8	5
Terre Haute, Ind.	14	6	6	14.3	6
Arkansas Basin					
Chikaskia: Corbin, Kans.	10	17	17	12.5	17
Blackwell, Okla.	26	17	19	31.0	18
Arkansas: Arkansas City, Kans.	16	18	18	16.9	18
Red Basin					
Sulphur: Hagansport, Tex.	38	Jul. 30	2	44.0	Jul. 30
Red: Burkburnett, Tex.	9	31	31	9.9	31
WEST GULF OF MEXICO DRAINAGE					
San Jacinto: Lake Houston, Tex.	44.5	Apr. 9	4	45.45 47.0 47.5	Apr. 13 May 13 Jun. 26

* Provisional
\# Highest Stage observed

RAWINSONDE DATA

Average monthly values

ALBANY, N. Y. 1008 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	86	16.0	13.5	25	.8
1000	31	150	16.2	12.9	26	1.3
950	31	589	16.1	10.3	30	3.6
900	31	1,047	14.0	7.8	30	6.3
850	31	1,528	11.7	3.3	30	8.9
800	31	2,034	9.7	-1.2	30	10.7
750	31	2,569	7.7	-6.1	29	12.0
700	31	3,135	5.[illegible]	-11.2	28	13.1
650	31	3,737	2.7	-15.6	28	14.6
600	31	4,382	-1.0	-18.1	28	16.6
550	31	5,067	-5.1	-21.8	28	17.9
500	31	5,815	-9.7	-27.4	28	19.2
450	31	6,619	-14.8	-31.4	28	19.4
400	31	7,503	-20.9	-36.3	28	20.2
350	31	[illegible],477	-28.0	-42.6	28	21.9
300	31	9,567	-35.7	-49.3	28	24.1
250	31	10,810	-44.8		28	28.1
200	31	12,271	-53.9		28	30.1
175	31	13,122	-57.4		28	29.7
150	31	14,088	-60.5		28	25.1
125	31	15,220	-61.4		28	18.9
100	31	16,604	-61.2		28	12.1
80	31	17,996	-58.2		29	5.8
70	31	18,840	-56.2		29	4.0
60	31	19,823	-54.4		32	2.5
50	31	20,997	-52.3		04	1.3
40	31	22,446	-50.1		08	3.3
30	31	24,332	-48.1		09	4.1
25	30	25,538	-46.2		08	5.5
20	29	27,027	-43.8		08	6.9
15	27	28,969	-41.4		10	[illegible].3
10	25	31,738	-37.0		10	7.8
7	8	34,226	-33.2			
5						
4						

ALBUQUERQUE, N. MEX. 842 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1,619	16.7	11.5	16	.6
1000	31	118				
950	31	565				
900	31	1,035				
850	31	1,533				
800	31	2,051	16.3	7.0	22	3.0
750	31	2,588	13.0	4.2	25	3.6
700	31	3,175	9.2	1.6	25	4.3
650	31	3,776	4.9	-1.8	25	4.4
600	31	4,434	.6	-7.1	25	4.7
550	31	5,116	-3.4	-13.1	24	4.2
500	31	5,877	-7.9	-18.0	24	5.5
450	30	6,683	-13.1	-24.2	24	5.8
400	30	7,578	-18.9	-30.5	23	6.1
350	30	8,559	-26.1	-37.9	23	6.6
300	30	9,657	-34.2	-45.6	24	8.6
250	30	10,907	-43.9		24	11.6
200	30	12,369	-54.7		24	13.3
175	29	13,212	-60.2		24	13.3
150	29	14,162	-65.1		24	11.0
125	29	15,263	-67.8		24	8.8
100	28	16,607	-66.7		23	3.7
80	26	17,968	-63.2		15	1.0
70	25	18,792	-61.4		10	2.9
60	25	19,755	-58.[illegible]		09	4.9
50	25	20,909	-55.8		09	7.4
40	23	22,339	-53.[illegible]		09	8.6
30	23	24,200	-50.5		09	10.7
25	23	25,396	-47.9		09	11.7
20	21	26,873	-45.[illegible]		09	14.5
15	20	28,799	-42.7		09	15.6
10	15	31,563	-37.9			

AMARILLO, TEXAS 893 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1,095	18.5	13.6	20	4.2
1000	31	114				
950	31	563				
900	31	1,035				
850	31	1,525	19.3	12.2	22	10.6
800	31	2,045	17.0	9.3	22	9.6
750	31	2,588	13.7	6.0	23	7.2
700	31	3,172	9.7	2.3	23	4.9
650	31	3,779	5.5	-2.5	22	4.3
600	31	4,434	1.3	-8.4	21	4.9
550	31	5,125	-2.8	-13.6	21	5.7
500	31	5,880	-7.3	-20.8	21	5.7
450	31	6,689	-12.4	-27.0	22	5.5
400	31	7,585	-18.4	-32.0	22	6.3
350	31	[illegible],569	-25.4	-37.3	23	7.0
300	31	9,670	-33.7	-44.5	24	9.2
250	31	10,923	-43.7		24	10.7
200	31	12,386	-54.9		25	10.5
175	31	13,229	-60.3		25	10.0
150	31	14,179	-65.1		25	8.5
125	31	15,281	-68.1		24	6.3
100	31	16,619	-67.5		25	2.0
80	31	17,973	-64.2		10	1.4
70	31	18,795	-61.3		08	3.1
60	29	19,756	-58.7		08	5.1
50	28	20,905	-56.3		09	7.2
40	27	22,333	-53.3		09	9.0
30	27	24,196	-50.6		09	10.5
25	26	25,389	-48.5		09	12.4
20	26	26,866	-46.0		08	13.3
15	23	28,801	-42.4		09	15.7
10	17	31,577	-37.7		09	15.[illegible]

* ANCHORAGE, ALASKA 1008 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	45	12.3	8.9	17	1.6
1000	31	114			16	1.7
950	31	546	12.0	5.5	19	1.3
900	31	997	9.2	3.1	12	1.2
850	31	1,468	5.8	1.3	09	2.1
800	31	1,961	2.5	-1.4	11	2.9
750	31	2,479	-.8	-5.4	12	2.8
700	31	3,029	-3.9	-10.2	13	2.8
650	31	3,608	-7.1	-15.0	13	2.4
600	31	4,231	-10.9	-20.2	13	2.2
550	31	4,890	-14.8	-25.9	16	2.0
500	31	5,610	-19.5	-31.8	15	1.5
450	31	6,379	-24.9	-36.5	13	1.1
400	31	7,232	-31.0	-41.5	07	.7
350	31	8,166	-37.9	-44.6	06	.9
300	31	9,211	-45.5		35	1.4
250	31	10,408	-51.7		32	3.3
200	31	11,859	-49.8		31	4.6
175	31	12,733	-49.7		30	4.2
150	31	13,742	-49.6		29	3.7
125	31	14,935	-49.8		29	3.0
100	31	16,394	-50.1		29	2.6
80	31	17,853	-49.6		30	.9
70	31	18,727	-49.3		28	.5
60	31	19,738	-49.0		31	.2
50	31	20,935	-48.6		07	.7
40	31	22,404	-48.1		10	1.6
30	29	24,303	-47.4		09	2.2
25	29	25,510	-46.5		09	2.9
20	29	26,995	-44.9		10	2.9
15	29	28,928	-42.4		09	2.9
10	24	31,679	-38.8		09	2.5
7	12	34,093	-36.1			

* ANNETTE, ALASKA 1011 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	37	12.3	9.6	10	.7
1000	31	124	12.8	9.0	10	.6
950	31	551	11.0	6.2	15	1.6
900	31	1,005	8.6	3.0	18	2.6
850	31	1,476	5.8	.1	18	3.5
800	31	1,970	2.6	-2.8	18	3.9
750	31	2,489	-.5	-6.3	18	3.8
700	30	3,040	-3.5	-10.0	19	3.1
650	30	3,619	-6.6	-15.0	20	2.7
600	30	4,245	-10.1	-19.4	22	3.1
550	30	4,903	-14.4	-24.6	23	3.8
500	30	5,628	-19.2	-29.2	23	4.5
450	30	6,399	-24.8	-34.5	25	5.5
400	30	7,250	-31.2	-39.9	25	6.5
350	30	8,183	-38.2	-44.1	26	6.2
300	30	9,226	-45.8		27	7.7
250	30	10,424	-50.6		26	9.4
200	30	11,876	-50.3		27	6.6
175	30	12,749	-49.9		27	5.6
150	30	13,755	-50.4		27	5.1
125	30	14,943	-50.7		28	4.5
100	30	16,394	-51.2		28	3.5
80	30	17,846	-50.9		28	2.2
70	30	18,715	-50.7		27	1.7
60	30	19,719	-50.5		28	.9
50	30	20,909	-50.0		08	.6
40	30	22,368	-49.3		09	1.6
30	30	24,258	-48.2		08	2.4
25	30	25,461	-47.3		07	2.9
20	30	26,942	-45.8		08	3.1
15	29	28,872	-43.2		07	3.8
10	29	31,623	-39.6		09	5.0
7	26	34,087	-36.0		09	6.0
5	14	36,427	-31.9		08	8.4
4	10	38,016	-29.1			

ATHENS, GEORGIA 991 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	246	21.1	19.4	34	1.0
1000	30	163				
950	30	608	23.3	18.1	35	1.9
900	30	1,081	21.0	15.5	34	1.1
850	30	1,574	17.8	13.2	30	1.3
800	30	2,091	15.1	7.9	27	1.5
750	30	2,630	11.9	2.8	26	1.5
700	30	3,211	8.[illegible]	-1.8	26	1.6
650	30	3,815	4.8	-4.7	22	1.1
600	30	4,470	.[illegible]	-9.8	25	1.2
550	30	5,157	-2.9	-16.1	27	1.2
500	30	5,916	-7.1	-20.7	26	1.1
450	30	6,725	-12.1	-25.0	25	.6
400	30	7,624	-17.9	-31.3	11	.2
350	30	[illegible],609	-24.7	-38.8	06	.[illegible]
300	30	9,713	-33.0	-47.3	08	.7
250	30	10,969	-42.8		09	1.6
200	29	12,437	-54.[illegible]		10	.[illegible]
175	28	13,282	-60.0		12	.4
150	28	14,232	-65.3		08	1.6
125	27	15,329	-69.4		11	1.0
100	27	16,661	-68.2		04	.[illegible]
80	27	18,014	-63.7		07	3.[illegible]
70	27	18,838	-61.4		08	4.[illegible]
60	27	19,801	-58.1		08	6.5
50	27	20,997	-55.4		09	8.3
40	27	22,387	-52.9		09	10.4
30	26	24,259	-49.6		09	11.7
25	25	25,458	-48.0		09	13.6
20	24	26,933	-45.9		09	15.4
15	23	28,860	-42.9		09	18.0
10	23	31,625	-37.6		09	21.[illegible]
7	17	34,101	-33.1		09	24.[illegible]
5	7	36,525	-29.2			

* BARROW, ALASKA 1015 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	8	4.0	3.1	10	4.2
1000	31	133	4.9	2.7	10	5.1
950	31	552	6.5	.4	12	5.4
900	31	996	5.4	-4.5	12	4.1
850	31	1,462	3.5	-7.5	13	2.7
800	31	1,952	.9	-9.0	14	2.2
750	31	2,466	-1.8	-12.4	16	1.8
700	31	3,015	-4.5	-16.8	17	1.4
650	31	3,594	-7.6	-20.4	21	2.2
600	31	4,215	-11.[illegible]	-23.4	21	2.9
550	31	4,875	-15.4	-27.5	23	3.1
500	31	[illegible],591	-20.1	-31.9	22	3.8
450	31	6,357	-25.7	-36.6	22	3.9
400	31	7,207	-32.0	-41.9	22	4.6
350	31	8,137	-39.[illegible]	-46.8	23	5.3
300	31	9,175	-47.[illegible]		23	5.[illegible]
250	31	10,363	-53.4		22	5.3
200	31	11,800	-51.3		23	3.1
175	31	12,671	-49.8		25	2.8
150	31	13,680	-49.5		25	2.3
125	31	14,875	-49.2		26	1.8
100	31	16,341	-48.7		25	1.2
80	31	17,808	-48.[illegible]		30	.5
70	31	18,686	-48.2		05	.4
60	31	19,701	-48.0		07	.6
50	31	20,903	-47.9		09	1.1
40	30	22,372	-47.8		09	1.2
30	30	24,274	-46.6		08	2.3
25	28	25,487	-45.5		08	2.3
20	25	27,003	-43.5		08	3.9
15	18	28,931	-41.1		10	4.0

BARTER IS., ALASKA 1016 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	27	15	4.1	3.1	09	4.7
1000	27	143	6.0	3.2	09	6.3
950	27	567	7.7	1.3	10	7.2
900	27	1,010	6.6	-3.6	10	5.3
850	27	1,478	4.8	-4.5	09	1.1
800	27	1,970	2.4	-9.1	27	1.3
750	27	[illegible],486	-.2	-12.2	27	2.2
700	27	3,038	-3.1	-17.8	28	2.9
650	27	3,613	-6.3	-22.2	29	2.6
600	27	4,242	-10.3	-25.6	30	3.1
550	27	4,899	-14.2	-30.4	30	2.8
500	27	5,624	-19.0	-33.7	31	4.2
450	27	[illegible],392	-24.8	-38.2	32	4.8
400	27	7,246	-31.3	-44.2	32	5.5
350	27	8,178	-38.4	-47.6	32	5.7
300	27	9,221	-45.8		32	6.6
250	27	10,417	-51.4		33	4.7
200	27	11,861	-51.3		35	2.2
175	27	12,732	-49.6		33	2.5
150	27	13,742	-49.3		33	[illegible].2
125	26	14,941	-48.9		33	1.9
100	25	16,409	-48.[illegible]		33	1.2
80	25	17,877	-48.0		36	1.5
70	25	18,758	-47.6		04	1.7
60	25	19,775	-47.3		06	1.6
50	25	20,982	-46.9		07	1.2
40	25	22,461	-46.5		06	2.7
30	25	24,374	-45.3		08	2.6
25	25	25,594	-44.0		08	3.0
20	25	27,097	-42.1		08	3.4
15	20	29,043	-39.4		10	3.8
10	13	31,821	-35.3			

BETHEL, ALASKA 1009 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	12	39	10.4	9.0	26	.[illegible]
1000	12	114	10.8	8.0		
950	12	541	8.4	6.3	22	2.7
900	12	985	5.7	3.9	18	3.4
850	12	1,452	3.3	-1.7	18	4.6
800	12	1,942	1.0	-5.2	18	4.6
750	12	2,455	-1.9	-8.8	19	4.[illegible]
700	12	3,005	-4.7	-12.4	19	4.8
650	12	3,583	-8.3	-18.2	19	5.3
600	12	4,202	-12.0	-21.2	19	5.6
550	12	4,858	-16.1	-24.6	19	4.5
500	12	5,574	-20.9	-29.1	20	4.3
450	12	6,335	-25.7	-36.6	20	5.0
400	12	7,189	-31.8	-42.2	21	5.2
350	12	8,118	-38.6	-46.1	21	5.7
300	12	9,160	-46.2		21	5.4
250	12	10,356	-50.5		24	3.3
200	12	11,810	-49.7		25	4.[illegible]
175	12	12,685	-49.1		23	5.4
150	12	13,695	-49.1		26	5.6
125	12	14,888	-49.8		25	3.2
100	12	16,348	-49.7		27	3.8
80	12	17,809	-49.5		29	1.9
70	12	18,683	-49.3		26	1.3
60	12	19,694	-49.1		27	1.7
50	12	20,890	-49.2		24	1.0
40	12	22,354	-48.7		01	.5
30	12	24,248	-47.5		07	1.7
25	12	25,456	-46.3		07	3.5
20	12	26,943	-44.6		09	2.5
15	11	28,870	-42.2		10	3.0
10	6	31,682	-37.9			

* BISMARCK, N. DAK. 955 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	505	12.3	10.5	02	1.1
1000	31	116				
950	31	549			04	1.8
900	31	1,007	15.7	6.6	32	1.5
850	31	1,491	14.0	3.8	29	3.6
800	31	2,001	11.7	.7	28	4.8
750	31	2,535	8.6	-2.1	27	6.7
700	31	3,106	5.2	-6.0	27	8.7
650	31	3,708	1.5	-9.4	26	10.4
600	31	4,348	-2.7	-12.4	27	11.9
550	31	5,027	-6.9	-17.0	26	12.4
500	31	5,772	-11.2	-23.0	26	13.9
450	31	6,567	-16.6	-28.0	26	14.9
400	31	7,450	-22.6	-34.6	26	16.4
350	31	8,416	-29.9	-41.0	26	17.5
300	31	9,497	-38.1	-47.3	26	20.6
250	31	10,728	-47.4		26	23.8
200	31	12,175	-55.2		26	26.0
175	31	13,024	-56.8		26	24.5
150	31	13,999	-58.0		26	20.5
125	30	15,146	-58.6		27	16.2
100	30	16,548	-57.8		27	10.2
80	30	17,956	-57.1		27	5.2
70	30	18,802	-55.8		29	3.0
60	30	19,788	-54.2		32	1.4
50	30	20,961	-52.5		06	.6
40	30	22,409	-50.6		04	1.5
30	29	24,294	-48.2		08	3.4
25	29	25,498	-46.7		09	3.3
20	28	26,984	-44.5		08	4.1
15	26	28,922	-41.6		08	5.3
10	21	31,692	-37.6		08	6.4
7	17	34,177	-34.0		09	7.7
5	5	36,514	-30.9			

BOISE, IDAHO 916 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	867	15.4	7.9	14	2.2
1000	31	110				
950	31	554				
900	31	1,015	17.6	6.4	16	1.3
850	31	1,503	16.7	2.8	22	.7
800	31	2,017	13.5	.1	24	1.4
750	31	2,555	9.5	-2.2	24	2.5
700	31	3,126	[illegible].4	-5.3	25	3.8
650	31	3,720	1.3	-10.6	25	5.3
600	31	4,367	-3.2	-13.8	25	7.3
550	31	5,040	-8.0	-17.2	25	8.6
500	31	5,785	-12.9	-22.5	24	9.5
450	31	6,578	-18.2	-29.1	24	10.8
400	31	7,453	-24.2	-35.1	24	12.7
350	31	8,413	-31.5	-41.2	24	14.9
300	31	9,485	-39.6	-48.3	23	18.2
250	31	10,709	-48.4		24	20.8
200	31	12,152	-55.7		24	21.6
175	31	13,001	-56.2		24	20.6
150	31	13,980	-56.9		24	16.6
125	31	15,131	-58.2		24	12.1
100	31	16,532	-59.1		24	6.7
80	31	17,935	-57.6		24	3.8
70	31	18,779	-57.0		22	2.0
60	31	19,757	-55.[illegible]		20	.7
50	31	20,921	-54.4		09	.9
40	31	22,357	-52.4		08	2.8
30	30	24,224	-50.2		09	3.7
25	29	25,421	-48.7		09	4.4
20	28	26,893	-46.6		09	4.9
15	26	28,819	-43.9		09	6.5
10	21	31,555	-40.1		08	6.8
7	7	33,999	-37.1			

BOOTHVILLE, LA. 1017 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1	25.2	23.3	06	.6
1000	31	151	26.3	23.1	08	.6
950	31	602	23.0	19.9	14	.5
900	31	1,074	20.1	15.6	12	1.0
850	31	1,566	17.3	11.5	15	2.0
800	31	2,082	14.3	7.4	14	2.4
750	31	2,625	11.5	2.1	13	2.3
700	31	3,199	8.3	-2.4	12	2.2
650	31	3,808	4.9	-6.4	09	2.3
600	31	4,458	1.3	-11.0	09	1.9
550	31	5,147	-2.7	-16.1	07	2.0
500	31	5,903	-7.2	-20.3	06	2.7
450	31	6,713	-12.3	-24.9	05	2.6
400	31	7,608	-18.1	-30.8	05	3.1
350	31	8,592	-25.0	-36.8	06	3.[illegible]
300	31	9,695	-33.3	-44.4	06	3.8
250	31	10,950	-43.2		07	5.1
200	31	12,415	-54.6		07	6.6
175	31	13,259	-60.4		07	6.6
150	31	14,207	-65.3		06	6.2
125	31	15,305	-69.5		07	5.3
100	31	16,636	-69.0		09	5.8
80	31	17,980	-65.4		08	6.4
70	31	18,798	-62.2		09	7.9
60	31	19,754	-59.6		08	10.4
50	30	20,902	-57.1		09	12.8
40	30	22,323	-54.3		09	13.9
30	30	24,179	-50.7		09	16.6
25	30	25,373	-48.4		09	17.2
20	28	26,847	-46.3		09	18.5
15	26	28,773	-42.5		08	19.8
10	16	31,521	-37.9		09	23.7
7	6	33,968	-33.0			

* BROWNSVILLE, TEXAS 1015 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	7	24.7	22.8	13	1.2
1000	31	135	25.8	24.0	15	3.2
950	31	584	22.9	21.1	16	7.3
900	31	1,059	20.3	16.2	16	7.5
850	31	1,551	17.7	11.6	16	6.7
800	31	2,068	14.9	7.2	15	5.2
750	31	2,609	12.1	2.7	13	4.4
700	31	3,189	8.[illegible]	-2.3	12	4.5
650	31	3,795	[illegible].4	-6.5	11	4.5
600	31	4,450	1.6	-12.0	11	4.2
550	31	5,140	-2.6	-17.6	11	4.1
500	31	5,897	-7.4	-21.4	11	3.9
450	31	6,703	-12.4	-27.7	10	4.0
400	31	7,603	-18.4	-31.4	08	4.6
350	31	[illegible],587	-25.2	-39.1	08	3.9
300	30	9,689	-33.8	-46.5	06	4.0
250	30	10,942	-43.7		04	4.7
200	30	12,406	-55.0		04	5.0
175	30	13,247	-61.0		05	4.7
150	30	14,193	-66.4		07	4.7
125	30	15,285	-70.3		06	5.6
100	30	16,605	-70.7		07	6.4
80	30	17,940	-67.3		09	10.3
70	30	18,749	-64.7		09	11.2
60	30	19,698	-61.9		09	13.1
50	30	20,833	-59.4		09	16.0
40	30	22,241	-56.0		09	18.0
30	30	24,089	-51.9		09	18.8
25	30	25,275	-50.0		09	20.1
20	29	26,747	-47.0		09	20.7
15	29	28,664	-44.3		09	21.4
10	26	31,404	-40.3		09	25.2
7	14	33,879	-35.3			

BUFFALO, N. Y. 992 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	218	16.9	14.4	22	1.8
1000	31	151				
950	31	594	17.7	12.0	27	5.3
900	31	1,052	15.5	8.2	28	7.0
850	31	1,536	12.8	5.0	29	9.3
800	31	2,043	10.1	-1.1	29	10.7
750	31	2,577	8.2	-7.0	29	12.2
700	31	3,146	5.7	-10.7	29	13.3
650	31	3,749	2.6	-12.7	29	14.4
600	31	4,393	-1.0	-16.9	28	15.1
550	31	5,080	-5.0	-21.3	29	16.[illegible]
500	31	5,826	-9.6	-26.6	28	17.7
450	31	6,632	-14.9	-31.2	28	18.4
400	31	7,514	-21.0	-36.4	28	19.3
350	31	8,488	-27.8	-43.5	29	21.0
300	31	9,576	-36.0	-48.7	28	22.8
250	31	10,817	-45.0		28	26.5
200	31	12,277	-54.0		28	29.2
175	31	13,126	-57.6		28	28.2
150	31	14,090	-61.1		28	24.1
125	31	15,217	-62.7		28	18.0
100	31	16,594	-61.7		28	11.7
80	31	17,986	-58.8		29	7.[illegible]
70	31	18,826	-57.1		30	4.9
60	30	19,805	-55.0		35	1.8
50	29	20,976	-53.0		04	1.4
40	29	22,423	-50.8		08	4.1
30	28	24,306	-48.3		09	5.2
25	28	25,512	-46.5		08	4.9
20	26	26,998	-44.3		08	6.4
15	25	28,935	-41.7		08	6.8
10	17	31,704	-37.0		10	7.9

CAPE HATTERAS, N. C. 1018 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	4	25.4	23.0	31	1.2
1000	31	156	25.2	21.7	30	2.5
950	31	606	23.1	18.3	30	4.0
900	31	1,077	20.1	15.6	30	3.9
850	31	1,569	17.1	12.1	30	4.4
800	31	2,085	14.4	7.5	29	5.0
750	31	2,629	11.6	2.4	28	5.7
700	31	3,204	8.3	-2.3	28	6.2
650	31	3,811	4.6	-6.8	28	6.4
600	31	4,462	1.2	-10.6	28	5.8
550	31	5,155	-2.4	-15.5	28	5.6
500	31	5,910	-6.6	-20.7	28	5.1
450	31	6,726	-11.4	-26.0	27	4.3
400	31	7,622	-17.3	-30.5	26	5.1
350	31	8,611	-23.9	-37.9	27	5.7
300	31	9,718	-32.2	-46.0	27	5.3
250	31	10,980	-42.1		27	6.3
200	30	12,457	-53.6		28	6.2
175	30	13,304	-59.6		28	6.8
150	30	14,255	-65.1		30	5.1
125	30	15,353	-69.1		29	2.7
100	30	16,686	-67.5		29	2.2
80	30	18,043	-63.0		03	2.3
70	30	18,869	-60.4		06	3.5
60	30	19,835	-57.8		08	5.3
50	30	20,993	-54.9		09	7.6
40	29	22,431	-51.6		09	9.6
30	29	24,310	-48.4		09	11.2
25	28	25,513	-46.5		09	11.8
20	26	27,002	-44.1		09	12.1
15	17	28,928	-41.7		09	12.9
10	8	31,658	-38.1			

See reference note at end of table

RAWINSONDE DATA

Average monthly values

* CARIBOU, MAINE 991 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	191	12.6	9.6	27	2.0
1000	31	116				
950	31	550	11.7	5.7	28	5.2
900	31	999	9.7	3.3	29	7.3
850	31	1,471	6.8	1.3	29	8.3
800	31	1,968	4.9	-4.0	30	9.9
750	31	2,493	2.7	-9.0	29	11.7
700	31	3,049	-.2	-13.[illegible]	29	13.2
650	31	3,641	-2.8	-16.6	28	15.2
600	31	4,272	-5.8	-20.2	29	16.7
550	31	4,948	-9.5	-24.2	28	19.7
500	31	5,681	-13.8	-29.4	28	22.0
450	31	6,473	-19.0	-33.7	28	24.5
400	31	7,342	-25.1	-39.6	28	26.4
350	31	8,298	-32.1	-45.5	28	29.1
300	31	9,371	-39.4	-49.1	28	31.9
250	31	10,600	-46.7		28	36.1
200	31	12,062	-51.4		28	35.5
175	31	12,925	-53.4		28	31.7
150	31	13,914	-54.4		28	26.9
125	31	15,081	-54.9		28	20.1
100	31	16,506	-55.1		28	14.6
80	31	17,932	-54.4		28	6.5
70	31	18,789	-53.2		29	5.0
60	31	19,785	-51.8		27	1.8
50	31	20,971	-50.2		30	.9
40	31	22,431	-48.9		09	1.9
30	31	24,327	-47.3		08	2.7
25	31	25,536	-45.7		09	4.0
20	27	27,020	-43.8		08	6.4
15	23	28,970	-40.7		09	6.6
10	17	31,756	-36.3		10	4.4
7	7	34,220	-32.7			
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CHARLESTON, S. C. 1017 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	13	23.4	20.8	32	1.0
1000	31	160	23.9	21.1	30	1.5
950	31	607	23.5	18.1	31	1.8
900	31	1,083	21.1	15.2	29	.7
850	31	1,576	18.0	12.5	26	.3
800	31	2,093	14.8	8.8	21	.4
750	31	2,639	11.6	4.3	21	.6
700	31	3,212	8.1	.3	21	.4
650	31	3,822	4.5	-4.4	20	.5
600	31	4,470	1.2	-9.1	29	.5
550	31	5,165	-2.6	-13.1	02	.1
500	31	5,918	-6.9	-18.9	12	.1
450	31	6,729	-11.6	-25.8	18	.4
400	31	7,629	-17.4	-31.6	19	1.4
350	31	8,616	-24.5	-38.1	18	2.0
300	31	9,721	-32.7	-46.1	15	2.3
250	31	10,979	-42.7		16	3.0
200	31	12,448	-54.2		16	2.7
175	31	13,293	-60.2		16	2.5
150	31	14,242	-65.3		15	1.0
125	31	15,340	-69.1		09	1.9
100	31	16,675	-67.9		09	1.6
80	31	18,026	-64.1		08	4.3
70	31	18,849	-61.0		08	5.6
60	31	19,812	-58.2		08	8.6
50	31	20,967	-55.3		09	10.0
40	31	22,401	-52.0		09	11.2
30	31	24,277	-48.5		09	13.2
25	30	25,472	-47.3		09	14.0
20	28	26,951	-45.3		09	14.5
15	24	28,881	-42.1		09	17.4
10	15	31,641	-37.1		09	20.4

CHIHUAHUA, MEXICO 859 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	1,478	17.7	15.2	21	.4
1000	29	108				
950	29	553				
900	29	1,024				
850	29	1,522	17.8	14.2	22	.4
800	29	2,042	16.7	9.7	18	1.3
750	29	2,581	13.5	6.7	15	2.3
700	29	3,169	9.9	3.5	15	3.3
650	29	3,771	5.7	-.4	15	3.5
600	29	4,432	1.3	-4.3	15	3.2
550	29	5,119	-2.[illegible]	-10.6	15	3.5
500	29	5,878	-7.3	-18.1	16	3.6
450	29	6,686	-11.7	-24.6	16	3.3
400	29	7,586	-17.4	-31.5	17	2.7
350	29	8,573	-24.3	-38.2	17	3.2
300	29	9,678	-32.7	-45.9	15	2.9
250	24	10,933	-42.9		15	3.3
200	23	12,401	-54.1		20	.7
175	21	13,244	-59.[illegible]		36	1.1
150	19	14,195	-65.2		22	.2
125	17	15,292	-69.5		19	1.2
100	14	16,623	-68.7		08	2.9
80	12	17,966	-65.5		08	5.6
70	12	18,781	-63.5		08	8.4
60	12	19,736	-60.[illegible]			
50	10	20,879	-58.[illegible]			
40	8	22,300	-54.9			
30	8	24,150	-52.0			
25	6	25,346	-50.1			

* COLD BAY, ALASKA 1009 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	30	10.3	8.0	20	2.3
1000	31	106	9.5	7.4	21	2.5
950	31	527	7.1	4.5	18	3.9
900	31	974	5.5	2.3	18	3.9
850	31	1,441	3.7	-1.7	20	3.2
800	31	1,932	1.7	-4.7	22	3.7
750	31	2,451	-.5	-8.6	23	4.5
700	31	2,999	-3.2	-12.2	23	4.7
650	31	3,581	-6.2	-15.7	23	5.4
600	31	4,206	-9.6	-20.2	24	6.8
550	31	4,868	-13.5	-24.7	24	7.6
500	31	5,593	-18.0	-29.5	24	8.7
450	31	6,366	-23.1	-33.6	25	9.3
400	31	7,226	-29.2	-38.7	25	[illegible].7
350	31	8,167	-36.2	-42.[illegible]	25	11.7
300	31	9,221	-43.4	-45.[illegible]	26	14.1
250	31	10,434	-47.8		26	16.9
200	31	11,899	-50.3		25	16.2
175	31	12,771	-50.0		26	13.6
150	31	13,777	-50.6		26	11.7
125	31	14,963	-51.1		26	8.9
100	31	16,413	-51.1		26	5.8
80	30	17,866	-51.0		25	3.5
70	30	18,734	-50.9		26	1.9
60	29	19,739	-50.6		30	.9
50	29	20,928	-50.3		33	.7
40	29	22,386	-49.8		01	.6
30	28	24,271	-48.2		02	[illegible].1
25	28	25,474	-47.2		07	1.1
20	25	26,944	-45.5		09	2.0
15	25	28,869	-43.7		10	2.[illegible]
10	22	31,630	-40.0		08	2.6
7	15	34,087	-37.3		09	2.3
5	8	36,414	-34.3			

COLUMBIA, MO. 990 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	238	20.6	18.0	16	1.6
1000	31	145				
950	31	591	21.2	16.2	23	4.9
900	31	1,058	19.0	14.0	25	6.5
850	31	1,549	16.5	9.5	26	6.3
800	31	2,064	14.2	5.3	26	6.0
750	31	2,606	11.4	1.2	25	5.7
700	31	3,181	8.0	-2.3	25	5.6
650	31	3,788	4.4	-6.5	25	6.6
600	31	4,438	.6	-10.1	25	7.2
550	31	5,128	-3.6	-14.7	25	7.9
500	31	5,880	-7.8	-20.1	25	7.9
450	31	6,688	-13.1	-25.7	26	8.3
400	31	7,581	-19.[illegible]	-32.[illegible]	26	8.8
350	31	[illegible],561	-26.0	-39.5	26	9.9
300	31	9,658	-34.2	-46.7	26	11.2
250	31	10,909	-44.[illegible]		27	12.8
200	31	12,370	-55.0		27	14.4
175	31	13,213	-60.4		27	13.5
150	31	14,162	-65.0		27	11.5
125	31	15,265	-67.7		27	9.0
100	31	16,609	-66.4		28	4.3
80	31	17,971	-63.3		29	1.6
70	30	18,794	-61.0		03	1.0
60	30	19,757	-58.3		07	2.7
50	30	20,912	-55.3		08	4.1
40	30	22,345	-52.6		09	5.5
30	28	24,213	-50.0		08	7.1
25	27	25,406	-48.3		09	8.5
20	27	26,882	-46.1		09	9.5
15	22	28,799	-43.7		09	10.3
10	12	31,550	-39.0			

DAYTON, OHIO 985 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	297	18.4	17.4	25	.1
1000	31	162				
950	31	608	20.2	15.2	27	3.5
900	31	1,071	17.7	12.4	28	5.4
850	31	1,559	15.0	7.8	28	6.7
800	31	2,071	13.2	1.6	27	7.3
750	31	2,609	10.8	-1.[illegible]	27	8.4
700	31	3,185	7.4	-5.[illegible]	27	9.0
650	31	3,787	4.0	-8.8	27	9.5
600	31	4,439	.2	-13.7	27	10.1
550	31	5,125	-3.8	-17.4	27	10.6
500	31	5,879	-8.0	-24.2	28	10.4
450	31	6,686	-13.0	-29.[illegible]	28	10.1
400	31	7,580	-19.0	-35.1	28	10.[illegible]
350	31	8,560	-25.9	-40.5	28	12.7
300	31	9,658	-34.4	-47.3	28	14.1
250	31	10,907	-44.1		29	16.1
200	31	12,369	-54.5		29	17.7
175	31	13,213	-59.7		28	17.7
150	30	14,166	-64.0		28	16.0
125	30	15,274	-66.6		28	12.6
100	30	16,627	-64.8		28	8.0
80	29	18,002	-61.2		30	2.4
70	29	18,834	-59.0		35	1.3
60	29	19,806	-56.2		05	2.1
50	29	20,971	-53.8		08	2.7
40	26	22,416	-51.4		08	4.9
30	25	24,296	-48.6		08	6.5
25	25	25,500	-46.7		09	8.1
20	21	26,994	-44.0		08	9.7
15	17	28,951	-40.8		09	10.6
10	11	31,729	-35.9			
7						

DEL RIO, TEXAS 979 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	314	24.7	20.2	11	4.1
1000	31	130				
950	31	584	23.2	19.4	13	8.4
900	31	1,052	20.8	16.9	16	10.2
850	31	1,547	18.8	12.9	17	9.4
800	31	2,066	15.8	9.8	16	7.7
750	31	2,610	13.2	3.2	16	6.5
700	31	3,191	10.2	-2.0	15	4.5
650	31	3,799	6.3	-5.6	15	3.1
600	31	4,456	2.0	-9.1	16	3.4
550	31	5,148	-2.5	-13.6	16	2.7
500	31	5,904	-6.9	-18.7	15	3.5
450	31	6,715	-12.0	-23.6	14	3.3
400	31	7,613	-17.6	-30.4	14	2.3
350	31	8,600	-24.4	-37.9	13	1.4
300	31	9,704	-33.0	-45.9	13	.7
250	31	10,961	-42.9		11	.7
200	31	12,428	-54.3		03	1.2
175	31	13,273	-60.3		06	2.5
150	31	14,222	-65.6		08	1.3
125	30	15,318	-69.7		07	1.2
100	29	16,649	-69.2		09	3.1
80	28	17,995	-65.5		08	6.5
70	28	18,811	-63.2		09	8.3
60	28	19,765	-60.3		09	9.8
50	27	20,912	-57.2		09	12.4
40	27	22,334	-54.1		09	14.4
30	27	24,193	-51.1		09	16.2
25	27	25,384	-48.9		09	18.1
20	26	26,862	-45.6		09	19.0
15	25	28,794	-42.0		09	20.8
10	21	31,551	-38.6		09	24.2
7	11	34,030	-33.5			

DENVER, COLO. 840 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1,611	13.8	9.1	22	1.3
1000	31	110				
950	31	555				
900	31	1,024				
850	31	1,512				
800	31	2,027	16.1	6.0	26	2.2
750	31	2,573	13.5	3.0	28	2.0
700	31	3,152	9.8	-.4	27	2.8
650	31	3,760	[illegible].3	-3.8	25	3.5
600	31	4,412	.4	-7.7	25	4.7
550	31	5,099	-4.1	-12.3	25	6.4
500	31	5,851	-8.5	-18.2	24	7.5
450	31	6,658	-13.7	-25.1	24	7.9
400	31	7,547	-19.[illegible]	-31.9	24	9.8
350	31	8,524	-27.[illegible]	-38.9	24	11.6
300	31	9,616	-35.[illegible]	-45.2	24	14.0
250	31	10,859	-43.4		24	16.9
200	29	12,312	-55.2		24	20.9
175	29	13,156	-59.4		25	21.2
150	29	14,113	-62.7		25	17.9
125	29	15,229	-64.7		25	12.7
100	28	16,587	-63.9		25	6.0
80	27	17,961	-61.4		27	1.2
70	27	18,793	-59.0		15	.5
60	27	19,766	-56.7		08	2.5
50	26	20,927	-54.6		08	3.8
40	25	22,361	-52.2		09	4.8
30	25	24,234	-49.5		08	6.8
25	25	25,434	-47.[illegible]		09	7.6
20	25	26,915	-45.4		08	9.2
15	21	28,847	-42.7		09	9.7
10	15	31,601	-38.4		09	10.6

DODGE CITY, KANS. 925 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	791	19.9	15.0	18	3.1
1000	31	115				
950	31	561				
900	31	1,032	20.6	13.8	20	[illegible].3
850	31	1,526	19.6	10.1	22	10.8
800	31	2,046	16.8	7.1	23	8.9
750	31	2,594	13.4	4.2	23	7.0
700	31	3,172	9.3	.5	22	6.2
650	31	3,780	5.2	-4.1	23	[illegible].2
600	31	4,432	1.3	-11.3	23	6.4
550	31	5,125	-2.9	-17.0	23	6.8
500	31	5,878	-7.2	-23.0	23	7.3
450	31	6,687	-12.5	-28.[illegible]	24	7.9
400	31	7,581	-18.8	-35.1	24	8.7
350	30	8,561	-25.9	-40.5	25	9.7
300	30	9,660	-34.4	-46.3	25	10.4
250	30	10,911	-43.9		25	12.5
200	30	12,374	-54.9		25	14.8
175	30	13,218	-60.0		25	14.7
150	30	14,171	-63.9		25	12.5
125	30	15,280	-66.6		25	8.7
100	30	16,629	-66.3		25	4.7
80	30	17,992	-62.8		21	.8
70	30	18,818	-60.3		08	[illegible]
60	30	19,784	-57.5		08	3.3
50	30	20,942	-54.9		08	4.1
40	30	22,376	-52.5		09	[illegible].4
30	28	24,244	-49.7		09	7.9
25	27	25,441	-47.9		08	[illegible].9
20	25	26,923	-45.2		08	10.4
15	23	28,854	-42.8		09	10.9
10	13	31,618	-38.1			

EL PASO, TEXAS 884 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1,193	19.8	14.7	09	.2
1000	31	113				
950	31	562				
900	31	1,034				
850	31	1,532	19.9	12.2	18	1.3
800	31	2,053	17.3	9.2	20	2.6
750	31	2,599	13.7	6.8	20	3.3
700	31	3,181	9.6	[illegible].9	18	2.4
650	31	3,789	5.1	.6	17	2.3
600	31	4,442	.9	-4.7	18	2.2
550	31	5,130	-3.2	-10.7	18	2.2
500	31	5,886	-7.6	-16.2	19	2.4
450	31	6,697	-12.5	-23.5	20	3.2
400	31	7,591	-18.3	-28.5	21	3.6
350	31	8,575	-25.2	-35.7	21	5.0
300	31	9,678	-33.3	-42.8	21	7.1
250	31	10,933	-43.4		22	7.8
200	30	12,399	-54.9		24	7.9
175	30	13,242	-60.[illegible]		25	7.5
150	30	14,190	-65.6		25	6.2
125	30	15,286	-69.5		24	3.5
100	30	16,616	-68.6		21	1.0
80	30	17,962	-65.7		08	4.0
70	30	18,778	-62.[illegible]		09	6.3
60	30	19,734	-60.0		09	8.6
50	30	20,880	-57.3		09	9.9
40	30	22,298	-54.9		09	11.5
30	30	24,150	-51.7		09	14.4
25	30	25,339	-49.3		09	15.7
20	29	26,812	-46.7		09	16.8
15	27	28,744	-43.0		09	17.7
10	21	31,509	-39.6		09	22.0
7	13	33,992	-35.2		09	24.3

ELY, NEV. 811 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1,908	9.4	3.9	20	2.9
1000	31	133				
950	31	568				
900	31	1,031				
850	31	1,519				
800	31	2,027	11.7	4.3	19	2.9
750	31	2,566	11.1	.7	20	3.3
700	31	3,141	7.4	-2.6	22	5.0
650	31	3,745	3.2	-6.4	23	6.8
600	31	4,392	-1.4	-10.3	23	7.5
550	31	5,071	-5.9	-16.2	23	7.9
500	31	5,821	-10.5	-22.6	24	9.3
450	31	6,621	-16.2	-27.9	24	11.1
400	31	7,502	-22.3	-34.4	24	13.2
350	31	8,470	-29.4	-40.5	23	14.4
300	31	9,553	-37.7	-46.6	23	15.4
250	31	10,787	-46.8		23	18.3
200	31	12,238	-55.5		23	20.0
175	31	13,084	-58.4		23	19.9
150	31	14,049	-60.5		24	16.2
125	31	15,180	-62.0		24	11.5
100	31	16,558	-62.4		23	5.2
80	31	17,940	-60.4		22	2.3
70	31	18,774	-58.9		15	.7
60	31	19,745	-57.0		08	2.2
50	30	20,902	-55.1		09	3.5
40	30	22,333	-53.2		08	5.2
30	30	24,197	-50.5		09	7.3
25	30	25,388	-49.1		09	7.7
20	30	26,861	-46.5		09	9.1
15	30	28,783	-43.4		08	10.3
10	29	31,541	-38.8		09	11.0
7	21	34,000	-35.6		10	14.4

EMPALME, MEXICO 1013 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	12	25.2	22.3	05	.9
1000	30	121	25.9	22.4	08	1.1
950	30	570	25.2	16.7	14	2.1
900	30	1,048	20.9	13.7	14	2.1
850	30	1,544	20.0	11.4	14	[illegible].4
800	30	2,064	16.8	8.0	13	1.9
750	30	2,608	13.5	4.3	13	2.7
700	30	3,189	9.7	-.1	14	2.5
650	30	3,799	5.7	-3.0	16	2.5
600	30	4,451	1.6	-6.7	18	2.1
550	30	5,145	-2.2	-12.3	19	1.7
500	30	5,898	-6.8	-17.4	19	1.5
450	30	[illegible],710	-12.1	-22.6	21	1.4
400	30	7,606	-17.5	-31.4	20	2.1
350	30	8,592	-24.2	-37.0	20	3.4
300	29	9,696	-32.4	-43.9	21	4.3
250	28	10,954	-42.4		21	5.8
200	28	12,421	-54.2		21	6.1
175	28	13,264	-60.4		22	5.3
150	28	14,211	-66.1		22	4.3
125	27	15,303	-70.2		24	2.4
100	26	16,630	-69.5		10	1.8
80	25	17,973	-65.1		09	6.9
70	25	18,788	-63.6		09	9.9
60	24	19,740	-60.4		09	11.8
50	23	20,882	-57.5		09	13.9
40	23	22,300	-54.6		09	15.1
30	23	24,155	-51.6		09	16.3
25	21	25,338	-48.8		09	18.0
20	20	26,814	-46.6		09	17.1
15	15	28,719	-44.0		09	19.6
10	6	31,473	-37.1			

* FAIRBANKS, ALASKA 997 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	135	10.6	8.0	36	1.2
1000	31	106			29	1.5
950	31	535	12.5	5.4	31	.8
900	31	988	[illegible].7	2.6	27	1.4
850	31	1,461	6.4	-.1	26	1.1
800	31	1,956	2.9	-2.8	27	.9
750	31	2,473	-.[illegible]	-6.3	24	1.1
700	31	3,024	-3.8	-11.5	26	.4
650	31	3,603	-7.2	-16.7	19	.2
600	31	4,227	-10.9	-22.3	15	.4
550	31	4,887	-15.1	-26.7	13	1.4
500	31	5,605	-20.0	-32.3	13	1.4
450	31	6,374	-25.4	-37.0	12	2.4
400	31	7,225	-31.7	-42.9	10	2.3
350	31	8,155	-39.0	-46.7	08	2.0
300	31	9,194	-46.9		09	1.1
250	30	10,386	-53.7		12	1.5
200	29	11,824	-51.3		32	1.3
175	28	12,694	-50.2		32	2.4
150	28	13,700	-50.2		31	2.3
125	28	14,891	-50.0		32	1.8
100	27	16,354	-49.7		32	.5
80	26	17,820	-49.3		33	.6
70	26	18,695	-48.9		02	.4
60	26	19,709	-48.6		08	1.0
50	26	20,908	-48.3		09	1.3
40	26	22,379	-47.7		08	1.7
30	25	24,277	-47.1		09	2.6
25	25	25,486	-46.[illegible]		10	2.5
20	23	26,978	-44.3		10	2.6
15	23	28,916	-41.4		10	3.3
10	20	31,701	-37.2		0[illegible]	3.2
7	12	34,161	-33.8			

FLINT, MICH. 990 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	234	16.0	14.9	22	1.1
1000	31	149				
950	31	590	17.8	12.7	27	4.4
900	31	1,050	15.6	[illegible].8	28	6.9
850	31	1,534	13.1	4.8	28	8.0
800	31	2,042	11.1	-1.7	28	9.2
750	31	2,577	8.[illegible]	-5.5	28	9.8
700	31	3,148	6.1	-10.4	28	10.7
650	31	3,748	2.9	-14.8	28	11.6
600	31	4,396	-.7	-18.3	28	13.2
550	31	5,078	-4.8	-22.8	28	13.8
500	31	5,830	-9.2	-26.4	28	15.2
450	31	6,630	-14.6	-31.1	28	15.7
400	31	7,520	-20.5	-36.6	28	17.0
350	31	8,495	-27.6	-42.0	28	18.9
300	31	9,586	-35.[illegible]	-47.4	28	20.9
250	31	10,829	-45.0		28	24.5
200	31	12,288	-54.5		28	27.2
175	31	13,135	-58.1		28	26.1
150	31	14,098	-61.4		28	23.6
125	31	15,224	-62.[illegible]		28	17.3
100	31	16,599	-61.6		28	11.2
80	31	17,988	-59.2		29	5.9
70	31	18,827	-57.5		31	3.2
60	31	19,806	-55.4		33	2.4
50	31	20,974	-53.2		05	2.0
40	31	22,420	-50.6		07	3.8
30	30	24,305	-48.3		08	4.4
25	30	25,510	-46.6		08	5.6
20	29	26,995	-44.4		09	6.2
15	27	28,932	-41.0		08	7.8
10	2[illegible]	31,703	-36.3		10	7.8
7	1[illegible]	34,165	-33.9			

FORT WORTH, TEXAS 996 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	180	23.7	20.6	18	2.1
1000	31	145				
950	31	594	23.0	17.9	20	8.6
900	31	1,065	21.5	14.2	20	8.5
850	31	1,559	18.8	10.7	20	6.3
800	31	2,077	15.6	6.3	20	4.6
750	31	2,618	12.3	1.6	21	4.5
700	31	3,198	8.[illegible]	-2.5	21	2.8
650	31	3,804	[illegible].1	-5.6	20	2.7
600	31	4,457	1.1	-10.4	19	3.3
550	31	5,146	-2.8	-15.1	17	3.4
500	31	5,901	-7.2	-19.3	18	2.9
450	31	6,712	-12.1	-25.1	17	2.3
400	31	7,607	-18.[illegible]	-30.1	16	1.8
350	31	8,592	-24.7	-37.4	16	1.0
300	31	9,696	-32.9	-45.4	27	.6
250	31	10,954	-43.0		28	2.2
200	30	12,417	-55.[illegible]		27	2.0
175	30	13,258	-61.0		27	1.2
150	30	14,203	-66.4		25	1.0
125	30	15,295	-70.2		27	.4
100	30	16,626	-68.4		09	1.6
80	29	17,973	-64.7		07	3.3
70	29	18,792	-62.3		08	5.0
60	29	19,751	-59.5		09	7.7
50	29	20,900	-56.6		09	9.0
40	29	22,324	-54.1		09	10.8
30	28	24,181	-50.9		09	12.2
25	27	25,371	-48.9		09	14.4
20	26	26,844	-46.5		09	16.3
15	22	28,775	-43.3		09	18.9
10	13	31,530	-37.[illegible]		09	17.6

See reference note at end of table

RAWINSONDE DATA

Average monthly values

GLASGOW, MONT. 934 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	696	12.6	8.2	09	2.1
1000	31	112				
950	31	546				
900	31	1,005	15.5	7.0	13	.5
850	31	1,490	13.9	4.5	28	1.7
800	31	1,999	11.0	1.3	28	2.9
750	31	2,530	7.7	-1.4	28	4.6
700	31	3,100	4.2	-4.8	28	6.7
650	31	3,695	.6	-8.6	27	8.2
600	31	4,338	-3.2	-12.3	27	9.8
550	31	5,014	-7.5	-17.7	27	10.9
500	31	5,758	-12.2	-22.0	27	12.2
450	31	6,548	-17.6	-28.2	26	13.0
400	31	7,428	-23.7	-34.2	26	14.3
350	31	[illegible],389	-31.1	-41.2	26	15.4
300	31	9,463	-39.5	-47.0	26	18.1
250	31	10,685	-48.9		26	21.3
200	31	12,122	-56.3		26	24.6
175	31	12,971	-55.6		26	23.9
150	31	13,952	-55.7		26	20.1
125	31	15,111	-56.5		26	15.0
100	31	16,524	-56.9		26	10.4
80	31	17,941	-56.1		27	5.5
70	31	18,790	-55.3		28	3.1
60	31	19,775	-54.2		33	1.3
50	31	20,948	-52.8		04	1.2
40	31	22,394	-50.9		08	2.2
30	29	24,277	-48.2		06	[illegible].7
25	28	25,481	-46.6		08	3.9
20	27	26,969	-44.3		09	4.5
15	25	28,909	-41.5		08	4.8
10	21	31,674	-37.1		08	6.6
7	11	34,168	-33.6			
5						

GRAND JUNCTION, COLO. 854 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1,474	15.9	[illegible].4	12	3.1
1000	31	109				
950	31	553				
900	31	1,022				
850	31	1,516			12	2.9
800	31	2,033	16.0	4.7	15	4.0
750	31	2,575	12.9	1.6	21	3.3
700	31	3,156	8.8	-.8	24	4.7
650	31	3,760	4.6	-4.4	24	5.8
600	31	4,412	-.4	-7.2	24	5.9
550	31	5,094	-4.6	-13.7	24	6.6
500	31	5,847	-9.1	-19.8	24	8.1
450	31	[illegible],653	-14.1	-26.2	24	8.1
400	31	7,541	-19.8	-31.3	24	10.0
350	31	8,517	-27.1	-38.6	25	12.9
300	31	9,609	-35.9	-46.1	24	15.0
250	31	10,850	-45.4		24	17.0
200	31	12,304	-55.0		24	20.8
175	31	13,149	-58.9		24	19.9
150	31	14,108	-62.5		24	16.9
125	31	15,225	-64.3		24	12.1
100	31	16,589	-64.1		24	5.3
80	30	17,961	-61.3		24	2.5
70	29	18,795	-59.4		15	.9
60	29	19,764	-57.3		08	2.1
50	27	20,920	-55.2		08	3.7
40	27	22,352	-52.5		09	5.2
30	26	24,224	-49.5		09	6.6
25	23	25,423	-47.6		09	7.4
20	22	26,903	-45.6		08	8.8
15	19	28,830	-42.8		09	9.0
10	14	31,597	-38.1			

* GREAT FALLS, MONT. 888 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1,123	12.5	5.7	23	2.2
1000	31	109				
950	31	552				
900	31	1,011				
850	31	1,491	13.9	3.2	25	4.3
800	31	2,000	11.2	.7	26	3.6
750	31	2,537	7.5	-1.5	26	4.1
700	31	3,100	3.6	-4.2	25	5.3
650	31	3,695	-.1	-8.5	26	6.8
600	31	4,335	-4.2	-13.5	25	7.7
550	31	5,010	-8.4	-19.4	25	10.0
500	31	5,748	-13.3	-23.2	25	10.5
450	31	6,540	-18.6	-28.9	25	11.7
400	31	7,410	-24.8	-34.6	25	13.1
350	31	8,367	-32.2	-42.3	25	14.9
300	31	9,437	-40.5	-49.7	24	17.[illegible]
250	31	10,654	-49.6		24	18.7
200	31	12,090	-55.3		24	21.1
175	31	12,941	-55.4		24	19.9
150	31	13,925	-55.2		25	16.9
125	31	15,086	-56.1		25	13.6
100	31	16,502	-56.5		25	8.4
80	31	17,920	-55.7		26	3.8
70	31	18,771	-55.1		25	1.9
60	31	19,757	-53.9		27	.7
50	31	20,931	-52.6		08	.8
40	31	22,379	-50.6		10	1.3
30	31	24,264	-48.1		08	2.3
25	31	25,469	-46.5		09	3.4
20	28	26,954	-44.5		07	4.6
15	25	28,893	-41.5		08	5.0
10	20	31,664	-37.1		08	6.2
7	13	34,170	-33.1		08	7.1
5	6	36,515	-28.4			

GREEN BAY, WIS. 992 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	210	14.8	12.9	26	1.4
1000	31	140				
950	31	582	17.2	11.1	27	4.0
900	31	1,039	15.4	7.3	28	6.0
850	31	1,522	13.1	4.2	27	6.8
800	31	2,031	10.6	-.4	27	[illegible].2
750	31	2,565	8.5	-6.7	27	9.4
700	31	3,135	5.6	-10.2	27	10.[illegible]
650	31	3,736	2.4	-14.4	28	11.3
600	31	4,381	-1.1	-17.6	28	13.0
550	31	5,061	-5.4	-21.6	28	14.3
500	31	5,813	-10.0	-26.3	28	16.0
450	31	6,614	-15.5	-31.3	28	16.8
400	31	7,498	-21.5	-36.6	28	17.9
350	31	8,470	-28.6	-43.5	28	21.2
300	31	9,558	-36.5	-48.2	28	23.7
250	31	10,798	-45.8		28	27.[illegible]
200	31	12,254	-55.0		28	29.[illegible]
175	31	13,101	-58.0		28	27.7
150	31	14,067	-60.0		28	23.9
125	31	15,202	-61.3		28	17.[illegible]
100	31	16,587	-60.2		29	11.6
80	31	17,983	-58.6		29	6.9
70	31	18,825	-56.9		30	4.3
60	31	19,807	-54.9		33	2.4
50	31	20,979	-52.6		01	1.8
40	31	22,429	-50.2		07	3.[illegible]
30	31	24,318	-47.9		08	4.[illegible]
25	31	25,525	-46.4		08	5.0
20	31	27,014	-44.4		08	5.[illegible]
15	31	28,953	-41.5		09	6.[illegible]
10	29	31,724	-37.0		09	8.1
7	18	34,198	-33.8		07	5.7
5	6	36,573	-29.0			

GREENSBORO, N. C. 988 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	273	20.2	18.1	29	.5
1000	31	166				
950	31	613	22.7	16.4	33	2.4
900	31	1,082	20.3	12.[illegible]	33	3.3
850	31	1,574	17.5	9.5	31	3.7
800	31	2,091	14.7	5.0	30	4.6
750	31	2,635	11.8	.5	29	5.1
700	31	3,209	8.5	-4.1	29	4.9
650	31	3,816	4.7	-7.4	28	[illegible]
600	31	4,466	.9	-12.5	28	[illegible].2
550	31	5,157	-2.6	-19.6	28	5.3
500	31	5,911	-6.9	-24.2	29	5.0
450	31	6,723	-12.0	-28.1	28	4.3
400	31	7,617	-17.7	-34.0	29	4.4
350	31	[illegible],603	-24.6	-39.4	28	4.9
300	31	9,707	-32.8	-47.[illegible]	28	5.8
250	31	10,965	-42.8		28	[illegible].2
200	31	12,433	-54.2		28	7.9
175	31	13,278	-59.8		29	6.5
150	31	14,230	-64.8		29	6.1
125	31	15,331	-68.7		28	3.8
100	31	16,668	-67.4		29	2.6
80	30	18,027	-63.5		06	1.2
70	30	18,852	-60.7		06	2.9
60	30	19,817	-57.7		08	4.7
50	28	20,974	-54.9		08	6.[illegible]
40	26	22,407	-52.2		09	[illegible].2
30	26	24,262	-48.8		09	9.7
25	26	25,484	-46.9		10	11.0
20	22	26,964	-45.2		10	11.5
15	15	28,881	-43.0		09	13.5
10	6	31,613	-39.2			

* GUAM, MARIANA IS. 998 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	111	25.1	23.9	16	.4
1000	31	[illegible]				
950	31	542	23.7	22.1	19	.8
900	31	1,013	21.1	18.7	25	.8
850	31	1,507	18.3	14.8	29	.7
800	31	2,026	15.4	11.3	31	.9
750	31	2,568	12.5	7.5	28	.4
700	31	3,148	9.7	3.4	18	.3
650	31	3,760	6.2	-.6	08	.3
600	31	4,412	2.3	-3.4	15	.7
550	31	5,110	-1.5	-7.3	11	1.7
500	31	[illegible],865	-5.[illegible]	-12.3	10	2.3
450	31	6,685	-10.[illegible]	-16.7	10	3.[illegible]
400	31	7,583	-15.6	-22.8	10	3.4
350	31	8,577	-22.[illegible]	-30.8	10	3.0
300	31	9,691	-30.6	-39.9	08	4.7
250	31	10,957	-41.0	-47.2	07	5.9
200	31	12,431	-53.9		06	7.3
175	31	13,273	-61.3		06	8.0
150	31	14,211	-69.3		06	8.3
125	30	15,277	-77.2		06	8.8
100	28	16,545	-77.[illegible]		08	12.1
80	26	17,840	-72.9		09	16.9
70	24	18,629	-68.6		09	17.1
60	22	19,561	-65.4		09	18.5
50	21	20,678	-62.[illegible]		09	22.[illegible]
40	18	22,073	-58.7		09	28.1
30	18	23,900	-54.3		09	30.9
25	18	25,075	-52.0		09	32.1
20	18	26,529	-49.5		09	29.6
15	16	28,427	-46.7		09	26.2
10	16	31,145	-42.7		09	19.4
7	14	33,569	-38.3		09	21.3
5	11	35,904	-35.2		09	26.1
4	6	37,448	-34.0			

HILO, HAWAII 1015 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	11	22.[illegible]	19.7	23	2.0
1000	31	141	23.3	20.3	25	1.3
950	31	588	20.3	18.1	09	2.4
900	31	1,054	17.0	15.0	09	3.6
850	31	1,541	14.2	11.5	09	4.4
800	31	2,052	11.8	7.7	09	4.2
750	31	[illegible],595	10.[illegible]	.2	10	3.9
700	31	3,164	[illegible].3	-9.4	10	3.2
650	31	3,772	5.6	-13.3	08	2.4
600	31	4,424	2.0	-15.5	09	1.2
550	31	5,117	-2.0	-19.2	19	.7
500	31	5,873	-6.6	-22.7	25	2.3
450	31	6,686	-11.[illegible]	-27.4	25	3.8
400	31	7,582	-17.[illegible]	-32.7	25	6.6
350	31	8,568	-24.7	-38.8	26	9.3
300	31	9,672	-33.1	-47.0	26	12.1
250	31	10,927	-43.1		26	15.[illegible]
200	31	12,393	-54.9		26	18.9
175	31	13,234	-61.3		25	20.2
150	31	14,176	-67.8		25	18.5
125	31	15,258	-72.1		25	12.1
100	31	16,578	-70.9		18	1.3
80	31	17,904	-69.0		09	9.5
70	31	18,706	-66.1		09	13.7
60	31	19,647	-63.0		09	16.3
50	31	20,777	-59.8		09	19.2
40	31	22,183	-56.6		09	20.9
30	30	24,022	-53.1		09	23.1
25	30	25,202	-51.0		09	22.9
20	30	26,662	-48.8		09	23.7
15	29	28,563	-46.0		09	23.9
10	21	31,293	-41.0		09	23.8
7	7	33,734	-37.5			

HUNTINGTON W. VA. 991 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	246	18.5	17.5	18	1.1
1000	31	169				
950	31	613	21.0	16.4	27	2.5
900	31	1,080	18.5	13.6	29	4.5
850	31	1,568	15.8	10.4	28	6.0
800	31	2,082	13.4	4.8	28	6.6
750	31	2,618	11.0	-1.2	28	7.0
700	31	3,197	7.9	-4.7	28	7.8
650	31	3,798	4.5	-8.9	27	7.7
600	31	4,452	.7	-13.8	27	[illegible].7
550	31	5,136	-3.2	-18.8	27	8.9
500	31	[illegible],895	-7.5	-24.0	28	8.7
450	31	6,699	-12.7	-28.5	28	8.8
400	31	7,597	-18.6	-33.2	28	8.1
350	31	8,580	-25.4	-40.2	28	9.1
300	31	9,680	-33.6	-47.3	28	9.9
250	31	10,934	-43.4		28	12.[illegible]
200	31	12,400	-54.2		28	13.3
175	31	13,246	-59.5		28	13.8
150	31	14,200	-63.9		28	12.1
125	31	15,307	-66.8		28	[illegible].9
100	31	16,657	-65.4		28	4.[illegible]
80	31	18,026	-61.6		33	2.0
70	31	18,858	-59.3		04	1.[illegible]
60	31	19,831	-56.5		06	3.5
50	30	20,994	-53.7		08	4.[illegible]
40	30	22,436	-51.2		09	6.2
30	30	24,318	-48.3		08	7.5
25	28	25,524	-46.5		09	8.6
20	28	27,012	-44.5		09	9.5
15	27	28,952	-41.3		09	12.2
10	20	31,738	-36.8		09	13.8
7	5	34,144	-35.1			

* INTERNATIONAL FALLS, MINN. 973 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	360	12.1	9.6	19	.6
1000	31	125				
950	31	556	13.7	10.3	21	1.7
900	31	1,012	13.0	8.0	25	4.4
850	31	1,491	10.4	5.0	26	5.7
800	31	1,995	8.3	1.4	27	6.8
750	31	2,520	5.9	-2.9	26	[illegible].6
700	31	3,088	2.5	-7.3	27	10.0
650	31	3,677	-.9	-11.5	27	11.7
600	31	4,319	-4.5	-16.5	27	14.1
550	31	4,991	-8.7	-21.8	27	15.6
500	31	5,733	-13.0	-26.3	27	17.6
450	31	6,521	-17.8	-30.7	27	18.9
400	31	7,401	-23.8	-36.7	28	21.4
350	31	8,361	-30.9	-43.3	27	24.3
300	31	9,437	-38.8	-49.1	27	28.2
250	30	10,659	-47.7		27	31.6
200	30	12,105	-54.6		27	29.9
175	30	12,956	-55.9		27	25.3
150	30	13,935	-56.3		27	21.6
125	30	15,092	-56.5		28	17.[illegible]
100	30	16,508	-56.3		28	11.5
80	30	17,925	-55.7		29	[illegible].0
70	29	18,781	-54.6		29	[illegible]
60	29	19,772	-53.3		30	3.2
50	29	20,949	-51.8		02	1.2
40	29	22,401	-49.7		06	1.6
30	29	24,293	-47.3		09	[illegible].5
25	29	25,502	-46.1		08	3.0
20	29	26,991	-44.0		08	3.9
15	23	28,929	-41.5		08	3.9
10	20	31,719	-37.2		09	[illegible].5
7	13	34,184	-33.3		08	6.6

JACKSON, MISS. 1007 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	94	22.1	20.9	15	.3
1000	31	157	22.5	20.3	17	.4
950	31	605	22.8	17.[illegible]	24	[illegible].5
900	31	1,078	20.0	14.4	22	1.4
850	31	1,570	17.1	10.1	20	[illegible].2
800	31	2,085	14.1	5.7	19	[illegible].4
750	31	[illegible],623	11.3	1.5	18	1.6
700	31	3,202	7.9	-1.9	18	[illegible].2
650	31	3,805	4.1	-4.9	17	1.1
600	31	4,459	.7	-8.7	16	[illegible].1
550	31	5,148	-3.2	-13.2	14	1.4
500	31	5,903	-7.6	-18.1	13	1.[illegible]
450	31	6,709	-12.4	-24.1	10	1.4
400	31	7,608	-18.2	-29.4	07	1.3
350	31	8,592	-25.2	-36.4	06	1.7
300	31	9,693	-33.4	-45.5	06	[illegible].4
250	31	10,946	-43.6		04	2.7
200	31	12,407	-55.2		04	3.9
175	31	13,248	-60.8		04	4.1
150	31	14,194	-66.2		05	3.4
125	31	15,289	-69.5		08	2.5
100	31	16,623	-68.1		08	2.8
80	31	17,971	-64.6		08	4.1
70	31	18,792	-61.9		08	5.5
60	31	19,753	-58.7		09	7.4
50	31	20,905	-56.0		09	9.3
40	31	22,330	-54.0		09	11.4
30	31	24,190	-50.8		09	13.4
25	31	25,383	-48.6		09	15.2
20	29	26,856	-46.3		09	15.7
15	28	28,781	-43.4		09	17.2
10	11	31,526	-39.0			

JACKSONVILLE, FLA. 1018 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	5	23.3	22.6	29	.4
1000	31	163	24.[illegible]	22.3	25	.7
950	31	610	23.3	18.1	18	.6
900	31	1,086	20.8	14.8	11	1.5
850	31	1,579	17.9	11.3	12	2.0
800	31	2,095	14.7	7.8	12	2.6
750	31	2,638	11.5	3.2	11	2.8
700	31	3,213	8.3	-1.3	11	2.6
650	31	3,817	4.7	-6.3	10	2.3
600	31	4,471	1.1	-10.3	11	2.2
550	31	5,161	-2.[illegible]	-14.9	10	2.1
500	31	5,916	-7.3	-21.4	09	2.0
450	31	6,723	-11.9	-26.5	09	2.2
400	31	7,623	-17.9	-33.5	10	2.5
350	31	8,608	-24.9	-38.9	12	3.8
300	31	9,710	-33.1	-47.6	12	3.8
250	31	10,966	-42.[illegible]		11	4.1
200	31	12,434	-54.2		11	4.7
175	31	13,279	-60.1		12	4.2
150	31	14,227	-65.4		09	3.4
125	31	15,324	-69.[illegible]		09	4.7
100	31	16,654	-69.3		08	3.9
80	31	18,000	-64.[illegible]		08	6.5
70	31	18,820	-61.[illegible]		08	7.6
60	31	19,780	-59.2		08	10.4
50	31	20,928	-56.3		09	12.5
40	31	22,356	-52.[illegible]		09	13.5
30	29	24,226	-49.9		09	14.6
25	28	25,427	-48.1		09	15.7
20	26	26,915	-45.7		08	17.9
15	20	28,837	-42.8		09	20.7
10	9	31,571	-38.4			
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JOHN F. KENNEDY INT. AP NY 1017 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	5	21.3	15.6	32	[illegible].3
1000	30	151	20.7	14.6	31	3.0
950	30	596	19.0	12.1	31	4.4
900	30	1,057	16.[illegible]	9.4	31	5.3
850	30	1,542	13.9	7.0	30	7.2
800	30	2,052	11.5	2.3	29	8.9
750	30	2,588	9.3	-2.[illegible]	29	10.8
700	30	3,159	6.8	-7.7	29	12.4
650	30	3,761	4.1	-12.[illegible]	29	12.3
600	30	4,412	.6	-17.[illegible]	29	13.6
550	30	5,097	-3.4	-21.[illegible]	29	13.8
500	30	5,854	-8.2	-24.1	28	15.0
450	30	6,658	-13.3	-28.2	28	16.4
400	30	7,552	-19.1	-33.9	27	17.7
350	30	8,533	-26.[illegible]	-39.7	27	19.3
300	30	9,631	-33.9	-47.2	27	21.3
250	30	10,883	-43.6		27	24.3
200	30	12,348	-54.[illegible]		28	25.1
175	30	13,193	-59.1		28	26.3
150	30	14,150	-63.[illegible]		28	22.4
125	30	15,266	-64.4		28	17.1
100	30	16,631	-63.3		28	11.9
80	30	18,013	-59.6		30	5.4
70	30	18,851	-57.7		32	2.7
60	30	19,830	-55.3		05	1.3
50	30	20,998	-53.1		08	3.7
40	30	22,444	-50.6		09	5.2
30	30	24,331	-47.6		09	7.1
25	28	25,538	-45.8		09	6.8
20	25	27,031	-43.3		09	7.8
15	22	28,979	-40.2		10	8.6
10	12	31,763	-36.5			

JOHNSTON IS., PACIFIC AREA 1013 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	3	26.8	23.1	09	6.9
1000	31	116	25.8	22.7	09	7.8
950	31	568	22.4	20.2	09	8.[illegible]
900	31	1,038	19.6	16.2	09	9.0
850	31	1,529	16.8	13.3	09	[illegible].1
800	31	2,045	14.2	9.1	09	7.1
750	31	2,588	11.9	4.1	09	5.5
700	31	3,165	9.1	-.9	09	4.6
650	31	3,775	5.9	-4.6	09	4.3
600	31	4,427	1.7	-7.5	08	4.2
550	31	5,116	-2.4	-12.0	09	2.[illegible]
500	31	5,876	-6.5	-18.9	08	1.8
450	31	6,688	-11.1	-26.3	05	1.1
400	31	7,590	-16.7	-32.7	32	1.0
350	31	8,580	-23.7	-39.6	27	2.0
300	31	9,689	-32.3	-46.7	29	4.9
250	31	10,949	-42.4		29	[illegible].2
200	31	12,418	-54.5		28	[illegible].3
175	31	13,260	-61.5		27	9.[illegible]
150	30	14,200	-68.9		27	10.1
125	29	15,277	-74.5		26	7.5
100	29	16,580	-72.4		09	.7
80	28	17,899	-70.1		09	10.6
70	28	18,697	-67.5		09	14.1
60	28	19,632	-64.1		09	17.8
50	27	20,755	-60.3		09	19.7
40	26	22,160	-57.1		09	22.9
30	26	23,995	-53.6		09	25.3
25	26	25,174	-51.3		09	26.0
20	24	26,624	-49.3		09	25.5
15	22	28,519	-46.6		09	23.7
10	15	31,242	-41.8		09	22.9

KEY WEST, FLA. 1015 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	3	26.8	21.7	11	1.4
1000	30	139	25.8	21.5	11	2.2
950	30	583	22.2	19.6	12	3.7
900	30	1,059	19.6	15.1	13	3.7
850	30	1,550	16.9	10.9	13	3.2
800	30	2,066	13.9	6.8	13	2.7
750	30	2,603	10.9	2.1	12	2.5
700	30	3,181	7.9	-1.3	11	2.6
650	30	3,785	4.4	-5.0	12	3.5
600	30	4,438	.9	-10.0	11	3.6
550	30	5,128	-3.1	-15.7	11	3.8
500	30	5,881	-7.7	-20.3	10	2.7
450	30	6,684	-12.8	-24.9	09	3.2
400	30	7,583	-18.8	-32.0	08	4.1
350	30	8,564	-25.8	-38.3	08	4.4
300	30	9,662	-34.1	-46.1	07	5.1
250	30	10,912	-44.2		06	5.7
200	30	12,369	-55.9		06	6.5
175	30	13,208	-61.5		06	6.5
150	30	14,151	-66.6		07	5.3
125	30	15,245	-69.9		08	6.2
100	30	16,569	-70.1		09	7.0
80	30	17,907	-66.8		08	9.4
70	30	18,716	-65.3		08	11.9
60	30	19,661	-62.3		09	14.6
50	30	20,797	-58.8		09	17.1
40	30	22,209	-55.7		09	17.9
30	30	24,059	-51.4		09	18.4
25	29	25,250	-49.1		09	19.4
20	29	26,720	-47.5		09	19.2
15	27	28,633	-44.3		09	23.7
10	20	31,382	-40.0		09	26.9
7	11	33,810	-36.8			

KING SALMON, ALASKA 1010 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	15	10.2	5.6	20	.5
1000	31	94			18	1.3
950	31	519	10.1	5.9	15	1.4
900	31	972	7.7	3.9	13	1.4
850	31	1,441	4.8	1.7	14	1.9
800	31	1,934	2.1	-1.5	15	2.6
750	31	2,451	-.7	-6.0	16	2.3
700	31	3,003	-3.5	-10.8	16	2.8
650	31	3,584	-6.6	-13.2	16	3.2
600	31	4,208	-10.2	-17.0	17	2.[illegible]
550	31	4,870	-14.0	-22.4	18	2.7
500	31	5,593	-18.4	-27.6	19	3.2
450	31	6,366	-23.4	-33.4	19	3.0
400	31	7,226	-29.5	-38.0	20	3.2
350	31	8,165	-36.7	-43.1	21	3.6
300	31	9,215	-44.4		22	4.5
250	31	10,420	-50.2		24	5.1
200	31	11,879	-49.3		26	6.8
175	31	12,754	-49.7		27	6.8
150	31	13,761	-50.0		26	5.4
125	31	14,952	-50.3		27	4.[illegible]
100	31	16,407	-50.3		28	3.4
80	31	17,863	-50.0		27	2.[illegible]
70	31	18,736	-49.9		27	1.5
60	31	19,744	-49.7		23	.6
50	31	20,938	-49.5		06	.3
40	30	22,401	-49.1		07	1.1
30	30	24,294	-47.5		08	2.5
25	27	25,505	-46.1		09	3.5
20	22	26,992	-44.9		10	2.9
15	17	28,924	-42.7		10	3.5
10	11	31,679	-39.7			

See reference note at end of table

RAWINSONDE DATA

Average monthly values

AUGUST 1968

+ KOROR, CAROLINE IS. 1007 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	30	28.2	24.4	22	1.7
1000	31	94	27.7	23.8	22	1.9
950	31	542	23.9	19.7	23	3.7
900	31	1,020	20.9	16.0	24	4.2
850	31	1,513	18.1	11.9	24	4.1
800	31	2,031	15.5	7.6	25	2.4
750	31	2,571	12.8	4.5	23	2.1
700	31	3,154	9.7	1.1	21	1.3
650	31	3,761	6.5	-2.2	19	1.8
600	31	4,420	2.7	-6.2	16	1.7
550	31	5,115	-1.2	-10.5	13	1.8
500	31	5,875	-5.4	-14.6	12	2.8
450	31	6,694	-10.0	-20.1	11	4.1
400	31	7,597	-15.5	-26.3	10	6.0
350	31	8,592	-22.2	-34.5	09	7.4
300	31	9,707	-30.4	-43.1	08	[illegible].8
250	31	10,976	-40.6	-52.1	07	13.0
200	31	12,455	-53.0		07	17.4
175	31	13,302	-60.1		07	18.6
150	31	14,247	-67.4		07	18.6
125	31	15,324	-75.0		07	16.0
100	31	16,601	-77.5		08	13.9
80	31	17,903	-70.8		09	12.7
70	31	18,699	-67.4		09	13.3
60	31	19,633	-64.7		09	15.3
50	31	20,753	-62.2		09	20.[illegible]
40	31	22,143	-58.4		09	29.8
30	31	23,975	-52.8		09	36.6
25	31	25,162	-48.9		09	33.5
20	28	26,640	-44.8		09	22.3
15	27	28,579	-41.9		10	7.3
10	23	31,338	-39.1		08	7.[illegible]
7	12	33,783	-36.2			
5						

KOTZEBUE, ALASKA 1011 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	16	5	12.8	10.6	31	1.2
1000	16	92	12.7	9.2	30	1.2
950	16	515	11.2	6.7	18	.7
900	16	973	9.2	3.4	20	1.5
850	16	1,445	6.3	.6	18	2.5
800	16	1,940	3.5	-2.9	18	3.4
750	16	2,459	.8	-7.3	17	4.0
700	16	3,013	-2.8	-9.7	16	4.2
650	16	3,591	-6.6	-12.5	17	4.5
600	16	4,218	-10.1	-19.7	16	4.7
550	16	4,879	-14.4	-23.5	16	4.1
500	16	5,601	-18.9	-28.8	15	5.1
450	16	6,372	-24.1	-35.0	17	5.3
400	16	7,228	-30.2	-38.5	18	5.8
350	16	8,165	-37.2	-45.9	19	6.0
300	16	9,212	-45.1		19	5.5
250	16	10,406	-53.0		18	5.8
200	16	11,838	-51.9		16	3.8
175	15	12,697	-49.7		17	3.5
150	15	13,706	-49.6		14	2.4
125	15	14,899	-49.6		13	1.5
100	15	16,360	-49.4		13	1.5
80	13	17,833	-49.2		11	2.1
70	13	18,708	-49.0		11	2.5
60	13	19,722	-48.5		11	3.0
50	13	20,922	-48.2		11	2.0
40	13	22,392	-48.1		07	3.1
30	13	24,290	-47.2		09	3.4
25	12	25,502	-46.0		09	3.4
20	12	26,992	-44.3		10	4.0
15	7	28,942	-41.4			

KWAJALEIN, MARSHALL IS. 1011 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	4	27.6	24.4	11	1.8
1000	31	98	27.0	23.7	11	1.7
950	31	551	23.9	21.1	11	2.1
900	31	1,023	21.0	17.2	11	3.2
850	31	1,518	18.5	14.3	10	3.5
800	31	2,037	16.0	11.5	09	3.6
750	31	2,584	13.4	7.1	09	4.0
700	31	3,163	10.4	2.7	09	4.9
650	31	3,777	6.5	-1.2	09	5.3
600	31	4,430	2.6	-4.[illegible]	09	5.1
550	31	5,130	-1.1	-9.7	10	5.2
500	31	5,885	-5.4	-13.8	10	4.7
450	31	6,704	-10.4	-19.9	10	4.4
400	31	7,602	-16.0	-26.6	09	4.4
350	31	8,595	-22.8	-34.[illegible]	08	4.3
300	31	9,707	-31.2	-41.6	09	3.8
250	31	10,972	-41.1	-49.5	09	4.1
200	31	12,448	-53.8	-61.2	09	3.8
175	31	13,291	-61.2	-68.3	09	3.3
150	31	14,231	-68.8		06	2.0
125	27	15,306	-75.6		35	2.3
100	24	16,586	-78.3		10	5.2
80	21	17,878	-73.3		09	10.6
70	21	18,668	-69.4		09	12.1
60	21	19,594	-66.2		09	16.0
50	21	20,709	-62.9		09	21.0
40	20	22,097	-59.9		09	27.3
30	19	23,914	-54.6		09	34.4
25	19	25,089	-51.8		09	33.1
20	18	26,543	-47.6		09	24.2
15	16	28,459	-44.4		10	14.5
10	14	31,191	-40.4		08	7.8
7	12	33,628	-37.4		09	12.7
5	5	35,936	-35.6			

LAKE CHARLES, LA. 1017 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	5	23.1	22.2	05	1.4
1000	31	152	25.1	22.1	12	1.3
950	31	598	22.5	18.7	19	2.7
900	31	1,072	19.8	14.3	18	3.2
850	31	1,564	17.1	9.8	17	3.1
800	31	2,080	14.4	4.8	16	2.5
750	31	2,620	11.4	1.4	15	2.3
700	31	3,196	8.0	-2.6	15	2.2
650	31	3,802	4.4	-6.2	13	2.0
600	31	4,452	.8	-9.6	11	1.6
550	31	5,142	-2.9	-16.2	08	[illegible].6
500	31	5,897	-7.3	-21.5	08	2.3
450	31	6,707	-12.4	-25.9	08	2.0
400	31	7,602	-18.0	-32.0	07	2.2
350	31	8,586	-24.7	-37.6	08	2.6
300	31	9,690	-33.0	-45.6	07	2.7
250	31	10,946	-43.0		08	3.5
200	31	12,413	-54.5		07	5.3
175	31	13,257	-60.2		07	5.5
150	31	14,206	-65.7		07	[illegible].6
125	31	15,302	-69.6		08	3.9
100	31	16,636	-68.4		08	3.6
80	31	17,985	-65.2		09	6.0
70	30	18,798	-62.7		09	7.3
60	30	19,755	-60.1		08	9.2
50	30	20,900	-57.1		08	11.2
40	29	22,320	-54.4		09	13.7
30	28	24,173	-51.2		09	15.8
25	27	25,363	-49.3		09	16.9
20	27	26,832	-47.1		09	17.7
15	23	28,749	-43.3		08	19.9
10	15	31,495	-38.8		09	24.1
7	7	33,966	-34.7			

LANDER, WYO. 831 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1,696	12.6	4.4	24	2.0
1000	31	108				
950	31	547				
900	31	1,012				
850	31	1,504				
800	31	2,017	13.9	2.0	29	2.0
750	31	2,557	11.5	-.9	27	2.6
700	31	3,133	7.7	-3.6	26	5.4
650	31	3,737	3.2	-6.8	26	7.7
600	31	4,383	-1.4	-11.2	25	9.7
550	31	5,062	-5.9	-16.5	24	9.5
500	31	5,812	-11.0	-22.4	24	11.1
450	31	6,607	-16.3	-27.5	24	13.3
400	31	7,492	-22.5	-33.9	25	14.9
350	31	8,458	-29.7	-39.3	25	16.3
300	31	9,539	-38.1	-46.7	25	18.4
250	31	10,770	-47.2		25	22.4
200	31	12,217	-55.4		25	24.6
175	31	13,064	-57.9		24	23.9
150	31	14,030	-60.0		24	18.9
125	31	15,165	-61.1		24	13.1
100	31	16,548	-61.4		24	6.8
80	31	17,937	-59.8		25	3.2
70	31	18,774	-58.1		21	.8
60	31	19,750	-56.2		08	1.7
50	31	20,912	-54.6		08	2.8
40	31	22,348	-52.1		08	4.1
30	30	24,220	-49.2		08	5.0
25	29	25,419	-47.7		08	6.3
20	29	26,898	-45.5		09	6.5
15	27	28,829	-42.6		09	7.9
10	21	31,587	-38.0		09	8.3
7	10	34,081	-34.0		11	7.8

* LIHUE KAUAI, HAWAII 1013 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	36	24.7	21.5	06	4.[illegible]
1000	31	148	24.3	20.9	07	5.7
950	31	592	20.8	19.0	07	7.6
900	31	1,064	17.4	14.5	08	7.8
850	31	1,551	14.5	11.2	08	8.3
800	31	2,062	12.1	[illegible]	08	7.5
750	31	2,600	10.6	-2.2	08	6.7
700	31	3,176	9.0	-9.3	08	4.2
650	31	3,784	5.6	-13.2	09	2.9
600	31	4,436	1.7	-16.4	09	1.5
550	31	5,125	-2.8	-20.[illegible]	11	.[illegible]
500	31	5,881	-7.5	-25.[illegible]	30	.8
450	31	6,690	-12.9	-29.4	28	2.8
400	31	7,583	-19.0	-34.5	27	5.3
350	31	8,563	-26.1	-39.[illegible]	27	[illegible].7
300	31	9,659	-34.6	-46.5	27	13.0
250	31	10,907	-44.7		27	18.6
200	31	12,361	-56.2		26	22.8
175	30	13,198	-62.0		26	23.1
150	30	14,140	-67.0		26	19.5
125	30	15,232	-69.1		26	10.[illegible]
100	30	16,568	-68.8		19	1.3
80	30	17,908	-67.2		08	9.5
70	30	18,715	-65.3		09	13.1
60	30	19,659	-62.1		09	15.[illegible]
50	30	20,794	-59.2		09	18.1
40	30	22,201	-56.6		09	19.9
30	29	24,039	-53.2		09	22.0
25	28	25,221	-51.3		09	22.[illegible]
20	27	26,678	-49.1		09	22.[illegible]
15	26	28,574	-46.7		09	24.5
10	25	31,286	-42.7		09	25.8
7	23	33,718	-38.2		09	29.9
5	16	36,053	-33.8		09	30.7
4	[illegible]	37,597	-32.3			

LITTLE ROCK, ARK. 1009 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	79	22.7	19.9	22	1.0
1000	31	152	22.9	19.9	23	1.4
950	31	598	22.8	18.5	23	4.3
900	31	1,073	20.5	15.3	23	4.4
850	31	1,566	17.7	11.9	24	3.5
800	31	2,083	14.5	7.9	24	2.6
750	31	2,621	11.6	3.7	24	2.2
700	31	3,202	8.4	-.5	22	2.1
650	31	3,805	4.9	-4.5	21	2.0
600	31	4,461	1.0	-7.8	21	2.1
550	31	5,149	-3.0	-12.9	23	1.7
500	31	5,907	-7.3	-18.2	23	2.1
450	31	6,714	-12.2	-24.5	23	1.8
400	31	7,613	-18.0	-31.6	22	1.7
350	31	8,598	-24.9	-38.1	25	1.2
300	31	9,701	-33.2	-45.4	29	2.3
250	31	10,957	-43.0		30	4.3
200	31	12,424	-54.3		30	4.[illegible]
175	31	13,269	-60.0		30	4.3
150	31	14,219	-65.3		31	3.0
125	31	15,318	-69.0		29	1.2
100	31	16,652	-68.0		04	1.0
80	30	18,007	-63.4		07	2.6
70	30	18,832	-60.6		08	3.6
60	30	19,799	-58.1		08	4.7
50	30	20,953	-55.9		08	6.8
40	30	22,382	-53.5		09	9.4
30	29	24,247	-49.5		09	10.8
25	29	25,446	-47.8		09	11.[illegible]
20	26	26,919	-45.2		09	13.7
15	23	28,847	-43.2		09	14.3
10	11	31,583	-40.2			
7	6	33,991	-38.5			

MCGRATH, ALASKA 1000 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	103	10.0	6.8	29	1.1
1000	31	105			28	1.0
950	31	539	11.9	[illegible].7	28	.8
900	31	986	9.3	3.6	21	.2
850	31	1,458	5.9	1.2	17	.8
800	31	1,952	2.6	-1.9	15	1.4
750	31	2,471	-.7	-4.3	15	1.9
700	31	3,021	-4.0	-9.1	16	[illegible].9
650	31	3,600	-7.3	-13.6	15	2.6
600	31	4,222	-10.9	-18.3	15	3.3
550	31	4,883	-14.8	-22.4	15	3.0
500	31	5,602	-19.2	-28.6	14	[illegible].0
450	31	6,372	-24.6	-34.0	14	[illegible].7
400	31	7,225	-30.8	-39.8	14	1.9
350	31	8,159	-37.6	-43.9	15	1.7
300	31	9,206	-45.2		13	1.6
250	31	10,403	-51.8		09	1.2
200	31	11,850	-50.3		28	1.8
175	31	12,723	-49.7		25	1.7
150	31	13,731	-49.5		25	2.5
125	31	14,925	-49.6		27	1.6
100	31	16,385	-49.7		27	.5
80	31	17,846	-49.2		27	.3
70	31	18,722	-48.9		12	.5
60	31	19,736	-48.7		12	1.3
50	31	20,935	-48.4		10	1.2
40	31	22,404	-47.9		09	[illegible].8
30	31	24,305	-47.0		09	2.6
25	29	25,515	-46.1		09	3.2
20	25	26,993	-44.5		11	3.4
15	19	28,906	-42.1		13	1.2
10	6	31,595	-39.9			

+ MAJURO, MARSHALL IS. 1011 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	3	28.6	24.9	10	1.1
1000	31	102	26.9	22.2	11	1.5
950	31	548	23.2	18.9	13	2.5
900	31	1,026	20.5	15.4	13	3.1
850	31	1,519	17.9	11.8	12	3.4
800	31	2,037	15.4	8.4	11	3.9
750	31	2,577	12.7	5.2	10	4.3
700	31	3,160	9.6	1.3	11	4.1
650	31	3,765	6.1	-2.6	10	5.4
600	31	4,425	2.4	-6.1	10	5.7
550	31	5,111	-1.2	-10.[illegible]	09	5.7
500	31	5,880	-5.2	-15.5	09	5.6
450	31	6,694	-9.6	-21.3	09	5.6
400	31	7,604	-15.0	-27.7	09	5.6
350	31	8,602	-21.6	-33.7	08	5.[illegible]
300	31	9,720	-29.6	-42.0	09	6.2
250	31	10,995	-39.8	-50.0	09	6.4
200	31	12,481	-52.3		08	5.[illegible]
175	31	13,331	-59.5		07	4.[illegible]
150	31	14,279	-66.9		05	4.1
125	31	15,360	-73.8		05	[illegible].7
100	31	16,649	-76.4		08	5.1
80	31	17,951	-71.2		09	8.6
70	31	18,746	-68.2		09	9.7
60	31	19,678	-64.8		09	13.2
50	31	20,801	-61.5		09	19.6
40	31	22,198	-57.5		09	28.8
30	30	24,037	-52.0		09	33.4
25	29	25,227	-48.2		09	32.2
20	28	26,713	-43.9		10	19.7
15	26	28,651	-41.7		11	8.1
10	21	31,418	-38.5		09	10.6
7	12	33,871	-35.1			

* MEDFORD, OREG. 969 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	401	14.9	11.4	28	.6
1000	31	134				
950	31	574	15.8	10.4	29	.6
900	31	1,030	14.4	7.6	20	.5
850	31	1,512	12.2	4.3	21	1.5
800	31	2,018	9.5	.3	21	3.2
750	31	2,550	6.9	-4.0	23	5.0
700	31	3,116	3.6	-7.4	23	5.1
650	31	3,712	.0	-11.2	23	5.7
600	31	4,351	-4.0	-15.8	24	6.8
550	31	5,026	-8.2	-21.7	25	7.6
500	31	5,767	-12.9	-26.2	24	9.8
450	31	6,557	-18.7	-32.0	25	10.2
400	31	7,431	-25.2	-36.2	25	12.4
350	31	[illegible],387	-32.3	-42.0	25	13.7
300	31	9,456	-40.3	-48.4	25	15.8
250	31	10,677	-48.5		25	18.9
200	31	12,121	-54.6		25	18.4
175	31	12,974	-55.1		25	17.4
150	31	13,957	-55.9		25	14.5
125	31	15,113	-57.3		25	10.6
100	31	16,521	-58.0		25	7.3
80	31	17,930	-56.8		24	3.2
70	31	18,776	-56.2		24	2.0
60	31	19,757	-55.1		15	.9
50	31	20,924	-54.0		10	1.2
40	31	22,361	-52.4		08	3.2
30	31	24,230	-50.2		09	5.1
25	31	25,425	-48.3		08	6.0
20	31	26,902	-46.1		09	6.6
15	31	28,825	-43.8		09	7.9
10	30	31,575	-39.9		09	8.3
7	21	34,011	-36.4		09	9.9
5	9	36,389	-31.3			

MERIDA, MEXICO 1016 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	11	22.5	22.2	09	2.3
1000	31	146	24.7	23.3	10	4.5
950	31	595	23.1	19.6	11	6.2
900	31	1,068	20.7	15.3	11	5.9
850	31	1,562	18.1	10.4	11	5.5
800	31	2,079	15.2	5.5	11	5.[illegible]
750	31	2,619	12.1	1.6	11	5.2
700	31	3,199	8.9	-3.1	11	4.[illegible]
650	31	3,804	5.0	-5.5	10	5.1
600	31	4,458	1.1	-10.5	09	4.7
550	31	5,142	-3.0	-14.9	08	4.[illegible]
500	31	5,903	-7.3	-19.5	07	4.7
450	31	6,711	-12.3	-24.9	08	4.6
400	31	7,610	-17.9	-31.5	07	4.4
350	31	8,594	-24.9	-38.1	07	4.1
300	31	9,696	-33.2	-47.3	07	3.[illegible]
250	31	10,952	-42.9		07	1.6
200	31	12,418	-54.4		29	1.7
175	31	13,261	-60.4		30	1.8
150	31	14,208	-65.7		35	1.8
125	31	15,303	-69.7		06	4.6
100	31	16,626	-70.9		07	9.1
80	31	17,955	-67.5		08	12.8
70	31	18,765	-64.4		09	14.6
60	31	19,713	-62.0		08	16.6
50	31	20,850	-58.3		08	16.9
40	30	22,266	-54.9		08	20.2
30	29	24,121	-51.0		09	21.6
25	26	25,310	-49.2		09	21.3
20	23	26,779	-47.1		08	21.0
15	15	28,691	-43.2		08	23.2
10						
7						
5						

MIAMI, FLA. 1017 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	4	26.3	22.9	08	.9
1000	31	150	26.2	23.0	10	1.9
950	31	599	22.9	20.6	13	3.7
900	31	1,072	20.1	16.5	13	3.9
850	31	1,564	17.4	12.6	13	3.4
800	31	2,081	14.7	8.2	12	[illegible].9
750	31	2,622	11.8	2.8	13	3.3
700	31	3,200	8.6	-1.5	13	3.1
650	31	3,805	5.2	-5.6	13	2.8
600	31	4,460	1.5	-10.0	12	3.0
550	31	5,148	-2.7	-15.2	13	3.3
500	31	5,906	-7.4	-20.2	12	3.6
450	31	6,715	-12.3	-27.4	11	3.8
400	31	7,611	-17.9	-32.7	10	4.0
350	31	8,596	-24.8	-39.1	10	4.4
300	31	9,700	-33.2	-46.4	09	5.1
250	31	10,956	-43.0		08	6.0
200	31	12,422	-54.7		07	8.0
175	31	13,265	-60.7		07	8.4
150	31	14,212	-65.7		07	6.9
125	31	15,310	-69.0		08	6.3
100	31	16,639	-69.8		09	6.7
80	31	17,977	-66.7		08	[illegible].7
70	31	18,787	-64.0		08	11.6
60	30	19,737	-61.3		09	15.3
50	28	20,877	-57.8		09	17.5
40	28	22,295	-54.5		10	18.0
30	26	24,151	-50.5		09	17.6
25	25	25,344	-48.4		09	17.9
20	24	26,815	-45.9		09	20.9
15	22	28,731	-43.2		09	23.3
10	15	31,477	-38.7		10	24.9

MIDLAND, TEXAS 918 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	874	21.2	16.3	15	2.6
1000	31	123				
950	31	572				
900	31	1,045	21.9	15.2	17	6.8
850	31	1,541	19.9	12.[illegible]	19	11.3
800	31	2,063	17.3	9.5	20	8.0
750	31	2,606	14.0	5.9	20	3.0
700	31	3,190	10.2	2.1	17	1.9
650	31	3,798	6.0	-2.2	17	2.3
600	31	4,454	1.8	-8.6	18	3.3
550	31	5,142	-2.4	-13.1	18	4.1
500	31	5,902	-6.7	-18.8	18	4.1
450	31	6,711	-11.5	-22.6	19	3.7
400	31	7,611	-17.3	-29.6	20	3.5
350	31	8,598	-24.3	-35.2	21	3.6
300	31	9,704	-32.8	-43.[illegible]	23	3.8
250	31	10,961	-42.9		25	3.7
200	31	12,427	-54.7		26	3.9
175	31	13,270	-60.6		26	2.9
150	30	14,218	-65.6		22	2.2
125	29	15,314	-69.3		22	2.2
100	27	16,649	-68.1		11	1.1
80	26	18,000	-65.3		09	4.5
70	25	18,818	-62.9		09	[illegible].6
60	24	19,772	-60.3		09	7.9
50	24	20,915	-57.9		09	10.0
40	23	22,330	-54.8		09	12.7
30	23	24,184	-51.2		09	14.4
25	21	25,373	-49.6		09	15.6
20	20	26,841	-46.9		09	17.4
15	19	28,764	-43.2		09	20.2
10	8	31,543	-39.7			

MONTERREY, MEXICO 970 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	423	21.9	20.5	13	.6
1000	31	153				
950	31	601	21.7	18.9	12	2.3
900	31	1,069	19.3	16.9	13	4.9
850	31	1,563	19.0	12.2	14	7.5
800	31	2,082	16.4	7.1	14	7.0
750	31	2,622	13.2	1.8	14	5.7
700	31	3,207	9.5	-1.6	13	4.0
650	31	3,812	5.5	-4.6	12	2.9
600	31	4,468	1.3	-9.3	11	2.7
550	31	5,157	-3.1	-13.7	10	3.2
500	31	5,913	-7.5	-20.1	10	3.5
450	31	6,720	-12.4	-25.7	10	3.7
400	31	7,618	-18.2	-32.2	10	3.6
350	31	8,603	-25.3	-38.6	10	3.0
300	31	9,704	-33.9	-45.9	08	2.2
250	31	10,955	-44.2		05	2.3
200	31	12,414	-55.6		02	2.2
175	31	13,255	-60.9		05	3.3
150	31	14,201	-66.3		06	2.6
125	31	15,294	-70.0		06	4.4
100	31	16,619	-69.2		09	6.3
80	31	17,964	-65.6		08	10.2
70	31	18,779	-63.4		08	11.9
60	31	19,730	-61.0		08	13.1
50	31	20,871	-57.9		08	16.0
40	31	22,289	-54.2		08	17.8
30	30	24,151	-50.3		08	18.2
25	29	25,345	-48.3		09	18.6
20	28	26,819	-45.9		08	19.4
15	24	28,746	-42.4		08	21.4
10	9	31,479	-37.6			

MONTGOMERY, ALA. 1012 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	61	22.1	20.3	34	.4
1000	31	161	22.9	20.5	36	1.0
950	31	609	23.4	18.6	01	.6
900	31	1,082	20.7	15.7	16	.3
850	31	1,575	17.7	12.0	16	1.2
800	31	2,092	14.6	8.0	18	1.4
750	31	2,638	11.6	3.7	18	1.4
700	31	3,211	8.3	-1.1	12	1.1
650	31	3,821	4.9	-6.1	12	1.7
600	31	4,469	1.2	-9.0	09	1.3
550	31	[illegible],162	-2.8	-13.7	09	1.9
500	31	5,915	-7.1	-19.4	08	1.5
450	31	6,722	-12.0	-25.9	06	1.6
400	31	7,623	-17.9	-30.6	06	1.8
350	31	8,607	-24.8	-38.7	06	2.4
300	31	9,710	-33.2	-46.4	07	3.0
250	31	10,965	-43.0		06	4.0
200	31	12,433	-54.2		08	3.7
175	31	13,277	-60.0		08	4.2
150	31	14,227	-65.2		07	3.4
125	31	15,326	-69.2		08	2.8
100	31	16,656	-68.9		09	2.5
80	31	18,005	-64.2		08	4.4
70	31	18,826	-61.8		08	4.9
60	31	19,788	-58.6		08	6.6
50	31	20,940	-56.1		09	8.5
40	31	22,367	-53.3		09	11.0
30	31	24,230	-50.5		09	13.3
25	30	25,423	-48.2		09	15.0
20	30	26,900	-45.8		09	16.0
15	30	28,828	-42.5		09	18.1
10	29	31,595	-37.4		09	20.0
7	17	34,076	-34.7		09	23.9
5	5	36,409	-31.8			

See reference note at end of table

• NANTUCKET, MASS. 1016 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	14	19.1	17.2	31	1.2
1000	30	153	18.9	14.8	28	2.3
950	30	591	17.2	9.9	31	4.9
900	30	1,054	15.0	7.3	30	6.0
850	30	1,536	12.7	4.0	29	7.7
800	30	2,044	10.6	-.6	29	9.3
750	30	2,577	8.8	-5.9	28	11.4
700	30	3,148	6.1	-8.7	28	12.[illegible]
650	30	3,746	3.2	-13.5	28	14.0
600	30	4,397	-.3	-17.1	28	15.5
550	30	5,080	-4.2	-21.1	28	16.7
500	30	5,834	-8.5	-25.5	28	17.2
450	30	6,639	-13.6	-30.9	27	18.6
400	30	7,530	-19.8	-36.6	27	20.0
350	30	8,508	-26.8	-41.8	27	21.0
300	30	9,604	-34.8	-47.9	28	23.8
250	30	10,852	-44.4		28	27.3
200	30	12,312	-54.7		28	28.0
175	30	13,158	-59.5		28	27.1
150	30	14,114	-63.2		28	21.8
125	30	15,232	-64.2		28	16.2
100	30	16,601	-62.8		28	11.7
80	30	17,989	-59.1		29	5.8
70	30	18,828	-57.1		30	3.4
60	29	19,809	-55.1		36	1.2
50	29	20,979	-53.1		03	1.0
40	29	22,424	-50.9		08	3.7
30	29	24,306	-48.4		09	5.2
25	28	25,510	-46.5		09	6.3
20	27	26,998	-44.2		08	7.0
15	25	28,929	-41.7		09	8.0
10	23	31,705	-37.5		09	8.1
7	17	34,173	-34.3		09	10.2
5						

NASHVILLE, TENN. 999 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	180	21.1	19.6	15	.8
1000	31	169			11	.9
950	31	615	22.3	16.6	26	3.3
900	31	1,085	19.6	14.4	26	3.9
850	31	1,577	16.8	10.7	26	4.4
800	31	2,092	14.1	6.1	26	4.0
750	31	2,635	11.1	2.2	26	4.0
700	31	3,209	7.9	-2.1	26	4.0
650	31	3,819	4.6	-6.5	26	3.4
600	31	4,465	.7	-9.5	25	3.5
550	31	5,156	-3.1	-15.3	25	3.6
500	31	5,909	-7.1	-21.4	26	4.2
450	31	6,721	-12.2	-28.1	26	4.1
400	31	7,615	-18.1	-33.0	27	4.3
350	31	8,599	-25.0	-39.7	28	3.6
300	31	9,701	-33.3	-46.8	29	4.6
250	31	10,954	-43.2		28	5.4
200	31	12,419	-54.7		28	5.5
175	31	13,262	-60.3		28	[illegible].0
150	31	14,211	-65.6		29	4.8
125	30	15,307	-68.9		29	3.4
100	29	16,642	-67.6		30	1.4
80	29	18,000	-62.9		05	1.6
70	29	18,826	-60.7		07	2.7
60	29	19,791	-57.5		08	4.0
50	28	20,951	-54.4		08	6.1
40	28	22,385	-52.6		09	7.2
30	27	24,252	-49.8		09	[illegible].7
25	26	25,448	-47.6		09	10.8
20	26	26,929	-45.1		09	12.1
15	23	28,857	-42.0		09	12.7
10	18	31,617	-37.7		08	12.7
7	10	34,100	-33.6			
5						

• NOME, ALASKA 1011 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	5	9.9	5.0	03	1.1
1000	31	97	10.5	6.4	08	1.0
950	31	523	9.0	5.1	12	2.6
900	31	971	6.8	2.4	14	3.3
850	31	1,440	4.3	-.3	15	4.1
800	31	1,931	1.5	-3.1	15	4.5
750	31	2,446	-1.4	-5.9	15	5.1
700	31	2,997	-4.3	-9.1	14	4.8
650	31	3,573	-7.4	-13.7	14	5.2
600	30	4,197	-11.0	-19.6	14	4.9
550	30	4,857	-15.3	-24.6	14	4.7
500	30	5,576	-20.0	-28.5	15	4.8
450	30	6,347	-25.1	-35.0	14	4.4
400	30	7,197	-31.1	-40.0	15	5.3
350	30	8,131	-38.0	-44.1	14	4.3
300	30	9,175	-46.1		15	4.3
250	29	10,357	-53.3		17	3.1
200	29	11,803	-49.6		20	1.8
175	29	12,679	-48.7		23	2.1
150	29	13,692	-48.9		26	1.1
125	29	14,890	-48.9		25	1.6
100	29	16,354	-49.2		25	.8
80	28	17,823	-48.9		21	.2
70	28	18,700	-48.8		06	.5
60	28	19,712	-48.7		12	.7
50	28	20,911	-48.6		10	1.1
40	28	22,379	-48.4		09	.6
30	28	24,275	-47.6		09	2.0
25	28	25,402	-46.5		08	2.1
20	28	26,967	-44.8		09	2.6
15	26	28,898	-42.4		10	2.7
10	22	31,656	-38.2		07	2.7
7	14	34,122	-34.5		02	.5
5	5	36,374	-34.5			

NORTH PLATTE, NEBR. 918 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	848	15.8	12.5	11	1.0
1000	31	110				
950	31	552				
900	31	1,015	18.4	12.3	17	2.0
850	31	1,506	18.7	9.2	22	4.9
800	31	2,025	16.6	4.4	23	4.4
750	31	2,568	13.2	1.0	23	4.3
700	31	3,147	9.1	-1.6	24	5.2
650	31	3,753	4.7	-6.1	24	5.1
600	31	4,404	.1	-10.6	24	6.0
550	31	5,090	-4.1	-16.8	24	6.4
500	30	5,842	-8.4	-22.3	25	8.6
450	30	6,647	-13.8	-25.9	25	10.4
400	30	7,539	-19.8	-33.1	26	12.0
350	30	8,516	-26.8	-39.7	26	13.1
300	30	9,609	-35.4	-46.8	25	15.2
250	30	10,854	-45.0		26	17.7
200	30	12,311	-55.1		26	20.9
175	30	13,155	-59.4		26	21.2
150	30	14,113	-62.4		26	18.5
125	30	15,232	-64.5		25	12.4
100	30	16,594	-64.1		25	7.1
80	29	17,970	-61.0		26	2.9
70	29	18,803	-58.7		20	.4
60	28	19,773	-56.9		08	1.9
50	28	20,934	-54.2		09	2.6
40	27	22,375	-51.5		08	4.0
30	26	24,251	-48.8		09	5.5
25	26	25,451	-47.0		09	6.3
20	24	26,934	-44.8		09	7.8
15	21	28,868	-42.3		08	8.1
10	16	31,638	-37.1		10	8.3
7						
5						

OAKLAND, CALIF. 1015 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	6	15.1	12.8	26	.7
1000	30	132	14.5	12.3	25	1.4
950	30	574	15.3	7.5	26	2.7
900	30	1,027	17.3	1.7	29	3.2
850	30	1,513	15.5	-2.6	25	3.2
800	30	2,025	12.9	-5.0	24	3.6
750	30	2,563	9.7	-8.2	24	4.2
700	30	3,133	6.4	-11.4	24	4.7
650	30	3,734	3.0	-15.5	24	5.1
600	30	4,380	-.9	-19.9	25	6.6
550	30	5,063	-5.4	-24.0	26	7.4
500	30	5,809	-10.4	-28.7	26	9.6
450	30	6,610	-16.0	-32.4	26	11.6
400	30	7,489	-22.4	-37.6	26	12.4
350	30	8,454	-29.9	-43.2	25	13.1
300	30	9,533	-38.4	-49.3	25	15.5
250	30	10,762	-47.3		25	16.8
200	30	12,208	-55.3		25	17.2
175	30	13,055	-57.3		25	16.6
150	30	14,025	-59.2		25	15.6
125	30	15,164	-60.3		25	13.2
100	30	16,550	-61.0		24	7.7
80	29	17,945	-59.2		22	2.5
70	29	18,782	-58.1		15	1.1
60	29	19,755	-56.7		11	2.9
50	29	20,914	-55.4		10	4.2
40	29	22,342	-53.6		09	6.1
30	29	24,203	-50.7		09	8.6
25	29	25,395	-49.0		09	9.4
20	29	26,867	-46.8		09	10.8
15	28	28,786	-44.2		09	12.0
10	20	31,520	-41.0		09	13.0
7	5	33,947	-35.8			
5						

OMAHA, NEBR. 969 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	403	18.7	16.4	16	2.0
1000	31	127				
950	31	570	19.7	15.4	18	4.7
900	31	1,037	19.9	11.9	22	[illegible].3
850	31	1,529	17.8	7.8	24	7.3
800	31	2,045	14.9	4.0	25	6.1
750	31	2,585	11.7	.7	25	6.1
700	31	[illegible],163	8.0	-3.7	25	6.1
650	31	3,768	4.1	-7.2	25	[illegible].6
600	31	4,418	.1	-12.5	25	6.9
550	31	5,105	-3.8	-18.6	24	[illegible].9
500	31	5,858	-8.4	-23.1	25	10.[illegible]
450	31	6,664	-13.5	-28.0	25	11.4
400	30	7,556	-19.3	-32.8	26	12.[illegible]
350	30	8,536	-26.4	-39.3	26	13.5
300	30	9,632	-34.7	-46.9	26	15.0
250	30	10,880	-44.5		26	18.2
200	30	12,341	-54.7		26	21.8
175	30	13,185	-59.3		26	20.2
150	30	14,143	-62.6		26	17.4
125	30	15,258	-65.2		26	13.1
100	30	16,618	-63.6		27	7.3
80	30	17,994	-61.2		28	3.1
70	30	18,826	-59.2		34	.6
60	29	19,795	-57.0		06	.5
50	29	20,955	-54.5		08	1.[illegible]
40	29	22,392	-51.9		09	3.5
30	28	24,266	-49.3		09	4.9
25	28	25,465	-47.5		09	5.9
20	27	26,947	-45.3		09	6.5
15	26	28,879	-42.3		09	8.1
10	21	31,643	-38.5		09	8.3
7	12	34,121	-34.4			
5						

+ PAGO PAGO, AMERICAN SAMOA 1013 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	5	27.4	22.5	12	3.9
1000	31	117	25.9	20.1	12	4.1
950	31	563	21.8	16.5	10	4.2
900	31	1,035	18.3	13.8	09	3.1
850	31	1,523	15.8	9.2	08	2.[illegible]
800	31	2,037	14.3	3.3	35	[illegible].5
750	31	2,577	12.5	-1.8	34	2.[illegible]
700	31	3,158	9.8	-5.7	30	2.3
650	31	3,766	6.7	-9.6	32	2.5
600	31	4,423	3.0	-14.0	32	2.9
550	31	5,118	-1.0	-19.2	30	3.3
500	30	5,878	-5.3	-23.2	28	4.2
450	30	6,692	-10.5	-28.5	26	5.[illegible]
400	30	7,595	-16.4	-34.5	26	7.8
350	30	[illegible],587	-23.2	-40.3	26	10.0
300	30	9,697	-31.7	-47.6	26	11.4
250	30	10,962	-41.4		26	12.3
200	30	12,440	-52.9		25	13.[illegible]
175	30	13,289	-59.4		25	13.1
150	30	14,240	-65.6		26	10.9
125	30	15,332	-71.8		27	9.[illegible]
100	30	16,634	-75.4		26	4.8
80	30	17,936	-71.3		30	1.0
70	30	18,734	-66.0		08	1.7
60	30	19,683	-61.2		09	5.4
50	30	20,823	-58.6		09	9.[illegible]
40	29	22,236	-55.9		09	13.5
30	29	24,081	-52.7		09	15.0
25	28	25,264	-49.4		08	13.6
20	27	26,733	-46.9		08	11.2
15	23	28,649	-43.7		09	4.9
10	16	31,399	-39.1		21	2.1
7	5	33,792	-37.9			
5						

• PEORIA, ILL. 994 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	200	18.7	17.0	15	.9
1000	31	150				
950	31	597	20.3	15.4	24	4.1
900	31	1,059	17.7	12.4	26	5.1
850	31	1,567	15.5	7.2	26	5.7
800	31	2,060	13.8	1.1	26	6.2
750	31	2,600	11.0	-2.7	26	6.4
700	31	3,175	7.9	-6.8	26	6.8
650	31	3,779	4.1	-10.3	26	7.3
600	31	4,429	.3	-14.4	26	8.4
550	31	5,117	-3.8	-19.5	26	8.8
500	31	5,868	-8.4	-22.9	26	9.1
450	30	6,679	-13.4	-27.2	27	10.2
400	30	7,567	-19.4	-32.0	27	11.5
350	30	8,547	-26.3	-38.1	27	13.0
300	30	9,644	-34.7	-46.0	27	15.0
250	30	10,892	-44.5		27	17.4
200	30	12,351	-55.5		28	18.6
175	30	13,193	-60.3		27	17.5
150	30	14,144	-64.4		27	15.5
125	30	15,251	-66.1		28	11.9
100	30	16,607	-64.3		28	6.1
80	30	17,980	-61.6		31	2.0
70	30	18,811	-59.4		36	.7
60	29	19,780	-56.7		06	2.2
50	29	20,942	-54.4		08	3.6
40	29	22,380	-52.0		08	4.4
30	29	24,254	-49.2		08	5.9
25	29	25,454	-47.4		09	6.3
20	29	26,935	-45.4		09	8.7
15	29	28,866	-42.4		09	9.7
10	28	31,629	-38.0		09	10.1
7	25	34,101	-34.5		09	9.3
5	12	36,466	-31.2			

• PITTSBURGH, PA. 977 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	359	18.0	16.5	26	1.3
1000	31	159				
950	31	603	19.3	15.9	27	3.8
900	31	1,065	17.2	12.2	29	5.1
850	31	1,552	14.5	6.9	29	7.3
800	31	2,063	12.4	.4	28	[illegible].1
750	31	2,603	9.9	-3.8	28	[illegible].9
700	31	3,173	7.1	-7.5	28	10.3
650	31	3,775	3.9	-10.7	28	10.6
600	31	4,425	.1	-15.5	28	11.9
550	31	[illegible],110	-3.6	-20.6	28	12.4
500	31	5,866	-8.0	-23.9	29	13.2
450	31	6,672	-13.3	-29.2	29	13.2
400	31	7,565	-19.5	-34.6	29	14.0
350	31	8,544	-26.4	-41.4	29	16.0
300	31	9,640	-34.7	-47.7	29	17.4
250	30	10,889	-44.3		28	17.8
200	30	12,352	-54.6		28	18.8
175	30	13,197	-59.2		28	19.0
150	30	14,153	-63.4		28	18.2
125	30	15,267	-65.0		29	12.9
100	30	16,628	-63.6		28	7.[illegible]
80	28	18,007	-59.9		30	2.6
70	28	18,844	-57.8		03	1.4
60	28	19,820	-55.7		04	2.0
50	28	20,986	-53.6		07	3.7
40	27	22,428	-50.9		08	4.3
30	26	24,315	-47.9		08	4.8
25	26	25,520	-46.4		08	5.0
20	25	27,006	-44.6		08	5.7
15	24	28,942	-41.5		08	[illegible].4
10	23	31,715	-37.4		10	9.7
7	18	34,209	-33.3		09	7.8
5						

+ PONAPE, CAROLINE IS. 1005 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	39	29.0	24.3	35	.8
1000	31	86	28.3	23.1	36	1.0
950	31	532	24.1	18.4	08	.3
900	31	1,012	20.9	14.9	14	1.1
850	31	1,506	18.4	11.5	11	1.9
800	31	2,025	15.9	8.1	10	2.7
750	31	2,571	13.2	3.9	10	2.7
700	31	3,149	10.0	.8	10	4.0
650	31	3,759	6.5	-3.1	09	4.5
600	31	4,416	3.0	-7.5	10	5.4
550	31	5,112	-.8	-12.0	10	5.8
500	31	5,873	-4.6	-17.9	10	5.9
450	31	6,693	-9.5	-23.6	10	5.6
400	31	7,599	-14.9	-29.9	09	5.4
350	31	8,596	-21.8	-36.4	09	5.5
300	31	9,713	-30.0	-44.4	09	6.5
250	31	10,984	-40.4	-51.8	08	8.5
200	31	12,465	-52.9		07	9.6
175	31	13,312	-59.9		07	9.2
150	31	14,258	-67.1		07	8.0
125	31	15,339	-74.2		08	5.5
100	31	16,624	-77.1		09	6.6
80	31	17,923	-71.2		08	10.7
70	31	18,719	-68.1		09	10.8
60	30	19,647	-65.4		09	12.9
50	28	20,766	-62.4		09	19.1
40	28	22,155	-58.5		09	28.7
30	28	23,987	-52.8		09	35.4
25	28	25,173	-49.4		09	32.9
20	26	26,647	-45.3		09	21.0
15	24	28,573	-42.7		09	10.1
10	19	31,323	-40.0		08	3.3
7	5	33,778	-38.9			
5						

PORTLAND, MAINE 1014 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	20	15.8	11.0	29	1.4
1000	31	141	16.0	9.8	31	2.3
950	31	575	15.1	7.1	31	4.0
900	31	1,034	13.0	4.0	31	5.1
850	31	1,513	10.8	.7	30	7.1
800	31	[illegible],017	8.7	-3.5	30	9.3
750	31	2,544	6.3	-7.1	29	11.4
700	31	3,112	3.7	-11.6	28	14.1
650	31	3,706	1.0	-16.9	28	15.6
600	31	4,351	-2.3	-19.4	28	18.1
550	31	5,031	-6.1	-23.1	28	20.7
500	31	5,778	-10.8	-27.4	28	21.5
450	31	6,571	-16.1	-32.8	27	23.5
400	31	7,458	-22.2	-37.8	27	25.5
350	31	8,427	-28.8	-43.3	27	28.0
300	31	9,511	-36.9	-49.2	27	29.9
250	31	10,749	-45.7		28	33.1
200	31	12,206	-54.0		28	32.5
175	31	13,057	-57.1		28	29.0
150	31	14,027	-59.5		28	23.5
125	30	15,162	-60.8		28	18.8
100	30	16,551	-60.1		28	12.5
80	30	17,952	-57.4		29	6.5
70	30	18,795	-56.4		30	3.3
60	30	19,781	-54.2		34	1.3
50	30	20,955	-52.0		10	1.7
40	30	22,408	-50.1		09	3.6
30	30	24,295	-47.9		09	5.1
25	28	25,504	-46.0		08	4.6
20	26	26,990	-44.0		09	6.0
15	21	28,922	-41.4		09	6.4
10	18	31,690	-36.8		09	5.6
7	13	34,176	-32.6		08	6.7
5	10	36,574	-28.8			
4						

* QUILLAYUTE, WASH. 1009 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	58	11.3	11.0	08	.9
1000	31	131	12.2	10.8	09	.8
950	31	565	12.1	7.4	21	1.0
900	31	1,015	10.6	3.3	23	2.0
850	31	1,490	8.4	.5	23	2.6
800	31	1,989	6.0	-3.9	24	2.9
750	31	2,514	3.3	-7.7	24	3.9
700	31	3,072	.6	-13.2	24	4.9
650	31	3,659	-2.9	-17.2	24	6.2
600	31	4,293	-6.7	-19.8	25	6.3
550	31	4,962	-11.0	-24.5	25	7.2
500	31	5,694	-15.8	-28.7	25	8.2
450	31	6,473	-21.3	-33.7	25	9.2
400	31	7,338	-27.7	-39.4	24	10.5
350	31	8,283	-35.2	-44.2	24	11.8
300	31	9,338	-43.3	-47.7	24	13.4
250	31	10,544	-50.7		24	15.5
200	31	11,988	-52.4		25	14.9
175	30	12,841	-52.2		25	13.5
150	30	13,837	-52.8		26	11.9
125	30	15,009	-54.2		25	10.5
100	30	16,438	-54.5		25	7.4
80	30	17,869	-53.8		25	4.5
70	30	18,727	-53.2		24	3.0
60	30	19,720	-52.8		23	2.0
50	30	20,898	-52.3		14	.5
40	29	22,349	-51.0		07	.[illegible]
30	29	24,226	-49.4		07	2.5
25	29	25,424	-48.2		08	3.6
20	29	26,899	-46.6		08	4.0
15	29	28,817	-44.5		09	5.1
10	26	31,569	-40.3		06	5.9
7	21	34,034	-35.5		08	7.7
5	13	36,398	-31.4		09	8.9
4	6	37,969	-29.4			

RAPID CITY, S. DAK. 905 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	966	13.3	9.2	32	.9
1000	31	112				
950	31	552				
900	31	1,010			32	1.3
850	31	1,498	17.3	7.5	25	3.8
800	31	2,014	15.0	3.7	24	5.1
750	31	2,551	11.6	.1	24	6.1
700	31	3,131	7.8	-2.4	25	6.1
650	31	3,729	3.6	-6.0	25	7.0
600	31	4,384	-.7	-10.6	26	8.2
550	31	5,063	-5.6	-15.1	26	9.4
500	31	5,814	-10.5	-21.3	25	11.1
450	31	6,612	-15.8	-28.3	25	13.1
400	31	7,495	-22.1	-34.2	25	14.7
350	31	8,463	-29.2	-40.0	26	16.7
300	31	9,545	-37.5	-46.7	26	19.7
250	31	10,780	-46.2		26	23.8
200	31	12,232	-55.2		25	24.8
175	31	13,078	-57.9		26	23.9
150	31	14,045	-59.5		26	18.8
125	31	15,181	-60.9		26	13.6
100	31	16,566	-61.0		26	8.1
80	31	17,958	-59.1		27	3.4
70	31	18,797	-57.2		27	1.4
60	31	19,777	-55.7		03	.8
50	30	20,944	-53.8		07	1.9
40	30	22,384	-51.6		09	2.3
30	30	24,263	-48.4		08	4.2
25	29	25,467	-46.9		08	4.7
20	29	26,952	-44.6		08	5.5
15	25	28,893	-41.6		09	7.0
10	19	31,657	-37.6		10	5.2
7						
5						
4						

ST CLOUD, MINN. 978 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	316	15.3	13.0	17	1.7
1000	31	124				
950	31	561	17.9	12.9	20	3.5
900	31	1,024	17.1	9.8	23	6.3
850	31	1,510	14.8	4.5	25	7.0
800	31	2,021	12.0	1.4	26	7.3
750	31	2,555	8.9	-2.2	26	[illegible].1
700	31	3,128	5.7	-8.2	26	9.4
650	31	3,725	2.2	-11.8	27	10.8
600	31	4,374	-1.5	-15.7	27	12.5
550	31	5,054	-5.5	-21.0	27	13.9
500	31	5,804	-10.1	-26.2	27	15.[illegible]
450	31	6,603	-15.4	-31.0	27	16.8
400	31	7,489	-21.3	-36.7	27	17.6
350	31	8,460	-28.6	-43.3	27	19.5
300	31	[illegible],546	-36.9	-49.9	27	21.9
250	31	10,783	-46.4		27	24.9
200	31	12,236	-55.0		27	28.3
175	31	13,082	-57.9		27	27.[illegible]
150	31	14,051	-59.4		27	22.7
125	31	15,189	-60.9		27	16.7
100	31	16,580	-59.7		28	10.3
80	31	17,978	-58.1		28	5.4
70	31	18,821	-56.3		30	3.6
60	31	19,804	-54.6		33	1.1
50	31	20,975	-52.9		05	1.8
40	30	22,420	-50.6		06	2.9
30	30	24,306	-48.2		08	3.7
25	29	25,509	-46.5		09	4.4
20	28	26,996	-44.0		08	5.2
15	26	28,935	-41.3		08	6.8
10	19	31,697	-37.1		09	7.1
7	5	34,121	-34.2			
5						
4						

■ ST PAUL IS., ALASKA 1010 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	10	7.9	7.4	22	.8
1000	31	92	7.7	6.7	23	1.0
950	31	514	5.9	5.2	19	1.9
900	31	956	4.5	2.0	19	1.9
850	31	1,421	2.9	-2.1	19	2.3
800	31	1,911	1.0	-5.0	20	2.4
750	31	2,427	-1.4	-7.6	20	2.3
700	31	2,976	-4.2	-10.9	20	2.4
650	31	3,556	-7.0	-16.0	21	3.1
600	31	4,179	-10.4	-18.8	22	3.6
550	31	4,841	-14.7	-23.3	23	4.4
500	31	5,559	-19.2	-29.3	23	4.4
450	31	6,330	-24.4	-34.6	23	4.8
400	31	7,184	-30.6	-40.1	22	5.6
350	31	8,119	-37.5	-45.5	23	7.1
300	31	9,165	-44.9		23	9.9
250	31	10,372	-48.6		24	12.2
200	31	11,836	-48.9		23	9.0
175	31	12,714	-48.3		23	7.7
150	31	13,728	-48.9		24	6.0
125	31	14,923	-49.9		24	4.9
100	31	16,381	-50.1		23	3.4
80	31	17,839	-49.7		24	2.5
70	31	18,712	-49.7		23	1.4
60	31	19,719	-49.6		22	1.2
50	31	20,912	-49.8		23	.4
40	31	22,372	-49.5		01	.2
30	31	24,261	-48.3		09	1.3
25	31	25,464	-47.1		08	1.9
20	31	26,946	-45.4		09	2.8
15	31	28,876	-42.5		10	3.1
10	28	31,638	-38.8		09	3.3
7	24	34,109	-34.2		08	4.4
5	16	36,499	-29.8		09	5.3
4	5	38,032	-29.4			

See reference note at end of table

RAWINSONDE DATA

Average monthly values

AUGUST 1968

SALEM, OREG. 1009 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	61	13.2	11.3	19	1.2
1000	31	133	13.9	11.3	18	1.1
950	31	563	13.4	9.1	21	1.6
900	31	1,022	12.5	6.3	23	2.2
850	31	1,501	10.6	2.6	24	4.6
800	31	2,004	8.0	-1.3	24	5.0
750	31	2,528	5.1	-6.1	24	5.9
700	31	3,095	2.5	-12.7	24	7.2
650	31	3,686	-1.1	-16.6	24	7.9
600	31	4,325	-4.9	-21.3	25	8.5
550	31	4,998	-9.1	-24.0	25	8.2
500	31	5,735	-14.1	-28.4	24	9.6
450	31	6,519	-19.8	-32.7	24	11.3
400	31	7,390	-26.2	-39.0	24	11.9
350	31	8,343	-33.3	-44.0	24	13.7
300	31	9,407	-41.4	-50.2	24	15.4
250	31	10,622	-49.0		25	17.3
200	31	12,068	-54.0		25	17.1
175	31	12,926	-53.3		25	15.2
150	31	13,916	-54.6		25	13.3
125	31	15,079	-55.8		25	10.5
100	31	16,497	-56.5		25	6.8
80	31	17,915	-55.5		24	4.5
70	31	18,767	-54.9		23	3.1
60	31	19,751	-54.5		22	1.2
50	31	20,922	-53.3		09	1.1
40	31	22,362	-52.0		08	2.6
30	30	24,233	-49.5		07	3.6
25	29	25,429	-48.0		08	3.6
20	27	26,913	-45.8		08	4.5
15	24	28,844	-43.2		09	5.9
10	20	31,593	-38.7		08	6.8
7	7	34,099	-32.2			
5						
4						

SALT LAKE CITY, UTAH 873 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1,288	15.6	8.8	15	2.9
1000	31	115				
950	31	559				
900	31	1,027				
850	31	1,513	17.6	6.5	16	5.0
800	31	2,030	15.2	3.4	19	4.5
750	31	2,571	11.6	.3	22	4.7
700	31	3,147	7.5	-2.8	24	5.9
650	31	3,753	3.1	-6.2	23	7.9
600	31	4,396	-1.6	-9.8	24	8.9
550	31	5,078	-6.2	-14.5	24	9.3
500	31	5,824	-10.9	-20.5	24	11.3
450	31	6,622	-15.6	-27.7	24	12.1
400	31	7,507	-21.7	-32.7	24	14.0
350	31	8,477	-28.8	-39.3	24	15.0
300	31	9,560	-37.4	-47.1	24	17.3
250	31	10,793	-47.1		24	20.6
200	31	12,240	-55.6		24	22.7
175	31	13,085	-58.3		24	21.4
150	31	14,050	-60.3		24	18.0
125	31	15,182	-61.7		24	12.8
100	31	16,561	-61.5		24	7.0
80	30	17,947	-60.1		24	2.6
70	30	18,783	-58.3		24	.4
60	30	19,754	-56.6		08	1.7
50	30	20,915	-54.8		08	2.6
40	30	22,348	-52.7		08	4.2
30	29	24,217	-50.0		08	5.5
25	29	25,413	-48.3		08	6.9
20	28	26,889	-45.8		08	7.5
15	28	28,817	-42.9		09	8.4
10	22	31,572	-38.8		09	10.4
7	5	34,002	-35.9			
5						
4						

SAN DIEGO, CALIF. 999 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	124	18.0	16.0	24	.1
1000	31	119			34	.8
950	31	559	17.5	11.2	09	.1
900	31	1,024	20.3	2.4	29	1.0
850	31	1,517	19.3	1.5	29	1.8
800	31	2,036	16.6	-1.2	24	2.2
750	31	2,581	13.4	-3.7	22	2.8
700	31	3,160	10.0	-7.2	22	3.2
650	31	3,771	6.2	-10.9	22	3.2
600	31	4,424	2.2	-14.4	23	3.5
550	31	5,115	-2.2	-21.1	24	4.0
500	31	5,873	-6.9	-26.0	26	5.2
450	31	6,683	-12.6	-31.1	26	6.1
400	31	7,576	-19.2	-36.0	26	7.2
350	31	8,555	-26.9	-42.3	25	8.4
300	31	9,648	-35.4	-49.4	25	10.7
250	31	10,893	-44.8		25	13.3
200	31	12,354	-54.3		24	16.6
175	31	13,201	-58.9		24	16.[illegible]
150	31	14,158	-63.6		24	16.5
125	31	15,269	-66.0		24	12.2
100	31	16,622	-65.9		25	3.2
80	31	17,985	-63.3		08	2.4
70	31	18,808	-61.7		10	5.2
60	31	19,766	-59.0		09	6.9
50	31	20,917	-56.4		09	9.2
40	30	22,342	-54.2		09	10.7
30	30	24,199	-51.2		09	14.0
25	30	25,389	-49.3		09	15.2
20	27	26,858	-46.9		09	16.4
15	25	28,774	-44.5		09	16.5
10	24	31,514	-40.0		09	19.2
7	16	33,956	-35.9			
5	7	36,320	-33.6			
4						

SAN JUAN, P. R. 1017 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	6	26.0	24.5	13	2.0
1000	31	152	25.5	22.9	11	5.7
950	31	601	22.8	19.0	09	7.7
900	31	1,074	19.9	14.7	10	8.6
850	31	1,566	17.2	10.3	10	8.4
800	31	2,082	14.8	5.0	10	8.2
750	31	2,621	12.3	-.7	10	7.2
700	31	3,202	8.9	-6.2	10	7.1
650	31	3,808	5.3	-10.1	10	6.6
600	31	4,461	1.4	-14.1	10	6.4
550	31	5,148	-2.3	-19.2	10	6.0
500	31	5,908	-6.6	-24.4	09	5.2
450	31	6,717	-11.8	-29.4	08	4.6
400	31	7,615	-17.9	-34.8	09	4.3
350	31	8,599	-25.3	-41.1	08	3.2
300	31	9,699	-34.1	-48.6	08	2.0
250	31	10,949	-44.1		04	1.1
200	31	12,411	-54.6		33	1.0
175	31	13,256	-59.6		03	1.0
150	31	14,209	-63.9		08	2.3
125	31	15,314	-68.5		09	3.7
100	31	16,637	-71.9		08	6.8
80	31	17,960	-68.8		08	12.5
70	31	18,764	-65.9		08	15.7
60	31	19,707	-62.4		09	19.0
50	31	20,842	-58.8		09	20.8
40	31	22,255	-55.1		09	22.5
30	31	24,104	-51.4		09	23.4
25	31	25,293	-49.2		09	24.3
20	25	26,764	-47.0		09	25.3
15	21	28,686	-42.9		09	23.7
10	15	31,451	-37.3		09	21.5
7	6	33,920	-32.8			
5						
4						

SAN NICOLAS, CALIF. 994 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	174	14.7	12.4	30	4.6
1000	30	119				
950	30	558	20.5	3.1	32	3.8
900	30	1,025	20.6	1.9	31	3.0
850	30	1,516	18.2	1.0	29	2.8
800	30	2,033	16.1	-4.2	26	1.8
750	30	2,578	12.9	-3.7	25	2.3
700	30	3,153	9.6	-6.4	25	2.5
650	30	3,764	6.1	-10.2	25	3.7
600	30	4,415	2.1	-14.4	25	4.7
550	30	5,111	-2.3	-20.7	25	5.3
500	30	5,861	-7.5	-23.5	26	6.5
450	30	6,672	-13.3	-31.1	26	8.0
400	30	7,557	-19.9	-35.9	26	8.8
350	30	8,532	-27.9	-41.9	25	9.4
300	30	9,619	-36.9	-49.2	26	10.5
250	30	10,855	-46.3	-57.2	25	13.2
200	30	12,305	-55.7	-65.9	25	16.5
175	30	13,148	-59.5	-67.8	25	16.9
150	30	14,104	-63.2		24	15.0
125	30	15,217	-65.6		25	13.0
100	30	16,574	-65.0		25	3.9
80	30	17,940	-62.8		09	2.3
70	30	18,766	-61.2		11	5.0
60	30	19,728	-59.0		10	7.3
50	30	20,879	-56.7		10	7.5
40	30	22,301	-54.3		09	10.1
30	30	24,157	-51.4		09	13.8
25	29	25,345	-49.5		09	15.0
20	29	26,813	-47.3		09	15.4
15	27	28,726	-44.9		09	15.4
10	23	31,463	-40.7		09	18.0
7	18	33,908	-37.0		09	19.1
5	13	36,223	-34.0			
4	6	37,731	-35.1			

* SAULT STE MARIE, MICH. 990 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	221	12.1	11.3	33	.6
1000	31	137				
950	31	570	14.3	10.2	27	3.0
900	31	1,027	13.1	7.7	28	6.2
850	31	1,507	10.8	2.3	29	8.4
800	31	2,011	8.8	-2.1	28	9.8
750	31	2,544	6.4	-5.9	28	11.3
700	31	3,107	3.5	-9.8	28	12.9
650	31	3,701	.7	-15.2	28	14.9
600	31	4,343	-2.8	-19.2	28	16.[illegible]
550	31	5,022	-6.9	-23.9	28	17.4
500	31	5,766	-11.3	-28.3	28	19.4
450	31	6,562	-16.4	-33.0	28	22.2
400	31	7,442	-22.8	-38.6	28	22.3
350	31	8,407	-29.8	-44.2	28	24.9
300	31	9,488	-37.9	-49.6	28	27.5
250	31	10,719	-46.9		28	28.2
200	31	12,171	-53.8		28	30.8
175	31	13,024	-55.8		28	28.4
150	31	14,001	-57.4		28	25.3
125	31	15,152	-57.9		28	19.1
100	31	16,560	-57.2		28	12.0
80	31	17,974	-56.0		29	7.8
70	31	18,824	-54.9		30	4.9
60	31	19,814	-53.3		32	3.0
50	31	20,992	-51.5		36	1.4
40	31	22,447	-49.5		05	1.7
30	31	24,342	-47.3		08	2.[illegible]
25	31	25,552	-45.8		08	4.6
20	31	27,044	-43.6		08	5.3
15	30	28,990	-41.0		09	5.7
10	28	31,775	-37.2		09	6.[illegible]
7	24	34,265	-33.0		10	6.[illegible]
5	9	36,766	-27.2			
4						

* SHEMYA, ALASKA 1008 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	38	8.4	7.5	33	.6
1000	31	103	8.1	7.1	16	.3
950	31	528	6.1	4.7	28	.4
900	31	968	4.3	.7	29	.5
850	31	1,433	3.0	-4.1	31	1.1
800	31	1,923	1.8	-8.1	32	1.8
750	31	2,442	-.5	-10.9	32	2.0
700	31	2,991	-3.4	-15.3	31	2.4
650	31	3,569	-6.4	-18.5	30	3.2
600	31	4,197	-10.0	-22.1	30	3.7
550	31	4,859	-13.7	-27.6	30	4.2
500	31	5,583	-18.2	-31.6	29	5.7
450	31	6,357	-23.5	-35.8	29	6.7
400	31	7,214	-29.5	-41.0	29	8.0
350	31	8,153	-36.3	-45.9	29	10.0
300	31	9,206	-43.7		29	11.8
250	31	10,415	-48.5		29	14.6
200	31	11,884	-48.8		29	14.9
175	31	12,761	-49.0		28	13.8
150	31	13,771	-49.8		29	13.3
125	28	14,957	-50.8		28	9.4
100	27	16,407	-51.8		28	6.9
80	27	17,855	-51.2		28	4.2
70	27	18,723	-50.9		27	2.4
60	27	19,728	-50.4		27	[illegible].4
50	27	20,918	-50.2		26	.2
40	27	22,376	-50.0		08	1.0
30	27	24,260	-48.9		06	1.7
25	27	25,460	-48.1		07	2.2
20	27	26,937	-46.0		10	2.1
15	26	28,859	-43.5		07	2.3
10	24	31,618	-39.5		08	3.4
7	21	34,067	-35.5		08	4.8
5	17	36,439	-31.3		08	7.5
4	12	38,043	-28.5		08	9.0

* SHREVEPORT, LA. 1009 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	79	22.6	20.5	16	.8
1000	31	153	22.9	20.2	18	1.7
950	31	604	22.8	18.0	21	4.[illegible]
900	31	1,073	20.2	14.5	21	3.9
850	31	1,566	17.5	10.3	20	2.7
800	31	2,083	14.4	6.3	20	2.4
750	31	2,623	11.2	2.7	19	1.7
700	31	3,200	7.8	-.9	17	1.1
650	31	3,804	4.2	-4.7	18	1.1
600	31	4,455	.5	-8.8	17	1.3
550	31	5,146	-3.3	-14.3	15	.8
500	31	5,899	-7.7	-19.2	15	.9
450	31	6,708	-12.6	-24.9	16	.9
400	31	7,603	-18.0	-31.1	10	1.8
350	30	8,588	-24.7	-37.5	09	.5
300	30	9,692	-33.1	-46.2	36	.9
250	30	10,948	-42.9		36	1.7
200	29	12,417	-54.4		06	1.7
175	28	13,263	-60.5		09	1.3
150	27	14,209	-66.1		08	1.6
125	27	15,303	-69.8		06	2.1
100	27	16,633	-68.3		09	2.7
80	26	17,984	-64.4		08	4.6
70	26	18,804	-61.9		08	5.3
60	26	19,762	-59.2		09	6.6
50	26	20,911	-56.8		09	9.0
40	26	22,334	-54.1		09	11.6
30	25	24,194	-50.5		09	13.4
25	24	25,385	-48.3		09	14.7
20	24	26,859	-46.7		09	15.7
15	22	28,774	-44.2		09	17.6
10	21	31,524	-38.7		09	20.2
7	11	34,039	-34.2		10	21.2
5						
4						

SPOKANE, WASH. 932 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	717	13.4	6.3	16	2.7
1000	31	112				
950	31	550				
900	31	1,008	15.0	5.1	21	4.0
850	31	1,490	13.1	2.5	23	4.5
800	31	1,997	9.8	-.9	23	5.1
750	31	2,525	6.4	-3.8	23	[illegible].5
700	31	3,093	3.0	-7.1	24	6.7
650	31	3,684	-.9	-10.3	24	[illegible].2
600	31	4,324	-4.9	-14.7	23	[illegible].5
550	31	4,997	-9.3	-20.0	23	9.6
500	31	5,734	-14.2	-26.2	23	9.9
450	31	6,516	-19.7	-30.8	24	11.3
400	31	7,390	-26.0	-36.8	24	13.0
350	31	8,343	-33.3	-43.0	24	14.2
300	31	9,407	-41.5	-48.8	23	15.3
250	31	10,621	-49.6		23	16.9
200	30	12,055	-54.3		24	17.9
175	30	12,912	-53.2		24	16.0
150	30	13,905	-53.7		24	13.2
125	30	15,074	-54.8		25	10.8
100	30	16,500	-55.0		24	8.2
80	30	17,927	-54.5		24	[illegible].5
70	29	18,781	-54.1		25	3.1
60	29	19,770	-53.4		23	.7
50	29	20,946	-52.4		06	.7
40	29	22,393	-50.7		09	1.9
30	28	24,275	-48.4		08	2.6
25	28	25,479	-46.9		08	3.3
20	26	26,961	-44.6		08	4.5
15	25	28,898	-42.0		08	4.3
10	19	31,653	-37.5		08	6.3
7	13	34,106	-33.2			
5						
4						

* SWAN ISLAND, W. I. 1013 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	10	26.7	23.8	08	3.7
1000	31	125	26.1	23.3	08	4.8
950	31	582	23.0	20.1	10	7.2
900	31	1,047	20.2	15.6	10	7.9
850	31	1,540	17.7	10.7	10	8.5
800	31	2,057	14.7	5.2	10	9.1
750	31	2,599	11.6	1.2	10	9.3
700	31	3,175	8.4	-3.4	10	8.8
650	31	3,785	5.1	-8.5	10	8.7
600	31	4,434	1.7	-12.5	11	7.4
550	31	5,122	-2.5	-17.1	10	6.9
500	31	5,880	-7.3	-23.2	10	6.0
450	31	6,693	-12.5	-27.0	09	5.0
400	31	7,583	-18.3	-32.4	06	4.1
350	31	8,567	-24.9	-38.2	03	3.9
300	31	9,670	-33.3	-45.3	36	3.8
250	31	10,924	-43.4		32	4.8
200	29	12,386	-55.4		31	6.2
175	29	13,225	-61.8		31	5.7
150	29	14,166	-67.2		34	3.5
125	29	15,255	-70.7		07	5.5
100	28	16,568	-72.6		09	8.2
80	28	17,888	-69.2		09	13.3
70	27	18,690	-66.5		09	15.1
60	27	19,632	-63.0		09	17.4
50	26	20,759	-60.2		09	21.9
40	26	22,161	-57.0		10	23.3
30	26	24,002	-52.6		10	24.7
25	25	25,182	-50.4		09	25.3
20	25	26,646	-47.7		09	26.0
15	24	28,560	-44.5		09	26.3
10	20	31,306	-40.6		09	25.8
7	13	33,739	-35.8		09	25.3
5						
4						

TAMPA, FLA. 1017 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	8	24.3	23.0	11	1.5
1000	31	154	24.4	22.1	13	2.2
950	31	602	22.9	18.7	16	2.8
900	31	1,074	20.2	15.3	16	2.0
850	31	1,566	17.2	11.9	13	2.0
800	31	2,082	14.3	8.0	13	2.7
750	31	2,627	11.4	2.8	12	3.0
700	31	3,200	8.4	-2.5	12	2.9
650	31	3,806	4.9	-6.3	12	2.5
600	31	4,458	1.4	-11.3	11	2.9
550	31	5,151	-2.5	-17.3	12	2.1
500	31	5,905	-6.9	-23.2	10	2.0
450	31	6,716	-11.9	-28.1	10	2.0
400	30	7,615	-17.8	-34.0	08	2.5
350	30	8,599	-24.9	-40.4	09	2.8
300	30	9,702	-33.2	-47.4	10	2.6
250	30	10,958	-42.9		08	3.0
200	30	12,426	-54.3		09	5.1
175	30	13,270	-60.3		10	5.7
150	30	14,218	-65.8		09	5.5
125	30	15,312	-69.3		09	6.2
100	30	16,643	-69.3		08	6.3
80	30	17,985	-66.3		08	8.6
70	30	18,799	-63.4		08	10.3
60	30	19,753	-60.6		09	12.8
50	30	20,897	-57.6		09	15.2
40	30	22,316	-54.0		09	16.3
30	30	24,176	-50.9		09	16.0
25	28	25,367	-49.1		09	17.1
20	28	26,838	-46.5		09	19.3
15	26	28,763	-42.7		09	23.0
10	19	31,531	-38.8		09	26.9
7	5	33,990	-32.7			
5						

TOPEKA, KANS. 985 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	269	20.6	17.9	16	2.2
1000	31	138				
950	31	583	21.5	16.0	20	6.2
900	31	1,052	20.6	12.7	22	8.5
850	31	1,545	18.0	9.6	24	6.8
800	31	2,063	15.1	7.0	25	6.1
750	31	2,605	11.7	3.5	25	5.5
700	31	3,182	8.2	.4	25	5.4
650	31	3,787	4.5	-4.4	24	6.6
600	31	4,439	.6	-10.8	25	7.6
550	31	5,127	-3.4	-15.7	25	7.9
500	31	5,881	-7.8	-20.8	25	[illegible].8
450	31	6,691	-12.7	-26.8	25	9.2
400	31	7,583	-18.6	-32.7	25	9.4
350	31	8,565	-25.8	-38.8	25	10.2
300	31	9,664	-34.0	-45.5	25	12.6
250	31	10,916	-43.7		26	12.5
200	31	12,381	-54.5		26	13.[illegible]
175	31	13,226	-59.7		26	12.9
150	31	14,178	-63.9		26	11.4
125	31	15,287	-66.5		26	8.7
100	31	16,640	-64.9		27	5.0
80	30	18,007	-62.5		29	1.0
70	30	18,834	-60.2		03	1.5
60	30	19,805	-57.0		07	2.6
50	30	20,966	-54.3		08	3.3
40	29	22,404	-51.8		08	4.9
30	29	24,279	-49.3		09	5.6
25	29	25,478	-47.5		09	7.8
20	29	26,960	-45.1		08	8.7
15	27	28,892	-42.6		09	9.8
10	23	31,661	-37.9		09	10.9
7	9	34,128	-34.2			
5						

+ TRUK, CAROLINE IS. 1011 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	2	28.7	24.4	20	.8
1000	31	95	27.8	23.3	19	.9
950	31	545	23.8	19.0	18	1.0
900	31	1,021	21.0	14.6	18	1.2
850	31	1,515	18.4	10.9	14	1.2
800	31	2,033	15.6	7.5	11	1.5
750	31	2,578	12.7	3.4	09	2.0
700	31	3,157	9.6	.2	09	2.6
650	31	3,766	6.2	-4.0	10	3.3
600	31	4,422	2.3	-7.8	10	4.6
550	31	5,115	-1.4	-12.5	10	4.5
500	31	5,877	-5.3	-18.5	10	4.5
450	31	6,696	-9.7	-23.8	10	4.[illegible]
400	31	7,601	-15.2	-30.2	09	5.6
350	31	8,599	-21.7	-36.8	09	6.7
300	31	9,717	-29.9	-44.7	08	7.[illegible]
250	31	10,989	-40.4	-53.3	06	8.5
200	31	12,472	-52.8		07	10.8
175	31	13,320	-60.0		06	12.5
150	31	14,266	-67.5		06	11.9
125	31	15,344	-74.8		06	9.3
100	30	16,629	-76.3		09	9.3
80	30	17,932	-70.9		08	11.3
70	30	18,730	-67.1		09	12.4
60	30	19,666	-64.8		09	14.3
50	30	20,787	-61.7		09	20.4
40	29	22,183	-57.6		09	29.8
30	28	24,021	-52.3		09	32.7
25	28	25,209	-48.8		09	30.6
20	28	26,689	-44.8		09	21.8
15	25	28,616	-42.4		09	9.5
10	21	31,367	-38.7		10	9.6
7	10	33,848	-36.3			
5						

* TUCSON, ARIZ. 925 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	789	22.1	15.3	14	3.0
1000	31	100				
950	31	554				
900	31	1,025	23.4	13.0	14	2.5
850	31	1,523	21.2	9.7	16	1.5
800	31	2,045	17.5	7.5	18	1.4
750	31	2,589	13.3	5.0	19	2.2
700	31	3,171	9.2	1.1	19	3.1
650	31	3,778	5.5	-4.9	18	2.9
600	31	4,432	1.5	-8.5	17	3.2
550	31	5,119	-2.8	-12.8	19	2.5
500	31	5,878	-7.7	-18.2	20	2.7
450	31	6,686	-12.5	-25.3	22	2.7
400	31	7,582	-18.2	-30.3	23	4.1
350	31	8,565	-25.7	-37.3	23	5.7
300	31	9,663	-34.0	-44.7	22	8.3
250	31	10,915	-43.5		22	10.3
200	31	12,380	-54.1		23	12.2
175	31	13,226	-59.8		23	12.8
150	31	14,176	-65.3		24	11.7
125	31	15,274	-69.1		24	7.5
100	31	16,611	-67.5		24	1.7
80	31	17,963	-64.8		09	3.3
70	31	18,783	-62.1		09	5.1
60	31	19,741	-59.5		09	7.3
50	31	20,889	-57.2		10	10.1
40	31	22,308	-54.6		09	11.3
30	31	24,159	-52.2		09	14.0
25	31	25,343	-50.3		09	15.1
20	30	26,808	-47.6		09	16.6
15	29	28,722	-44.9		09	18.0
10	28	31,460	-39.2		08	20.6
7	21	33,924	-34.8		09	22.1
5						

* VANDENBERG AFB, CALIF. 1004 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	100	12.4	11.9	34	1.2
1000	29	130	12.4	11.7	35	1.5
950	29	570	16.0	2.6	36	3.4
900	29	1,027	19.5	-1.6	02	2.4
850	29	1,517	17.7	-4.5	01	1.6
800	29	2,032	15.0	-8.2	30	1.1
750	29	2,571	12.1	-10.5	26	2.4
700	29	3,150	9.1	-13.2	26	3.4
650	29	3,756	5.4	-16.2	26	4.1
600	29	4,409	1.5	-20.4	26	5.1
550	29	5,099	-3.0	-25.7	26	6.7
500	29	5,852	-8.0	-30.6	26	7.7
450	29	6,655	-13.9	-34.9	26	9.3
400	29	7,547	-20.6	-39.1	26	10.6
350	29	8,520	-28.4	-45.6	25	11.9
300	29	9,605	-37.4	-52.8	25	12.6
250	29	10,837	-47.4		25	13.9
200	29	12,281	-56.3		25	16.7
175	29	13,123	-59.1		25	17.1
150	28	14,080	-62.5		24	15.1
125	28	15,199	-64.1		25	12.2
100	28	16,565	-63.9		25	6.2
80	28	17,937	-62.2		24	1.1
70	27	18,764	-61.0		12	2.7
60	27	19,725	-59.2		10	5.1
50	27	20,874	-56.9		09	6.8
40	27	22,294	-54.6		09	8.2
30	27	24,147	-51.8		09	11.0
25	27	25,333	-50.1		09	12.6
20	26	26,795	-47.7		09	14.0
15	26	28,706	-44.9		09	15.6
10	22	31,428	-41.2		09	16.2
7	20	33,859	-37.9		09	16.2
5	10	36,163	-33.1			

See reference note at end of table

RAWINSONDE DATA

Average monthly values

VICTORIA, TEXAS — 1012 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.P.S.
SURFACE	31	33	24.1	22.6	08	1.2
1000	31	142	24.9	23.4	14	2.6
950	31	590	23.0	20.6	17	6.5
900	31	1,065	20.6	15.3	17	6.2
850	31	1,558	18.1	9.8	17	5.6
800	31	2,075	15.5	3.8	16	4.2
750	31	2,617	12.4	-1.0	15	3.7
700	31	3,196	9.[illegible]	-4.9	14	3.7
650	31	3,803	5.5	-9.3	13	3.5
600	31	4,456	1.7	-13.0	13	3.8
550	31	5,148	-2.5	-17.0	12	3.1
500	31	5,903	-7.0	-21.4	11	2.9
450	31	6,712	-12.1	-26.6	10	2.8
400	31	7,608	-17.9	-32.6	10	2.3
350	31	8,593	-25.[illegible]	-38.[illegible]	09	2.3
300	31	9,695	-33.3	-46.3	07	2.8
250	31	10,950	-43.2		05	3.7
200	31	12,416	-54.5		07	3.6
175	31	13,260	-60.2		08	4.2
150	31	14,209	-65.6		07	4.4
125	30	15,302	-69.9		08	4.3
100	30	16,631	-69.2		08	4.4
80	30	17,975	-65.7		06	6.9
70	30	18,789	-63.7		09	8.3
60	30	19,740	-60.9		09	10.6
50	29	20,882	-57.7		09	13.[illegible]
40	29	22,299	-55.2		09	14.6
30	27	24,148	-51.4		09	17.0
25	27	25,338	-49.2		09	17.8
20	27	26,808	-47.2		09	17.9
15	23	28,718	-43.8		09	19.7
10	21	31,467	-39.6		09	23.1
7	11	33,910	-36.3			
5	5	36,250	-34.5			

° WAKE IS., PACIFIC AREA — 1012 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.P.S.
SURFACE	31	5	28.0	24.9	09	5.0
1000	31	112	27.0	24.1	09	5.4
950	31	559	23.3	21.1	09	5.6
900	31	1,036	20.3	17.7	09	5.6
850	31	1,530	17.7	14.4	09	5.2
800	31	2,048	15.4	10.5	09	4.3
750	31	2,590	12.6	6.9	09	4.0
700	31	3,171	9.5	2.3	09	3.3
650	31	3,780	6.0	-1.5	09	3.2
600	31	4,435	2.0	-5.5	09	2.8
550	31	5,128	-2.1	-11.1	09	2.7
500	31	5,886	-6.3	-19.0	09	2.7
450	31	6,702	-11.1	-23.4	07	2.7
400	31	7,600	-16.7	-29.7	06	2.5
350	31	8,590	-23.[illegible]	-36.1	04	1.7
300	31	9,700	-31.9	-42.6	36	2.0
250	31	10,961	-42.4		33	3.6
200	31	12,429	-54.[illegible]		33	4.6
175	31	13,270	-61.7		33	5.8
150	31	14,209	-68.5		35	6.1
125	31	15,286	-73.3		04	4.0
100	28	16,586	-73.2		07	7.2
80	25	17,903	-69.8		08	12.7
70	25	18,702	-67.4		09	15.7
60	25	19,638	-63.8		09	18.5
50	25	20,767	-60.0		09	20.5
40	25	22,171	-56.8		09	23.2
30	24	24,012	-53.2		09	24.1
25	24	25,191	-51.6		09	24.8
20	24	26,644	-50.0		09	25.4
15	24	28,536	-46.9		09	26.4
10	21	31,258	-41.5		09	26.2
7	14	33,703	-39.2		09	27.7
5	5	36,031	-35.3			

° WALLOPS IS., VA. NASA — 1017 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.P.S.
SURFACE	31	3	22.5	20.5	32	1.0
1000	31	151	23.1	18.4	31	1.9
950	31	599	21.7	14.4	32	4.1
900	31	1,067	18.8	11.0	32	3.9
850	31	1,556	15.6	8.0	30	4.3
800	31	2,070	13.3	3.4	29	6.4
750	31	2,606	10.5	-.6	28	7.7
700	31	3,183	7.6	-5.4	28	8.8
650	31	3,788	4.4	-9.0	28	10.1
600	31	4,439	.9	-13.1	28	10.2
550	31	5,128	-2.9	-19.0	28	9.9
500	31	5,884	-7.2	-23.2	28	9.7
450	31	6,691	-12.4	-27.1	27	9.8
400	31	7,588	-18.3	-32.2	27	9.9
350	31	8,572	-25.0	-38.2	27	10.4
300	31	9,675	-33.2	-46.3	27	11.7
250	31	10,931	-42.9		27	12.9
200	31	12,399	-54.5		28	14.4
175	31	13,243	-60.2		28	14.0
150	31	14,193	-64.8		28	12.3
125	31	15,297	-67.7		27	9.1
100	31	16,640	-66.2		28	5.9
80	30	18,008	-61.9		32	2.6
70	30	18,838	-59.5		02	1.5
60	30	19,807	-57.2		06	3.0
50	30	20,967	-54.8		07	4.7
40	30	22,404	-51.6		08	6.9
30	30	24,283	-48.8		09	8.4
25	29	25,486	-47.1		09	10.2
20	29	26,971	-44.7		09	10.4
15	27	28,906	-42.1		09	11.5
10	22	31,671	-37.9		09	12.5
7	11	34,139	-34.0			

WASHINGTON DULLES INT. AP — 1009 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.P.S.
SURFACE	31	85	19.0	17.5	25	.9
1000	31	160	20.3	17.4	27	1.1
950	31	611	20.9	14.3	32	4.0
900	31	1,072	18.0	11.7	32	5.9
850	31	1,561	15.0	8.9	31	6.8
800	31	2,073	12.8	2.7	30	6.8
750	31	2,615	10.5	-3.0	29	7.7
700	31	3,185	7.6	-7.4	29	8.7
650	31	3,794	4.3	-10.9	28	9.4
600	31	4,440	.8	-15.1	28	10.1
550	31	[illegible],130	-3.4	-18.6	28	10.3
500	31	5,881	-7.6	-23.3	28	10.8
450	31	6,693	-12.4	-29.2	28	11.6
400	31	7,584	-18.5	-34.8	28	11.4
350	31	[illegible],566	-25.6	-41.2	28	12.8
300	31	[illegible],666	-33.9	-48.6	28	14.6
250	31	10,918	-44.0		27	15.3
200	31	12,383	-54.2		28	16.5
175	31	13,228	-59.5		28	16.0
150	31	14,182	-64.1		28	15.0
125	31	15,288	-66.7		28	11.2
100	30	16,641	-65.2		27	6.8
80	30	18,012	-61.0		30	2.7
70	30	18,845	-58.9		02	1.2
60	30	19,819	-56.3		06	2.6
50	30	20,984	-53.6		08	3.7
40	30	22,425	-51.3		08	5.5
30	28	24,307	-48.2		09	6.7
25	27	25,510	-46.6		09	8.3
20	26	26,998	-44.4		09	9.1
15	25	28,937	-41.4		09	9.[illegible]
10	19	31,720	-38.1		09	11.1
7	7	34,148	-36.0			

WINNEMUCCA, NEV. — 870 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.P.S.
SURFACE	30	1,312	12.2	.0	17	.9
1000	30	122				
950	30	563				
900	30	1,030				
850	30	1,508	15.6	2.5	23	1.3
800	30	2,021	13.6	-.2	26	2.8
750	30	2,558	9.8	-2.8	26	3.3
700	30	3,130	5.8	-5.1	25	4.4
650	30	3,728	1.7	-8.6	23	6.3
600	30	4,373	-2.8	-11.7	23	8.5
550	30	[illegible],051	-7.5	-16.4	23	9.4
500	30	5,793	-12.3	-22.5	23	10.2
450	30	6,590	-17.7	-28.3	24	11.5
400	30	7,462	-23.5	-34.7	24	13.5
350	30	8,425	-30.4	-40.4	24	15.9
300	30	9,502	-38.5	-48.5	25	15.3
250	30	10,731	-47.4		24	17.2
200	30	12,176	-56.1		24	18.6
175	30	13,023	-57.0		24	19.3
150	30	13,997	-58.2		24	17.4
125	29	15,139	-59.4		24	12.1
100	28	16,531	-60.4		24	6.0
80	26	17,928	-58.2		22	1.7
70	25	18,769	-57.2		24	.[illegible]
60	25	19,747	-55.8		05	1.7
50	24	20,916	-54.4		07	3.3
40	23	22,354	-52.4		08	4.6
30	21	24,221	-50.0		08	6.4
25	19	25,411	-48.5		09	7.0
20	18	26,882	-46.7		08	8.3
15	17	28,806	-43.5		08	8.9
10	13	31,565	-39.8			
7	5	34,014	-36.2			

WINSLOW, ARIZ. — 853 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.P.S.
SURFACE	31	1,492	15.[illegible]	7.1	17	1.3
1000	31	113				
950	31	556				
900	31	1,025				
850	31	1,522			18	1.3
800	31	2,041	16.9	5.8	23	2.6
750	31	2,584	13.4	2.7	23	4.2
700	31	3,165	9.4	-1.2	22	4.8
650	31	3,773	5.2	-5.7	22	4.3
600	31	4,424	.7	-9.4	22	4.5
550	31	5,108	-3.7	-13.8	23	4.6
500	31	5,866	-8.2	-20.6	23	5.6
450	31	6,676	-13.1	-27.6	24	5.5
400	31	7,564	-19.4	-34.0	24	6.7
350	31	[illegible],543	-26.7	-39.2	24	8.5
300	31	9,637	-35.0	-46.3	23	11.3
250	31	10,885	-44.2		23	15.0
200	31	12,346	-54.[illegible]		23	17.8
175	31	13,191	-59.7		24	18.1
150	31	14,143	-64.4		24	15.5
125	30	15,247	-66.9		24	10.9
100	30	16,595	-66.0		23	4.4
80	30	17,955	-63.4		14	.7
70	29	18,778	-61.3		12	3.1
60	29	19,739	-58.9		10	4.8
50	29	20,888	-56.4		09	6.8
40	29	22,314	-53.7		09	9.[illegible]
30	29	24,172	-51.4		09	11.7
25	28	25,360	-49.6		09	12.2
20	26	26,828	-47.2		09	13.5
15	23	28,742	-44.4		09	14.6
10	17	31,479	-40.3		09	17.4
7	6	33,923	-38.0			

YAKUTAT, ALASKA — 1012 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.P.S.
SURFACE	31	12	7.9	7.[illegible]	08	1.0
1000	31	115			08	.7
950	31	544	10.9	6.0	11	1.2
900	31	994	[illegible].4	3.1	14	2.2
850	31	1,465	5.5	1.1	15	2.8
800	31	1,958	2.6	-2.3	13	2.4
750	31	2,479	-.4	-5.7	11	2.7
700	31	3,027	-3.5	-8.8	12	3.4
650	31	3,607	-6.[illegible]	-14.7	13	2.9
600	31	4,231	-10.8	-19.7	14	3.1
550	31	4,894	-14.7	-26.3	14	2.1
500	31	[illegible],611	-19.4	-30.[illegible]	15	1.7
450	31	6,383	-25.1	-36.2	14	1.4
400	31	7,233	-31.2	-42.0	05	.4
350	31	[illegible],165	-38.[illegible]	-45.3	35	1.6
300	31	9,208	-45.9		34	2.1
250	31	10,403	-51.4		32	3.5
200	31	11,857	-49.2		31	4.8
175	30	12,731	-48.7		30	3.9
150	30	13,744	-48.9		29	3.5
125	30	14,939	-49.4		29	3.5
100	30	16,399	-49.9		28	3.1
80	30	17,859	-49.4		28	2.3
70	30	18,733	-49.3		29	1.6
60	30	19,744	-49.2		27	.9
50	30	20,940	-48.8		12	.2
40	30	22,408	-48.1		11	1.5
30	30	24,308	-46.9		11	2.7
25	30	25,517	-46.1		11	2.4
20	30	27,005	-44.6		10	2.4
15	26	28,935	-41.9		10	2.7
10	16	31,703	-38.0		06	3.1
7	6	34,129	-35.3			

+ YAP, CAROLINE IS. — 1008 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.P.S.
SURFACE	31	17	28.2	24.6	26	1.9
1000	31	86	27.3	23.1	26	2.3
950	31	532	23.1	18.4	26	2.9
900	31	1,010	20.4	15.0	25	3.0
850	31	1,503	18.0	11.5	24	2.5
800	31	2,021	15.4	[illegible].4	25	2.1
750	31	2,561	12.7	4.4	23	1.9
700	31	3,144	9.7	[illegible].4	20	2.0
650	31	[illegible],753	6.3	-2.6	19	2.2
600	31	4,410	2.6	-5.8	17	3.1
550	31	5,101	-1.2	-10.4	15	3.1
500	31	5,865	-5.3	-15.8	12	3.7
450	31	[illegible],683	-9.8	-22.0	11	4.1
400	31	7,589	-15.3	-27.7	10	5.6
350	31	8,585	-21.9	-34.9	09	6.8
300	31	9,702	-30.1	-43.1	08	7.6
250	31	10,974	-40.3	-52.4	07	9.7
200	31	12,456	-52.8		07	13.1
175	31	13,304	-60.1		07	14.8
150	31	14,249	-67.7		07	15.2
125	31	15,326	-75.0		07	15.1
100	31	16,606	-77.8		08	13.7
80	31	17,905	-71.4		09	16.0
70	31	18,700	-68.0		09	16.1
60	31	19,630	-65.4		09	17.8
50	31	20,748	-62.1		09	22.2
40	30	22,138	-58.6		09	28.4
30	30	23,965	-53.5		09	34.3
25	28	25,149	-49.7		09	33.4
20	25	26,615	-47.0		09	27.9
15	21	28,541	-42.7		09	17.6
10	13	31,287	-39.4		09	8.8
7	6	33,720	-36.7			

YUCCA FLAT, NEV. — 882 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.P.S.
SURFACE	31	1,196	16.5	4.3	27	.7
1000	31	102				
950	31	547				
900	31	1,021				
850	31	1,510	20.0	4.[illegible]	21	1.7
800	31	2,030	16.8	1.[illegible]	20	4.8
750	31	2,570	13.0	-.7	21	6.0
700	31	3,152	8.6	-3.4	21	5.5
650	31	3,757	3.9	-6.8	20	5.5
600	31	4,406	-.3	-11.9	21	6.0
550	31	5,090	-4.6	-18.4	23	6.7
500	31	5,840	-9.4	-24.2	24	8.1
450	31	6,643	-15.0	-28.8	24	10.0
400	31	7,529	-21.1	-34.8	24	12.0
350	31	8,500	-28.6	-40.0	24	13.3
300	31	9,585	-37.1	-47.5	24	14.5
250	31	10,822	-46.1		24	15.4
200	31	12,274	-55.4		23	18.0
175	31	13,120	-58.3		23	19.5
150	31	14,083	-61.1		24	17.9
125	31	15,211	-62.9		24	12.9
100	31	16,581	-63.3		24	5.7
80	31	17,961	-60.9		19	1.8
70	31	18,793	-59.6		15	1.6
60	31	19,760	-57.8		09	2.5
50	31	20,917	-55.5		09	4.7
40	31	22,348	-53.3		09	6.3
30	31	24,210	-51.1		09	[illegible].1
25	29	25,401	-49.4		09	10.0
20	23	26,863	-47.0		09	10.7
15	13	28,770	-45.5		09	9.6

YUMA, ARIZ. — 995 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.P.S.
SURFACE	21	131	26.1	13.7	05	.2
1000	21	84				
950	21	534	27.3	12.9	23	1.[illegible]
900	21	1,015	24.8	9.5	21	2.9
850	21	1,514	21.6	6.3	20	3.6
800	21	2,036	17.7	4.8	19	3.6
750	21	2,579	13.7	1.8	19	3.1
700	21	3,163	9.7	-2.7	19	3.9
650	21	3,765	5.8	-7.5	21	3.8
600	21	4,424	1.8	-13.1	22	3.5
550	21	5,111	-2.4	-16.9	22	3.7
500	21	5,871	-7.0	-22.2	22	4.9
450	21	[illegible],676	-12.4	-27.7	24	6.5
400	21	7,574	-19.0	-33.7	25	7.9
350	21	8,554	-26.6	-40.2	24	9.2
300	21	9,648	-35.0	-47.3	23	11.9
250	20	10,894	-44.3		22	13.6
200	16	12,357	-54.8		22	13.0
175	15	13,208	-60.0		22	14.1
150	14	14,157	-65.2		23	13.3
125	11	15,250	-68.2			

Note: All observations scheduled at 1200, G.C.T. Pressures shown under station names are the average monthly station pressures for the month of record, corrected to the height of the floors of the instrument shelters used for rawinsonde purposes. "Number of observations" refers to those of dynamic height only. Although the number of temperature observations at any given pressure surface is usually the same as for height, it is possible for temperature to be missing for one or more pressure surfaces of some observations. Dew Point averages are limited to those observations with temperatures warmer than -40°C. Observations of wind speed and direction are sometimes lost due to limiting angles, i.e., elevation angles less than 6° above the horizon, or any obstruction above the horizon.

The temperature and wind values are based on 15 or more observations at the surface or 5 observations at a standard pressure level for temperature and 10 for wind. Dew Point data are not published for standard pressure surfaces for which less than 5 observations are available. Dew Point data are computed and expressed on the basis of vapor pressure over water. Unless otherwise indicated, they are obtained from carbon hygristors.

These average values for standard pressure surfaces were obtained by rawinsondes; dynamic height (geopotential) in units of .98 dynamic meter, temperature and dew point in degrees Celsius, and resultant winds in tens of degrees and meters per second.

° Rawinsondes at this station were equipped with hypsometers to permit more accurate evaluations of pressure, and consequently height, at pressures lower than 50 mb. These rawinsondes were carried aloft by special high altitude balloons, in an effort to consistently reach higher altitudes.

\+ Observations for these stations are scheduled at 0000 G.C.T.

† Dew Point temperatures are based on a minimum of 5 observations. Therefore, due to the lesser number of Dew Point observations at the higher levels comparison with dry-bulb temperatures should be made with care. Dew Point temperatures replaced Relative Humidity January 1967.

Solar radiation intensities, tabulated in langleys per minute on a surface normal to the direction of the sun. AUGUST 1968

Sun's zenith distance

Date	A.M. 78.7°	A.M. 75.7°	A.M. 70.7°	A.M. 60.0°	*	P.M. 60.0°	P.M. 70.7°	P.M. 75.7°	P.M. 78.7°

ALBUQUERQUE, N. MEX.

Air mass	4.19	3.35	2.51	1.67	*	1.67	2.51	3.35	4.19
Aug.									
6	0.81	0.90	1.03	1.16	1.38	----	----	----	----
7	.72	----	----	----	----	----	----	----	----
8	----	----	----	----	1.22	----	----	----	----
9	----	.82	.95	1.12	1.35	----	----	----	----
10	----	----	----	----	1.31	----	----	----	----
12	----	----	----	----	1.32	----	0.96	----	----
13	.79	----	----	1.15	1.35	----	----	----	----
15	.89	1.00	1.12	1.26	1.45	1.26	1.10	0.99	0.90
16	.88	.98	1.11	1.25	1.41	1.20	----	----	----
17	.77	.89	1.05	1.23	1.41	----	----	----	----
18	.91	1.01	1.13	1.27	1.42	1.23	1.06	.93	.84
19	.90	1.00	1.12	1.25	1.45	1.25	----	----	----
21	----	----	----	----	1.42	1.23	1.08	----	----
22	----	----	----	----	1.40	1.26	----	----	----
23	.91	1.02	----	1.28	1.47	1.34	1.19	1.07	.96
24	.99	1.08	1.19	1.31	1.43	1.18	1.09	.96	.87
25	.88	.97	1.08	1.22	----	----	----	----	----
27	----	----	----	----	1.31	----	----	----	----
28	.75	.84	.95	1.15	1.35	1.17	1.01	.89	.78
29	.78	.88	1.00	1.15	1.39	1.14	----	----	----
30	----	----	1.03	1.20	1.38	1.16	1.01	.89	.80
31	.84	.93	1.03	----	1.37	----	----	----	----
Averages	0.84	0.95	1.06	1.21	1.38	1.22	1.06	0.96	0.86

OMAHA, NEBR.

Air mass	4.78	3.82	2.87	1.91	*	1.91	2.87	3.82	4.78
Aug.									
1	----	----	----	1.11	----	----	0.88	0.72	0.60
5	0.62	0.78	0.89	----	1.25	----	----	----	----
6	.62	.75	.88	1.02	HM1.18	0.97	.78	----	----
11	----	----	----	HS1.06	----	----	----	----	----
13	.57	.66	.83	.99	----	----	----	----	----
16	----	----	----	----	----	----	HS .95	HS .87	HS .78
19	----	.70	.85	----	----	----	----	----	----
20	----	----	----	1.05	----	----	----	----	----
21	HS .63	----	HS .87	HS1.01	HS1.22	.99	.87	.67	.60
22	HS .64	.75	HS .86	HS1.04	HS1.23	1.01	.73	.62	.60
23	.70	.80	.88	1.01	HS1.22	----	----	----	----
24	----	----	----	HS1.19	HS1.30	HS1.06	HS .89	HS .71	HS .63
25	HS .76	HS .85	HS .96	HS1.14	HS1.29	1.04	.88	.72	.60
Averages	0.65	0.76	0.88	1.06	1.24	1.01	0.85	0.72	0.63

MADISON, WIS.

Air mass	4.69	3.75	2.81	1.88	*	1.88	2.81	3.75	4.69
				Instrument Inoperative					

GUAM, M. I.

Air mass	4.92	3.93	2.95	1.97	*	1.97	2.95	3.93	4.92
Aug.									
27	----	S 0.86	S 0.99	M 1.13	----	----	----	----	----

BLUE HILL OBS., MASS.

Air mass	4.89	3.92	2.94	1.96	*	1.96	2.94	3.92	4.89
Aug.									
5	----	----	----	----	1.25	1.06	0.89	0.77	0.69
8	----	0.65	0.77	0.93	1.25	----	----	----	----
11	0.84	.95	1.08	1.23	1.42	1.18	1.03	.91	.79
12	.79	.87	.98	1.12	1.35	1.13	.96	.84	.75
13	.74	.89	.99	1.15	----	----	----	----	----
15	.79	.89	1.03	1.18	1.39	1.18	1.01	.93	.83
16	.87	.99	1.08	1.22	----	----	----	----	----
18	----	----	----	1.21	1.35	1.16	.98	.87	.77
19	.82	.91	1.01	1.16	----	----	----	----	----
21	----	----	----	1.10	1.29	----	----	----	----
22	.72	.83	.96	1.12	----	----	----	----	----
26	.58	.65	.77	.98	1.25	1.06	.87	.75	.65
27	.77	.84	.98	1.13	1.33	1.08	.90	.79	.69
30	.84	.89	.96	1.07	1.21	1.01	.87	.77	.67
31	.67	.75	.89	1.07	----	----	----	----	----
Averages	0.77	0.84	0.96	1.12	1.31	1.11	0.94	0.83	0.73

TUCSON, ARIZ.

Air mass	4.56	3.65	2.74	1.83	*	1.83	2.74	3.65	4.56
Aug.									
2	----	----	----	----	1.16	----	----	----	----
3	0.52	0.70	0.82	0.95	1.23	----	----	----	----
4	----	----	----	----	1.23	----	----	----	----
5	.71	.83	.95	1.10	1.28	1.09	----	----	----
6	.57	.65	.75	.95	1.16	----	----	----	----
7	----	----	----	----	----	1.08	----	----	0.72
8	----	----	.84	.97	1.26	----	----	----	----
9	----	----	----	----	----	.95	.79	.70	.55
10	----	----	.77	.97	----	----	----	----	----
11	----	----	----	1.12	1.31	----	----	----	----
12	.73	.83	.95	1.12	----	1.12	----	.89	.80
13	----	.77	.90	1.07	----	1.12	1.00	.87	----
14	.82	.92	1.04	1.18	1.40	1.26	1.11	1.00	.91
15	.87	.97	1.10	1.24	1.42	1.25	1.12	1.01	.92
16	.86	.96	1.07	1.21	1.38	1.21	1.06	.96	.87
17	.84	.95	1.07	1.21	1.40	1.17	1.04	.90	.81
18	.84	.94	1.06	1.22	1.36	----	----	----	----
19	----	----	.96	1.10	1.33	----	----	----	----
20	----	----	----	----	----	1.15	1.00	----	----
21	.79	.89	1.01	1.18	1.40	1.17	1.04	.92	.84
22	.83	.93	1.04	1.19	1.37	1.20	1.08	.98	.89
23	.86	.94	1.06	1.20	1.38	1.21	1.05	.96	.87
24	.81	.91	1.03	1.17	1.35	1.05	.86	.72	.62
25	.67	.77	.89	1.04	1.31	----	----	----	----
26	----	.64	.82	1.02	----	.97	----	.68	.54
27	.64	.73	.84	1.02	1.23	.96	.77	.63	.57
28	----	----	----	----	1.27	1.00	.85	.74	.64
29	.48	.58	.70	.87	1.14	----	----	----	----
30	----	----	.71	.93	1.18	----	.76	----	----
31	----	----	----	----	1.17	.95	----	----	----
Averages	0.74	0.83	0.93	1.09	1.29	1.11	0.97	0.85	0.75

S Slight haze - indeterminable
M Moderate haze - indeterminable
* Values corresponding to true solar noon

HS Slight haze
HM Moderate haze
HI Intense haze

Langley is the unit used to denote one gram calorie per square centimeter. An explanation of the formula used in computing the air mass values for each station listed above appears in the February 1957 issue, Vol. 8, No. 2, page 63, of this publication.

SOLAR RADIATION DATA

Daily totals and monthly averages of solar radiation (direct and diffuse) received on a horizontal surface, tabulated in langleys.

Station	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
																Day of month																
ALBUQUERQUE N.M.	377	580	636	600	614	717	568	626	615	554	480	636	601	637	680	661	651	659	658	536	619	561	685	658	409	411	---	612	603	595	546	593
AMES IOWA	622	593	353	251	584	578	412	370	394	380	576	549	569	548	294	465	528	165	475	510	539	532	531	551	556	49	439	434	367	69	198	435
ANNETTE ALASKA	646	647	643	530	---	622	439	---	---	596	357	194	529	395	321	180	148	337	544	509	52	391	417	360	388	381	257	667	283	86	299	401
APALACHICOLA FLORIDA	302	594	484	663	126	498	597	655	665	---	667	351	570	554	611	561	633	395	317	607	551	629	625	578	434	531	391	313	561	444	429	511
ARGONNE NAT. LAB.	525	630	486	456	392	617	527	311	461	435	680	571	535	612	302	475	579	539	553	575	561	512	487	574	481	509	502	583	530	512	271	509
ASTORIA OREGON	362	194	447	262	467	654	609	536	644	604	599	501	164	509	167	414	303	375	455	568	384	136	151	231	281	265	285	492	559	580	519	410
ATLANTA GEORGIA	608	455	616	524	603	623	602	623	577	286	545	105	278	413	474	519	581	487	406	560	561	482	447	447	521	589	583	580	592	556	150	496
BARROW ALASKA	551	---	505	407	194	320	502	488	524	408	270	252	113	280	280	---	156	184	83	---	327	133	208	166	117	---	142	276	257	153	164	276
BETHEL ALASKA	392	187	228	301	552	435	283	118	130	283	310	384	379	344	387	309	354	110	120	124	81	---	141	442	236	307	419	111	354	303	209	278
BISMARCK N.DAK.	720	691	681	479	687	627	329	359	496	693	613	675	600	253	475	---	528	400	629	581	444	577	308	630	619	608	318	507	382	399	561	529
BLUE HILL MASS.	340	269	485	467	618	360	342	590	355	307	661	630	454	524	653	502	---	590	546	238	555	464	375	162	392	527	536	487	422	491	552	463
BOISE IDAHO	558	340	244	471	623	622	486	506	533	452	568	391	396	156	561	356	76	251	79	307	427	511	479	562	372	417	408	554	542	538	530	430
BOSTON MASSACHUSETTS	275	246	507	454	626	349	282	567	362	357	---	---	458	493	634	503	351	608	541	244	571	445	391	180	421	507	509	465	393	422	534	438
BROWNSVILLE TEXAS	546	373	535	316	532	614	654	688	667	664	613	611	610	582	615	380	264	630	642	642	582	638	537	312	368	446	527	407	586	299	---	529
BURLINGTON VERMONT	484	548	588	415	562	203	326	555	315	486	496	573	487	422	595	173	213	581	408	163	341	223	514	215	470	151	196	342	501	442	441	401
CAPE HATTERAS N.C.	655	572	663	542	570	614	576	522	569	586	261	248	595	586	505	451	584	538	367	526	565	598	542	511	540	545	262	195	411	478	---	506
CARIBOU MAINE	267	498	701	530	731	225	698	648	409	585	634	363	409	398	431	549	149	675	592	246	297	662	437	279	301	363	479	344	412	418	466	458
CHARLESTON S.C.	658	695	473	677	556	548	636	531	630	679	389	200	550	579	594	444	510	496	570	533	528	574	569	517	574	492	245	100	545	215	172	499
CLEVELAND OHIO	476	537	445	358	454	380	401	520	495	275	697	661	452	597	589	404	461	469	515	477	513	509	496	527	332	306	533	591	575	557	524	488
COLUMBIA MISSOURI	363	166	613	656	657	658	335	481	305	113	398	159	550	433	256	569	569	558	541	602	606	594	607	413	629	597	523	533	443	126	355	465
DODGE CITY KANSAS	535	601	693	661	678	679	685	602	663	127	399	550	655	514	649	572	154	598	656	641	607	633	533	628	569	572	369	107	143	629	639	540
E. LANSING MICHIGAN	565	639	509	613	175	309	551	337	454	---	596	644	543	---	575	---	---	---	573	---	376	---	548	---	307	386	652	631	418	476	534	496
EL CENTRO CALIF. NPF	616	622	607	608	616	557	545	525	589	600	600	616	584	651	637	636	636	636	617	625	622	657	637	544	510	290	578	583	566	545	545	587
EL PASO TEXAS	729	741	735	751	742	716	677	615	580	709	663	659	608	669	713	718	686	719	606	634	544	499	613	394	491	686	586	495	458	526	532	629
ELY NEVADA	497	649	642	799	767	620	473	522	647	616	634	575	617	546	775	---	637	310	658	558	250	651	721	615	588	656	629	653	685	692	685	612
EPPLEY NEWPORT R.I.	414	309	337	327	575	354	414	587	441	448	651	624	561	271	627	552	407	608	556	355	---	---	293	166	402	509	502	510	427	---	544	456
FAIRBANKS ALASKA	284	385	485	474	191	518	551	579	554	548	522	494	530	326	382	414	356	409	387	464	185	164	296	269	453	389	193	162	222	437	300	385
FLAMING GORGE UTAH	465	350	548	527	381	543	445	308	297	260	344	392	338	256	650	652	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
FORT WORTH TEXAS	740	750	739	665	689	712	729	711	669	709	500	465	---	345*	---	643*	606	614	679	631	639	663	567	631	600	345*	---	575	511	307	540	606*
GAINESVILLE FLORIDA	437	452	---	---	484	580	---	---	---	---	---	500	516	461	---	586	326	413	566	478	376	600	508	593	579	396	---	---	---	---	---	---
GLASGOW MONTANA	700	653	575	504	591	647	649	436	611	636	571	575	634	327	91	597	531	198	526	332	507	276	175	605	598	560	527	286	563	564	561	505
GRAND JUNCTION COLO.	281	464	780	856	392	563	521	382	618	476	628	673	312	332	693	709	645	636	628	407	636	---	669	659	600	437	373	590	633	635	628	562
GREAT FALLS MONTANA	600	678	433	459	574	642	578	647	266	476	474	634	544	242	96	451	294	373	479	246	602	394	604	600	590	396	424	217	589	578	569	476
GREENSBORO N.C.	535	371	451	527	504	544	547	516	503	441	119	510	304	497	381	534	559	541	482	487	570	572	515	531	379	574	513	532	572	560	531	490
INDIANAPOLIS INDIANA	578	606	275	352	594	578	408	473	482	243	629	631	370	356	371	495	503	500	597	609	567	544	517	539	603	510	563	587	457	525	450	500
ITHACA NEW YORK	241	471	560	537	602	352	375	583	458	194	591	655	470	518	639	157	353	655	301	364	608	320	231	383	456	147	333	544	454	600	569	443
LAKE CHARLES LA.	585	385	533	465	604	571	368	493	348	527	477	428	450	314	568	574	503	619	613	466	563	404	---	443	592	538	632	625	341	500	451	499
LAKELAND FLORIDA	644	473	557	409	580	656	652	693	528	500	545	542	598	611	639	551	513	642	651	656	650	614	482	454	617	463	202	397	427	582	506	550
LANDER WYOMING	700	574	485	641	---	603	553	424	76	191	641	647	424	362	630	628	590	436	491	618	608	504	524	630	572	561	498	313	617	607	591	525
LARAMIE WYOMING	534	483	366	585	484	526	483	393	189	326	406	384	406	231	551	577	483	601	482	513	499	522	461	598	544	518	121	412	352	574	567	457
LAS VEGAS NEVADA	609	660	712	608	461	475	386	589	554	604	668	486	579	701	697	671	679	603	676	655	675	685	691	594	614	478	608	637	632	630	648	612
LITTLE ROCK ARKANSAS	473	589	649	616	618	583	388	483	556	389	275	334	300	344	423	584	550	523	555	482	451	546	605	421	555	657	624	592	438	420	429	498
LOS ANGELES CALIF.	636	501	631	612	612	626	652	700	685	589	640	446	514	589	566	323	545	518	502	646	702	669	663	625	652	582	631	596	571	574	305	584
LOS ANGELES CALIF. U	633	696	601	641	641	625	625	690	666	598	650	493	473	589	520	159	456	504	490	595	677	628	638	657	642	563	---	600	582	576	541	582
MADISON WISCONSIN	494	689	602	613	506	589	507	281	582	678	689	467	624	560	221	326	513	360	564	580	579	577	563	532	463	518	602	567	484	488	192	516
MANHATTAN KANSAS	---	189	582	581	589	574	561	240	291	29	587	412	561	376	500	483	368	556	551	459	546	539	536	561	547	546	102	172	22	398	440	430
MATANUSKA ALASKA	219	211	602	580	572	578	464	369	566	257	231	297	466	363	414	505	305	463	430	60	354	227	374	271	367	364	440	440	271	409	395	383
MAUNA LOA OBS.HAWAII	440	527	420	498	436	764	651	563	666	661	620	789	708	424	282	348	369	328	416	573	402	697	760	765	692	769	772	767	617	662	637	581
MEDFORD OREGON	173	674	715	622	741	720	674	382	609	629	676	542	554	583	563	489	487	413	344	415	473	533	412	456	193	414	455	634	622	627	601	530
MIAMI FLORIDA	620	492	410	442	680	697	728	636	605	457	356	252	700	644	655	703	633	715	661	644	470	560*	494	470	129	413	411	451	543	550	566	542*
MIDLAND TEXAS	618	638	597	585	482	568	618	631	587	524	322	382	562	587	550	542	232	547	579	583	571	596	---	403	353	466	519	548	250	211	348	500
NASHVILLE TENNESSEE	375	411	623	622	644	635	644	551	557	560	390	623	307	474	586	547	578	576	568	519	464	444	546	572	543	637	644	604	418	419	449	533
NEW YORK N.Y. U	477	781	473	298	559	120	473	632	454	343	707	666	516	315	648	316	370	555	232	395	627	504	325	---	---	526	543	506	614	598	568	488
NORTH OMAHA NEBRASKA	---	---	---	---	---	639	573	---	---	293	---	640	---	546	367	---	561	158	466	535	574	568	547	596	575	494	392	211	65	421	470	---

Note.--Langley is the unit used to denote one gram calorie per square centimeter.
Values with an asterisk are interpolated.

U Indicates Urban sites.

SOLAR RADIATION DATA

Daily totals and monthly averages of solar radiation (direct and diffuse) received on a horizontal surface, tabulated in langleys.

Station	Day of month																															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
OAK RIDGE TENNESSEE	235	377	572	547	587	576	587	595	563	540	525	568	335	394	411	446	568	464	508	518	559	563	519	486	485	620	592	599	541	573	402	511
OKLAHOMA CITY OKLA.	602	680	676	654	636	610	657	661	648	589	185	545	270	308	441	569	566	460	608	643	626	625	607	422	386	627	471	214	107	150	534	509
PAGE ARIZONA	467	456	672	544	397	696	350	608	589	476	532	532	320	678	726	698	716	638	632	640	700	588	723	697	669	427	566	650	648	675	676	593
PALMER AAES ALASKA	281	224	521	548	523	518	484	371	489	241	245	265	438	364	426	453	273	427	345	84	284	255	353	296	349	323	427	411	248	386	380	362
PHOENIX ARIZONA	681	674	614	594	558	586	624	635	586	607	549	583	639	691	690	690	687	682	664	404	646	667	670	660	601	369	609	615	609	600	594	615
PORTLAND MAINE	210	427	634	570	663	293	383	647	384	460	651	649	554	582	645	527	291	653	458	192	593	444	613	454	404	496	566	291	363	379	479	482
PROSSER WASHINGTON	662	560	645	667	580	684	672	557	559	526	616	648	208	294	588	269	440	360	375	550	608	548	286	291	199	390	301	569	580	558	542	495
PULLMAN WASHINGTON	643	519	568	570	630	632	551	577	436	304	599	612	229	185	170	541	195	350	348	324	418	551	315	417	366	381	231	428	545	538	531	442
RAPID CITY S.DAK.	686	618	360	598	625	627	416	410	72	216	637	597	405	138	641	652	426	450	513	517	557	504	442	608	569	596	304	346	496	509	507	485
RENO NEVADA	503	555	626	502	433	639	601	543	410	448	594	571	422	462	573	314	594	311	121	495	406	594	581	595	232	603	583	572	579	564	571	503
RICHLAND 25 NW WASH.	672	538	673	678	586	680	673	553	494	521	634	644	184	233	573	326	323	272	407	452	606	482	222	229	196	364	232	576	578	577	554	475
RIVERSIDE CALIFORNIA	574	601	613	614	614	629	570	537	582	600	590	555	529	501	562	360	506	516	519	385	522	580	597	579	560	478	532	527	505	510	436	541
RUSTON LOUISIANA	620	619	474	628	629	544	197	433	460	488	194	209	142	450	419	460	579	---	---	---	---	---	---	---	---	---	577	---	---	---	---	---
SAINT CLOUD MINN.	671	665	513	264	599	313	564	611	320	630	656	560	574	549	234	607	219	165	345	597	506	407	577	263	246	590	481	476	456	116	305	454
SALT LAKE CITY	597	362	508	707	605	696	473	550	---	110	661	595	24	250	698	591	166	257	545	666	479	148	671	626	657	573	507	606	655	643	631	509
SAN ANTONIO TEXAS	543	645	615	431	547	627	657	656	646	634	666	654	559	554	518	588	542	636	523	522	546	618	643	475	536	529	529	641	613	560	151	568
SANTA MARIA CALIF.	595	598	561	628	655	647	623	654	662	649	592	472	564	659	638	671	664	660	565	644	667	661	644	623	649	606	618	627	603	534	492	617
SAULT STE MARIE MICH	672	587	493	683	288	271	579	394	248	701	690	495	578	652	---	196	539	637	135	622	346	221	290	484	126	589	615	586	600	546	466	478
SEATTLE TACOMA WASH.	451	---	451	452	---	594	660	608	641	630	643	474	231	86	397	287	434	300	222	498	463	219	99	152	128	429	296	424	551	571	500	410
SPOKANE WASHINGTON	683	628	649	625	634	673	659	593	441	421	599	655	---	187	145	496	222	239	313	438	452	445	232	370	323	389	378	498	560	551	542	468
STATE COLLEGE PENN.	237	584	529	412	567	298	402	508	488	222	716	707	512	531	688	253	527	454	307	465	633	510	438	402	536	338	462	639	647	626	540	490
STERLING VIRGINA	540	---	---	---	---	---	---	588	450	337	634	625	542	236	547	385	542	559	311	496	566	472	503	431	524	510	567	519	582	561	504	501
SWAN ISLAND W.I.	631	630	564	385	661	641	635	661	593	536	576	205	607	602	601	633	617	598	467	407	419	624	518	645	587	622	595	418	625	555	565	562
TAMPA FLORIDA	476	390	377	406	546	535	564	491	410	487	426	486	524	455	563	470	390	430	491	399	465	507	400	305	446	230	121	106	331	462	497	425
TUCSON ARIZONA	486	616	618	470	647	507	641	545	451	371	603	559	625	668	673	661	668	655	506	246	626	613	630	618	539	411	583	558	---	566	424	559
WAKE ISLAND PACIFIC	651	413	499	348	402	600	576	568	549	301	616	630	613	238	634	539	423	616	642	542	585	615	628	450	609	592	531	611	364	133	600	520

Note.--Langley is the unit used to denote one gram calorie per square centimeter.

Values with an asterisk are interpolated.

NET RADIATION

Net radiation in langleys per day (8 a.m. to 8 a.m.) at Palmer, Alaska

AUGUST 1968

Date.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
Langleys. . .	138	92	250	245	244	246	213	151	204	78	102	108	205	170	173	205	117	204	151	3	126	122	174	127	155	140	182	191	81	152	159	158

The measurement is made with a CSIRO FUNK **net exchange radiometer over a plot of** sod. **The value represents the total incoming minus the total outgoing radiation of all wave lengths.**

These data are of an experimental nature and are published as received from the Palmer, Exp. Station. **The instrument with which they were measured has not been checked by the** ESSA, Weather Bureau.

SOLAR ULTRA-VIOLET RADIATION DATA

Daily totals and monthly average (<3900 Å)

Date.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
Langleys. . .												INSTRUMENT INOPERATIVE																				

These data are from an U - V Eppley total ultra violet sensor and Speedomax H (Leeds Northrup) Recorder. It is at the same location (Agronomy Building, Iowa State University, Ames) as the published total solar radiation instrumentation. This instrument has not been checked by the ESSA, Weather Bureau.

TOTAL OZONE DATA

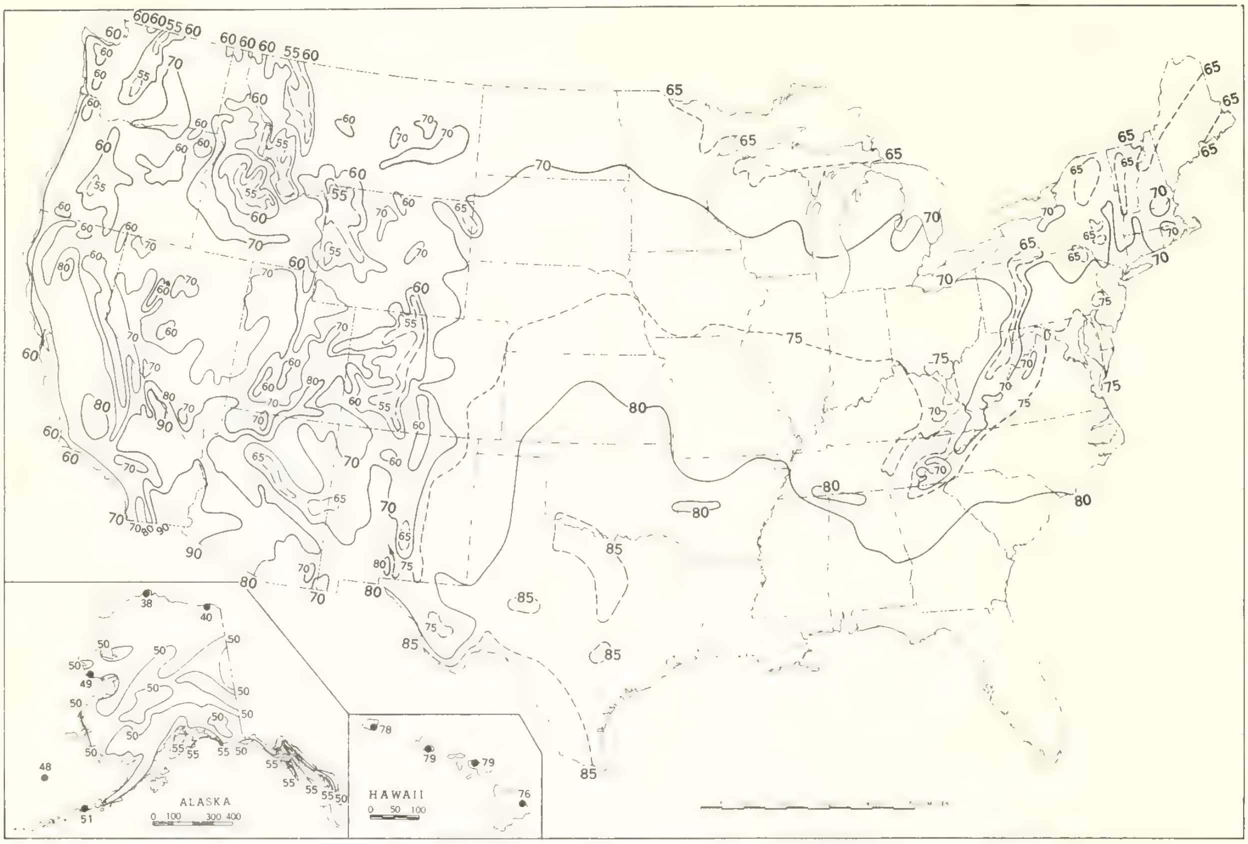
These provisional ozone data are obtained from measurements made with a Dobson ozone spectrophotometer, and are applicable approximately to local apparent noon. The data are presented in the code λ s Ω Ω Ω defined in the August 1962 WMO circular entitled "PUBLICATION OF DATA FOR METEOROLOGICAL RESEARCH, WORLD OZONE DATA."

Units. Milli-atmo-cms.

Station	Day of month																														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean O_3
															Data will be delayed																	

The spectrophotometer measures the total amount of ozone in the atmosphere, i. e. the amount contained in a vertical column of air extending from ground level to the top of the atmosphere in the vicinity of the station. The amount of ozone in this column (coded Ω Ω Ω) is expressed in terms of a thickness of a layer it would occupy at standard temperature and pressure e g , 350 milli-atmo-cm ozone implies an ozone layer 0 350 centimeter thick. The code λ s designates the type of measurement made.

Chart 1. A. Normal Daily Average Temperature (°F. 1931-60), August.



B. Temperature Departure from 30 - Year Mean (°F 1931-60), August 1968.

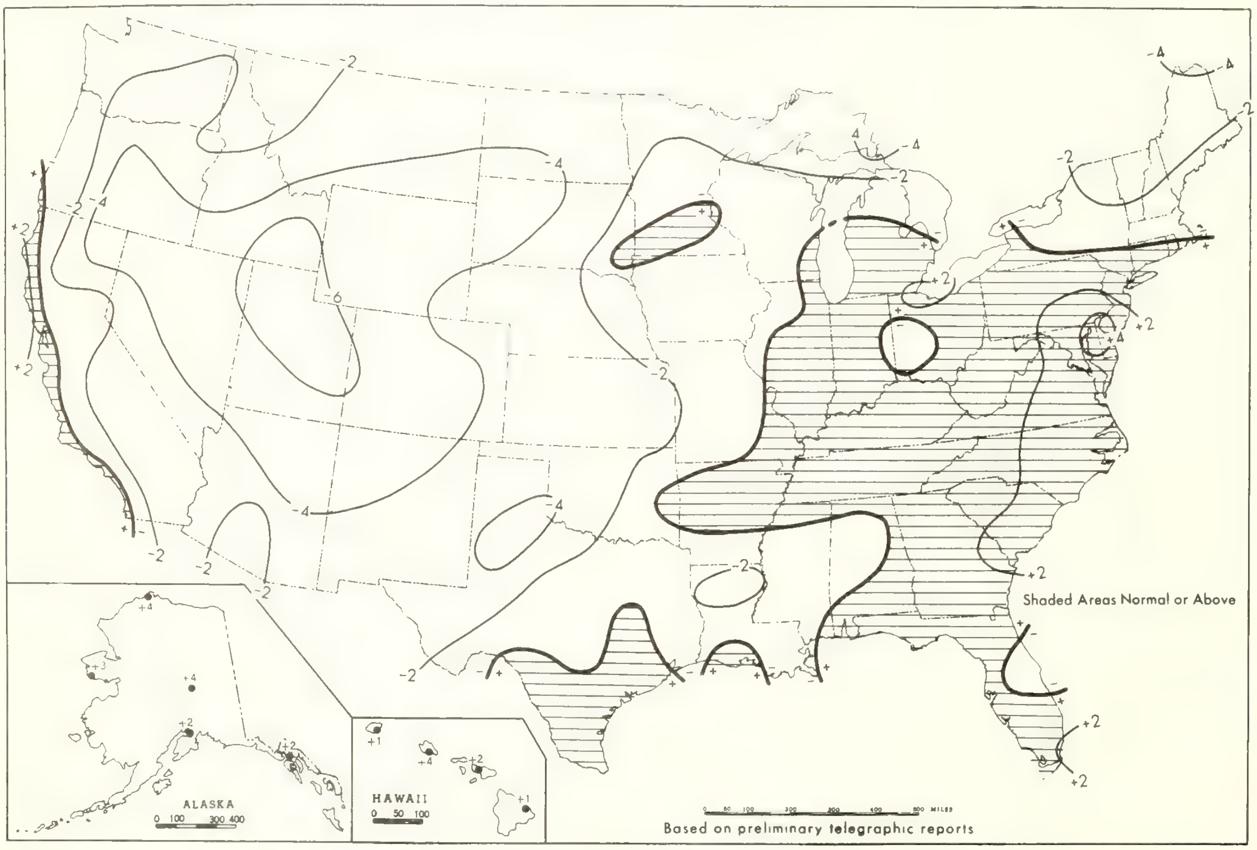


Chart II. Total Precipitation (Inches), August 1968.

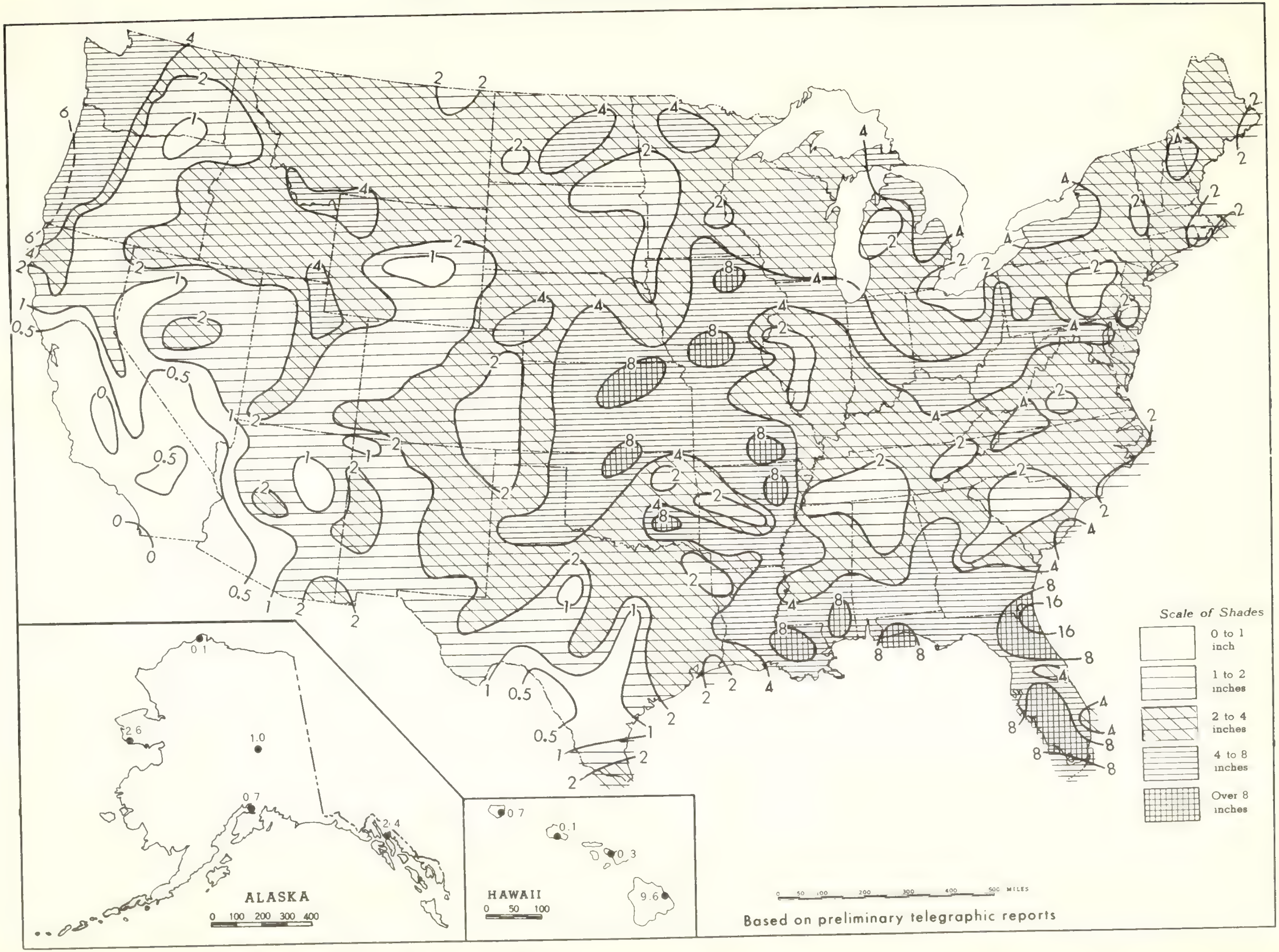


Chart III. Percentage of Normal Precipitation, August 1968.

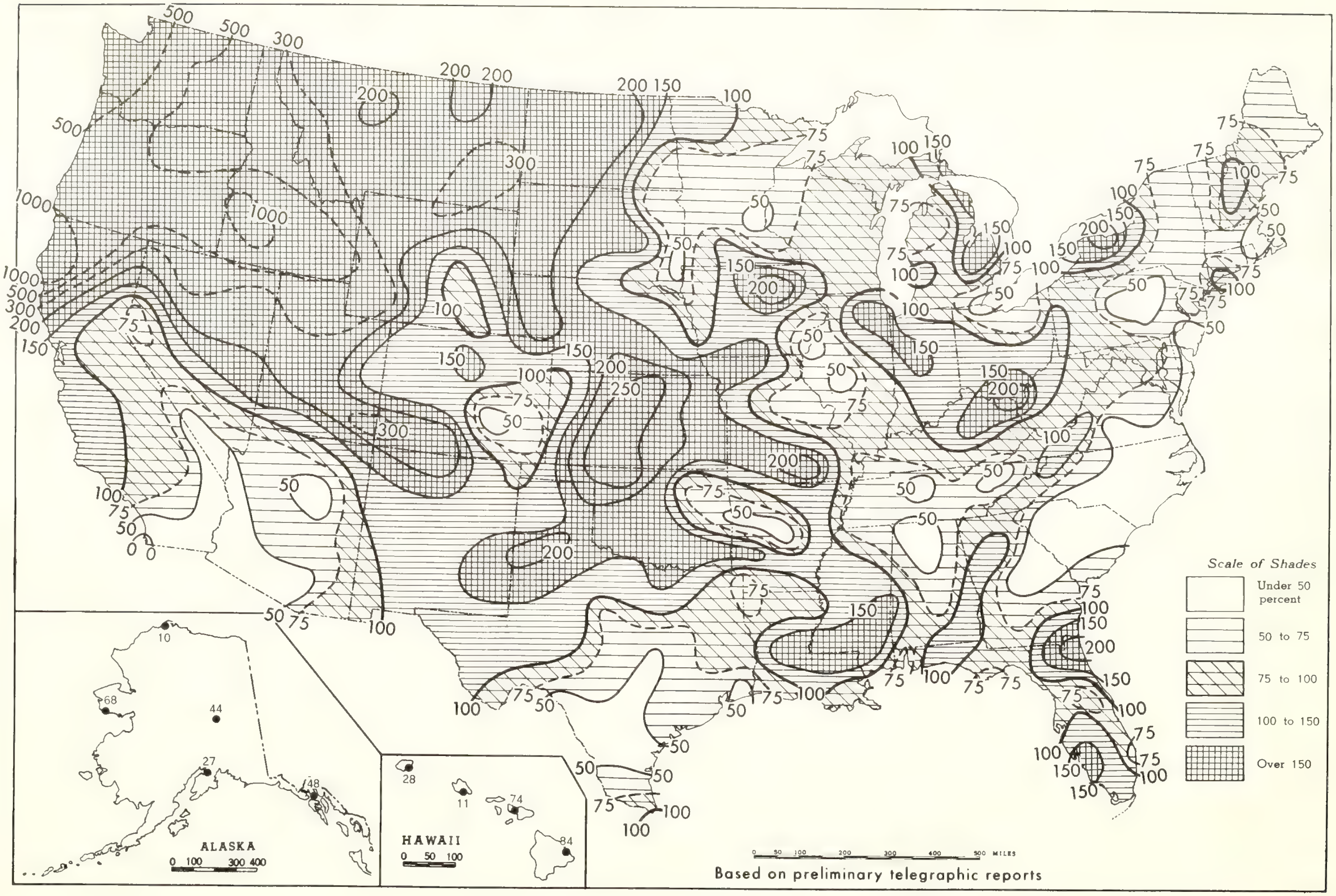
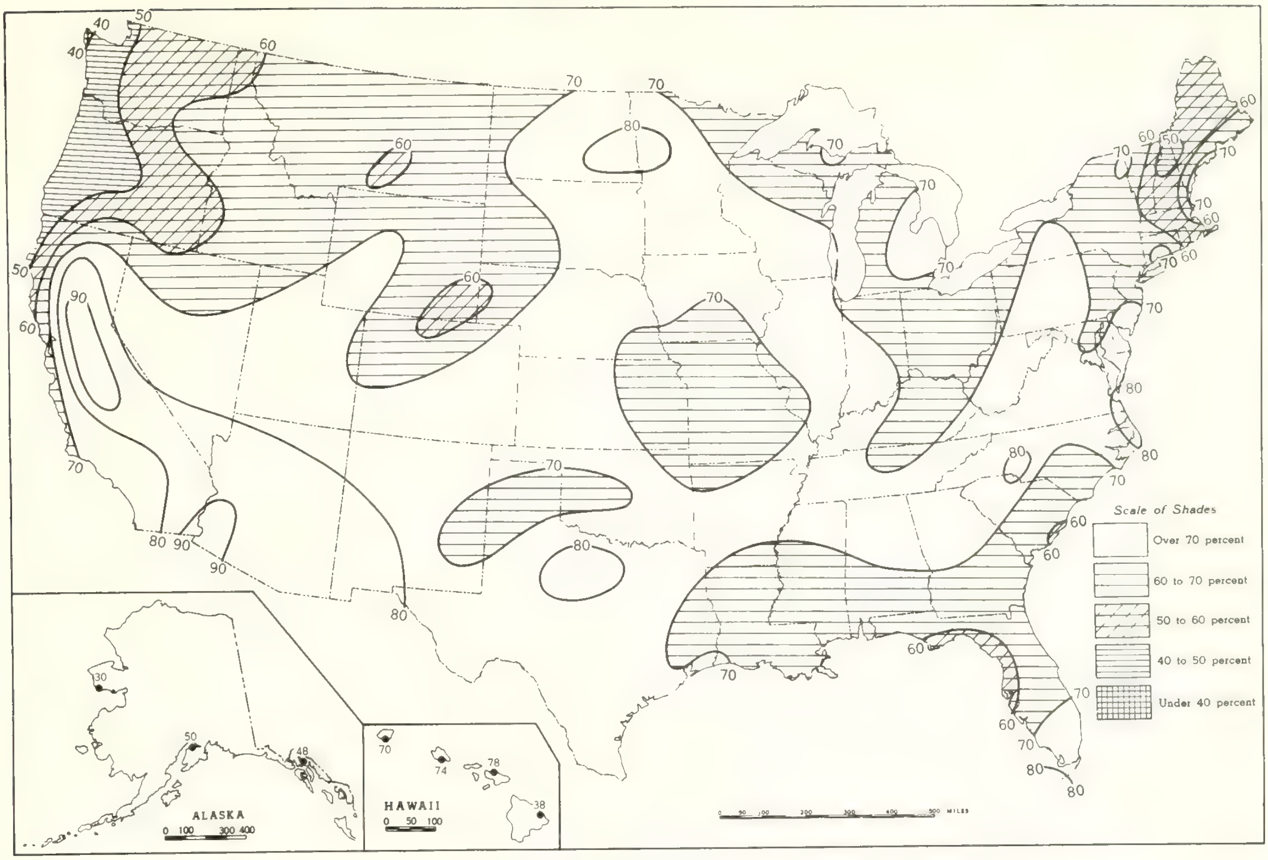
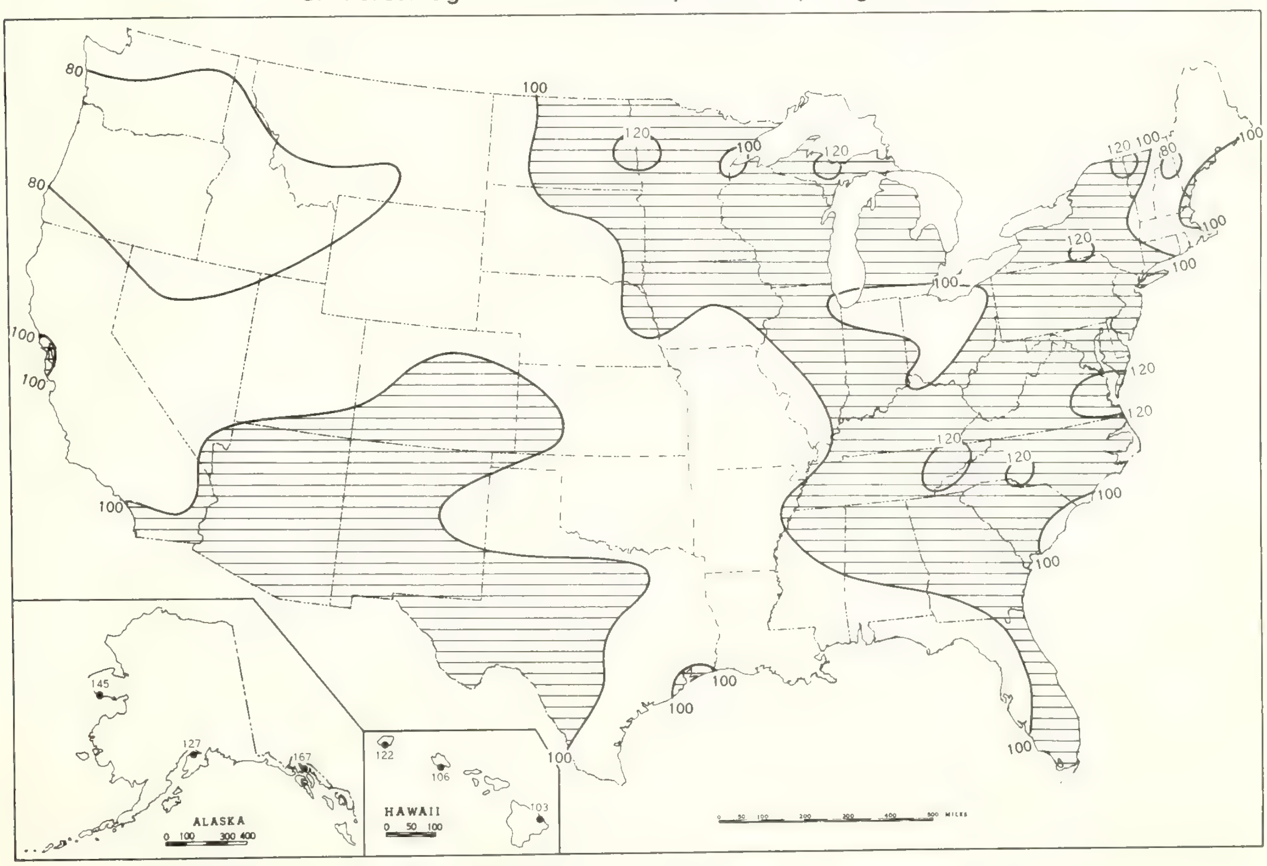


Chart VI. A. Percentage of Possible Sunshine, August 1968.

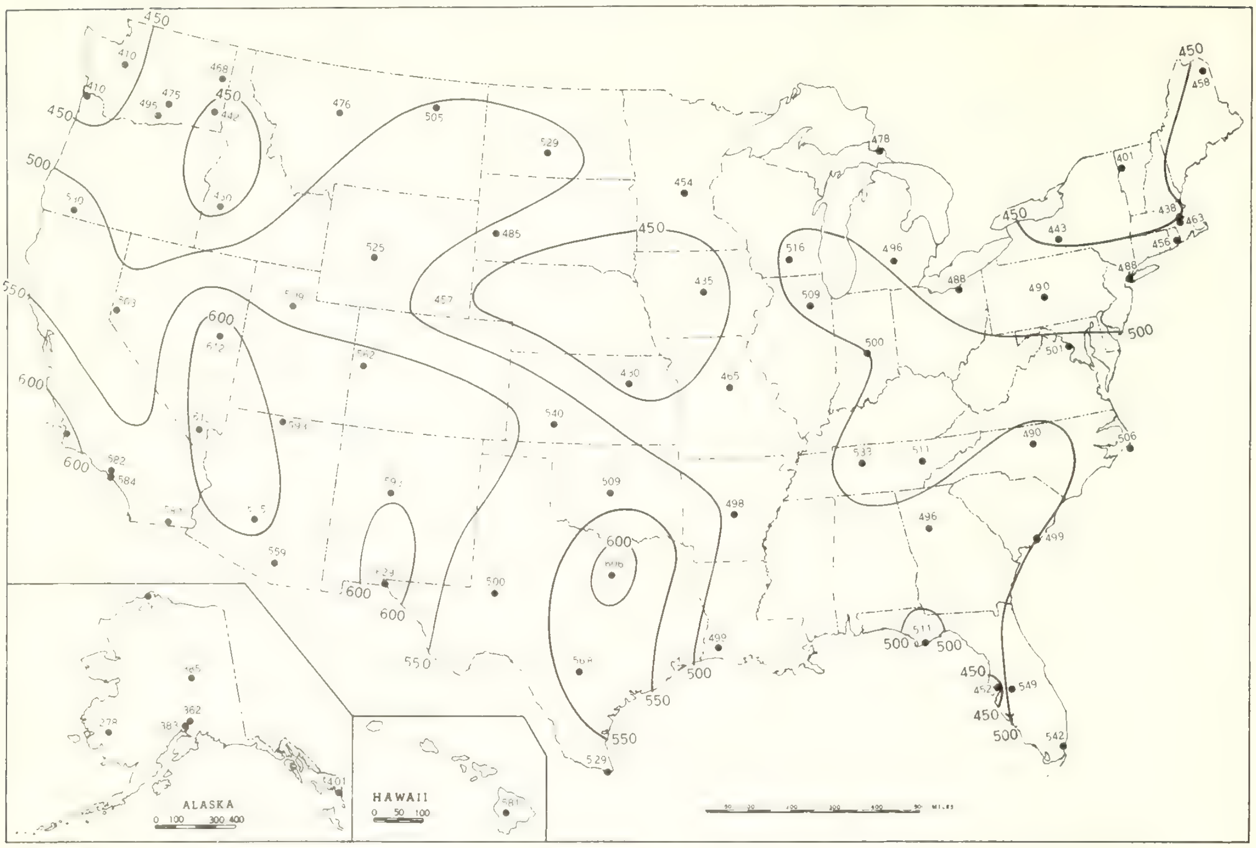


B. Percentage of Mean Monthly Sunshine, August 1968.

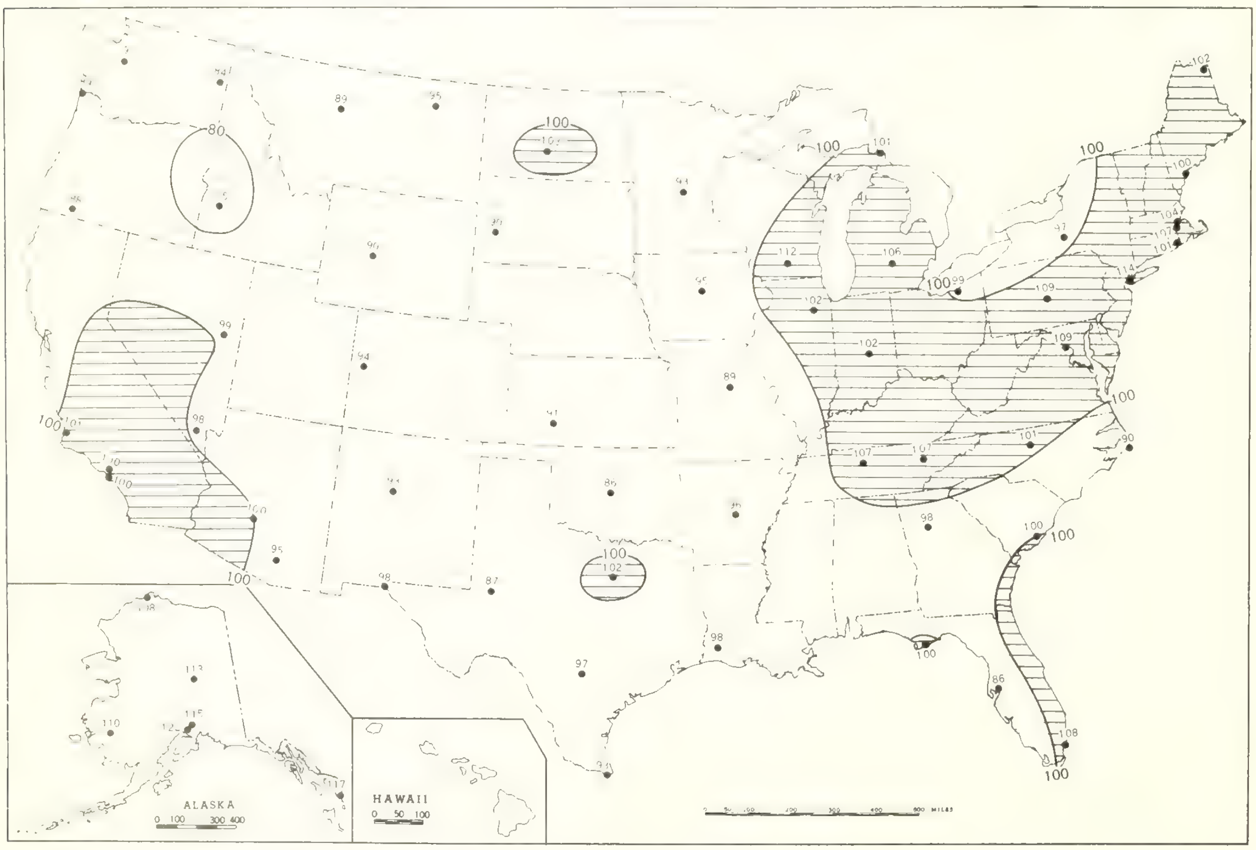


A. Computed from total number of hours of observed sunshine in relation to total number of possible hours of sunshine during month. B. Means are computed for stations having at least 10 years of record.

Chart VII. A. Average Daily Values of Solar Radiation, Langleys, August 1968.

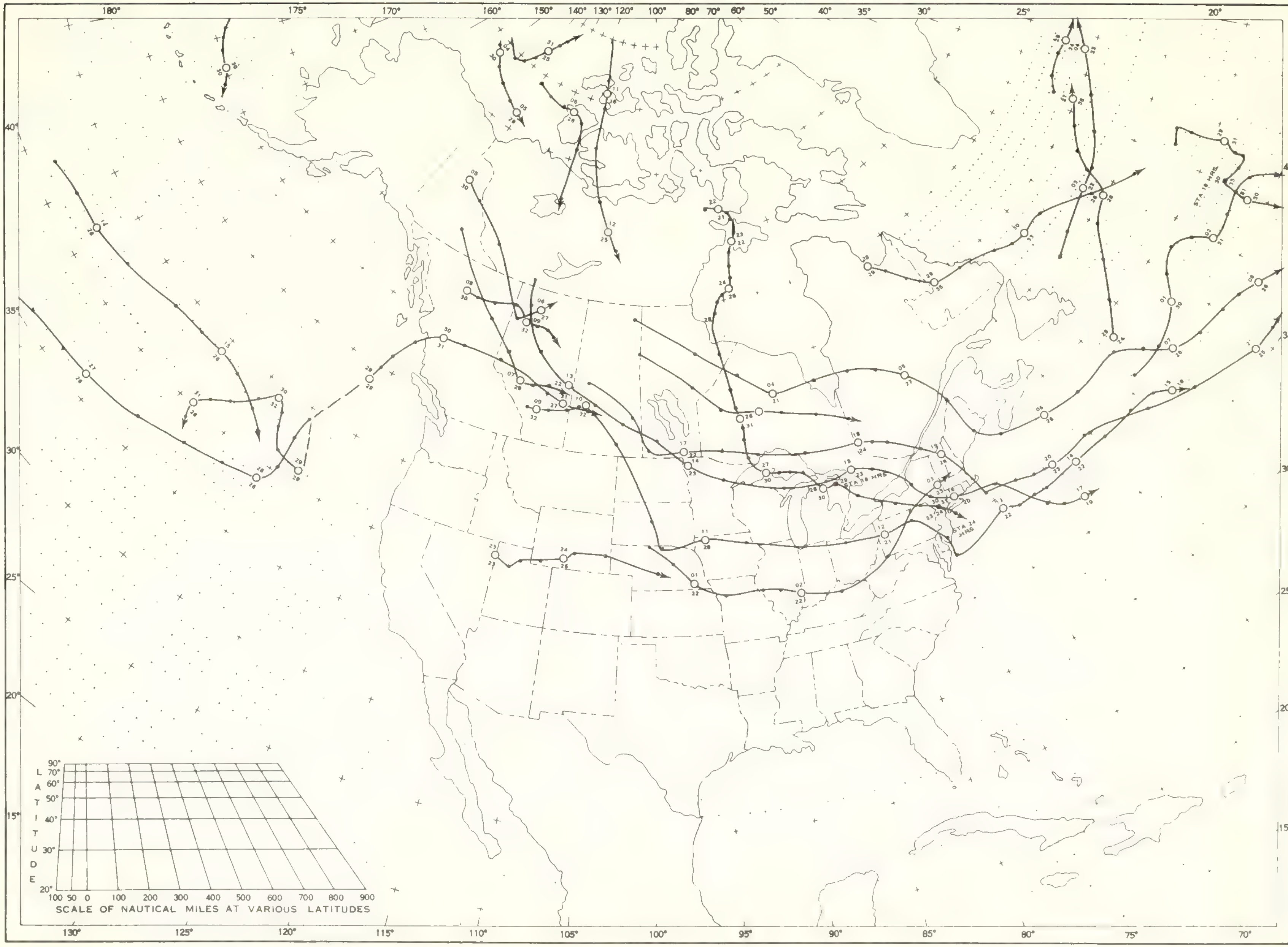


B. Percentage of Mean Daily Solar Radiation, August 1968.



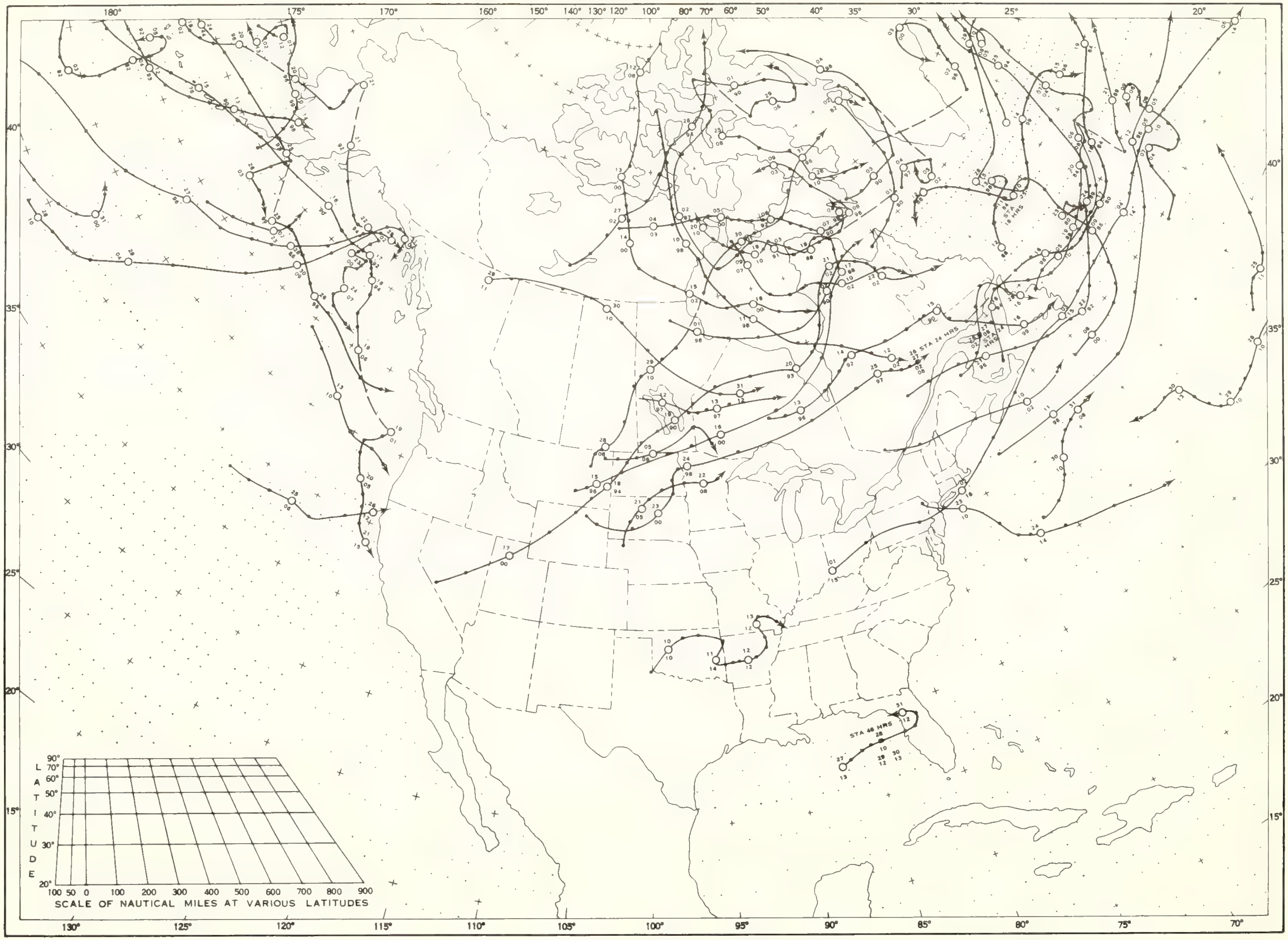
A. Mean daily solar radiation, direct + diffuse, received on a horizontal surface in langleys (1 langley = 1 gm. cal. cm.$^{-2}$) and recorded in International Pyrheliometer Scale of 1956. B. Percentage of the mean based on at least 5 years of record during the period 1950-60, and corrected to the International Pyrheliometer Scale of 1956.

Chart VIII. Tracks of Centers of Anticyclones at Sea Level, **August 1968**.



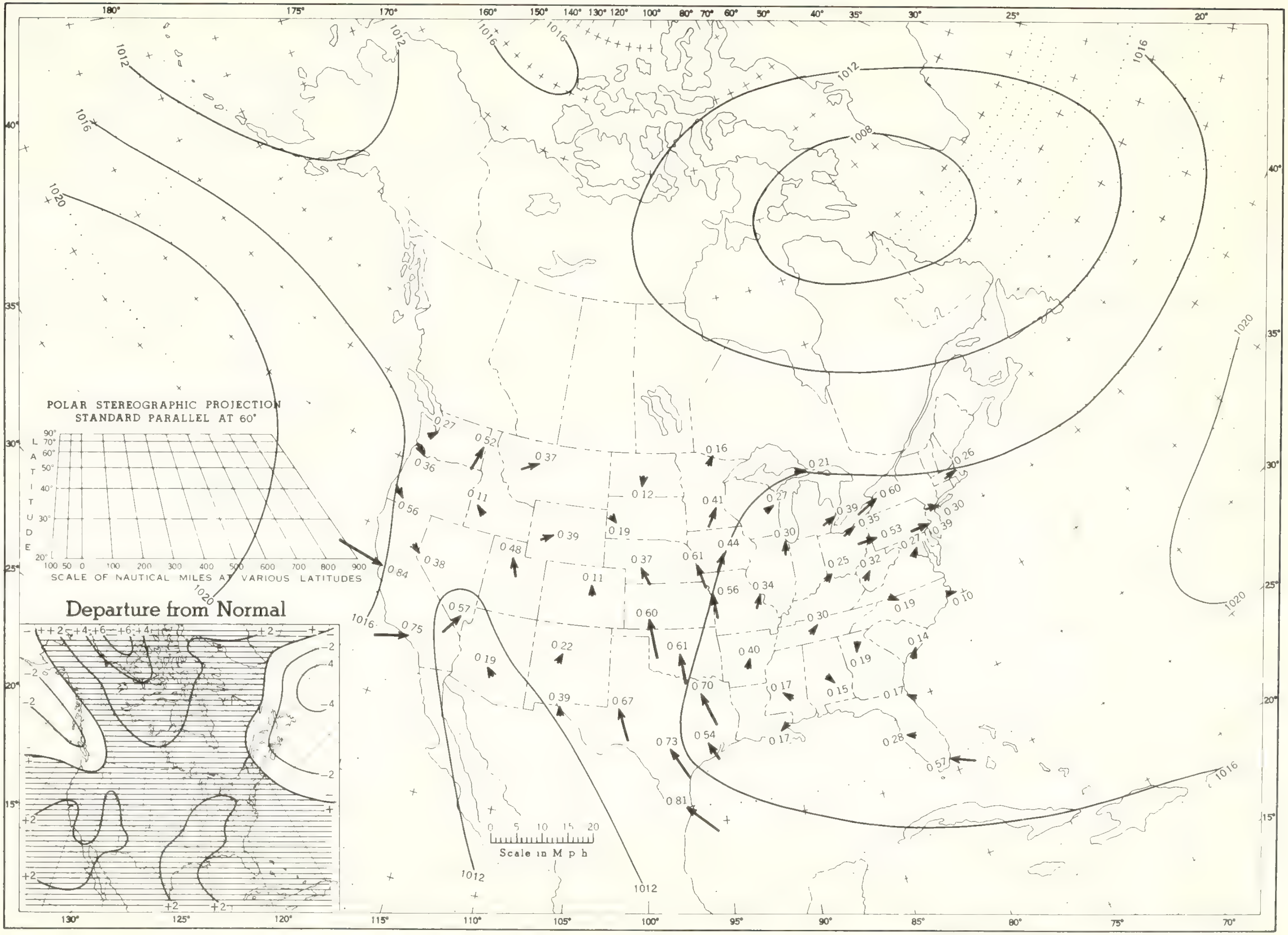
Circle indicates position of center at 7:00 a.m. E.S.T. Figure above circle indicates date, figure below, pressure to nearest millibar. Dots indicate intervening 6-hourly positions. Squares indicate position of stationary center for period shown. Dashed line in track indicates reformation at new position. Only those centers which could be identified for 24 hours or more are included.

Chart IX. Tracks of Centers of Cyclones at Sea Level, August 1968.



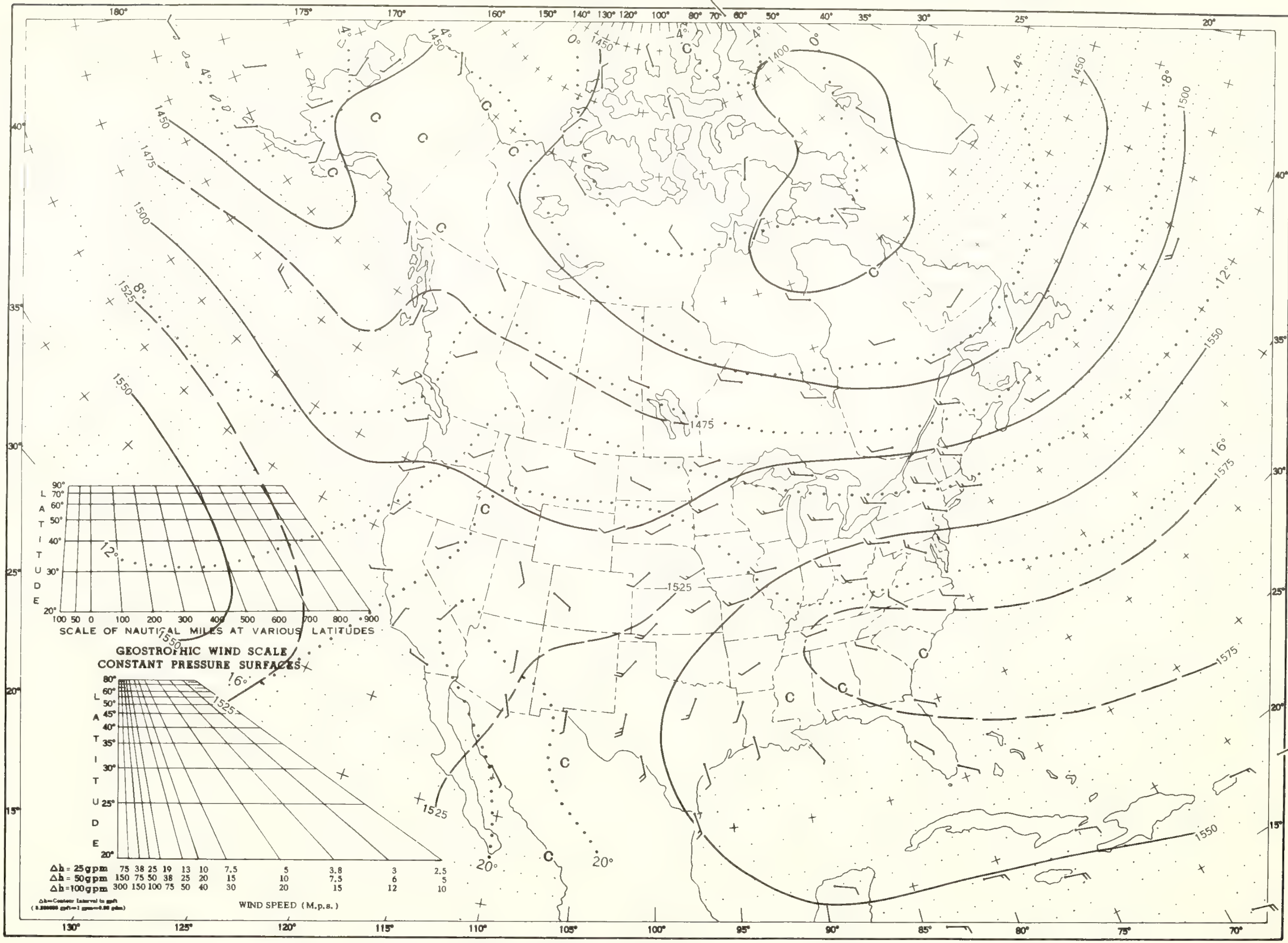
Circle indicates position of center at 7:00 a.m. E.S.T. Figure above circle indicates date, figure below, pressure to nearest millibar. Dots indicate intervening 6-hourly positions. Squares indicate position of stationary center for period shown. Dashed line in track indicates reformation at new position. Only those centers which could be identified for 24 hours or more are included.

Chart X. Average Sea Level Pressure (mb) and Resultant Surface Wind, **August 1968**. Inset: Departure of Average Pressure (mb) from Normal, **August 1968**.



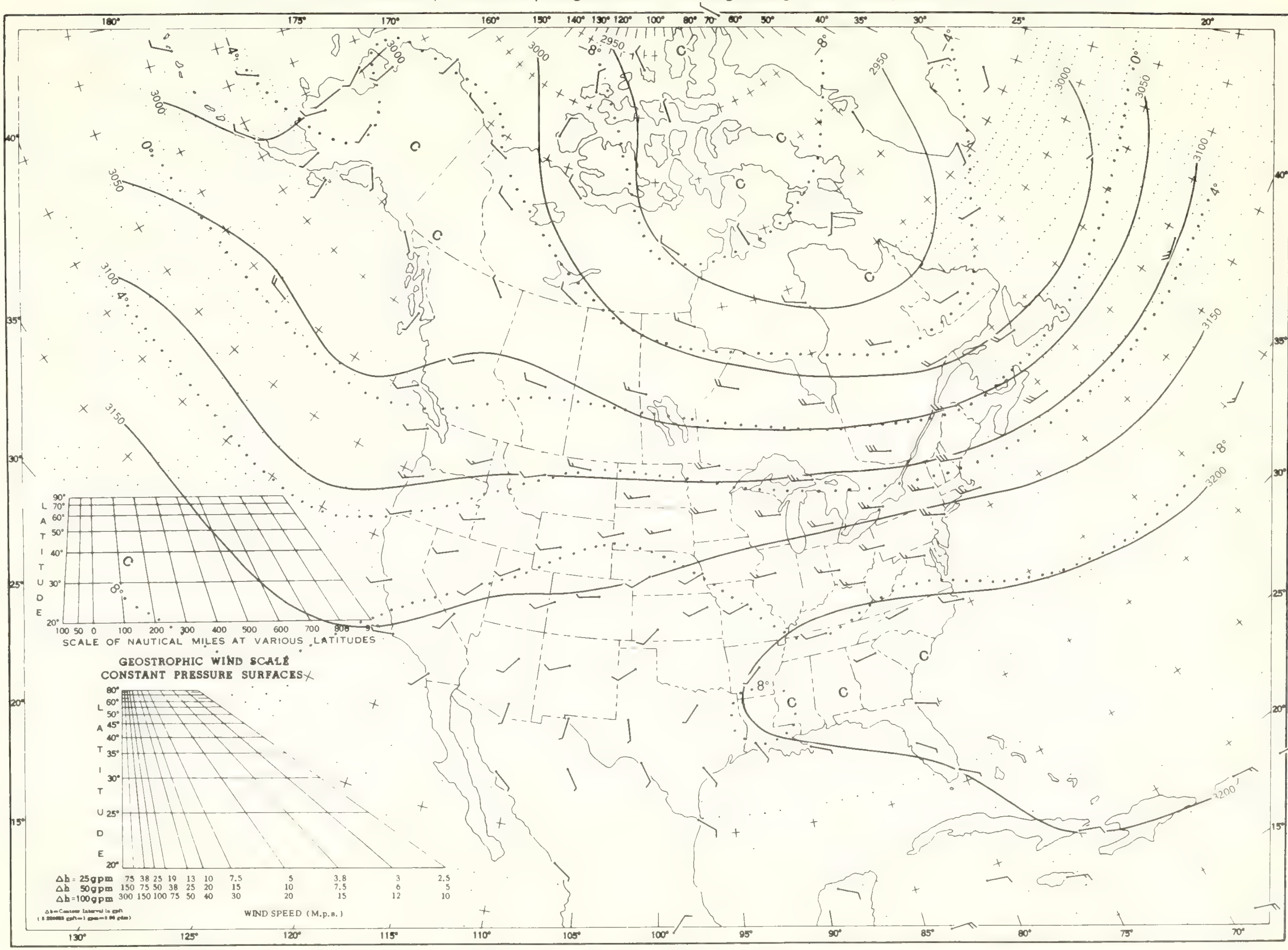
Average sea level pressures are obtained from eight daily 3-hourly observations. Resultant wind directions and speeds are shown by arrows. Constancy ratios (resultant speed÷average speed) are shown to two decimal places. Pressure normals are computed for stations having at least 10 years of record and for 10 intersections in a diamond grid over the oceans.

Chart XI. 850-mb. Surface, 1200 GMT, August 1968. Average Height and Temperature, and Resultant Winds.



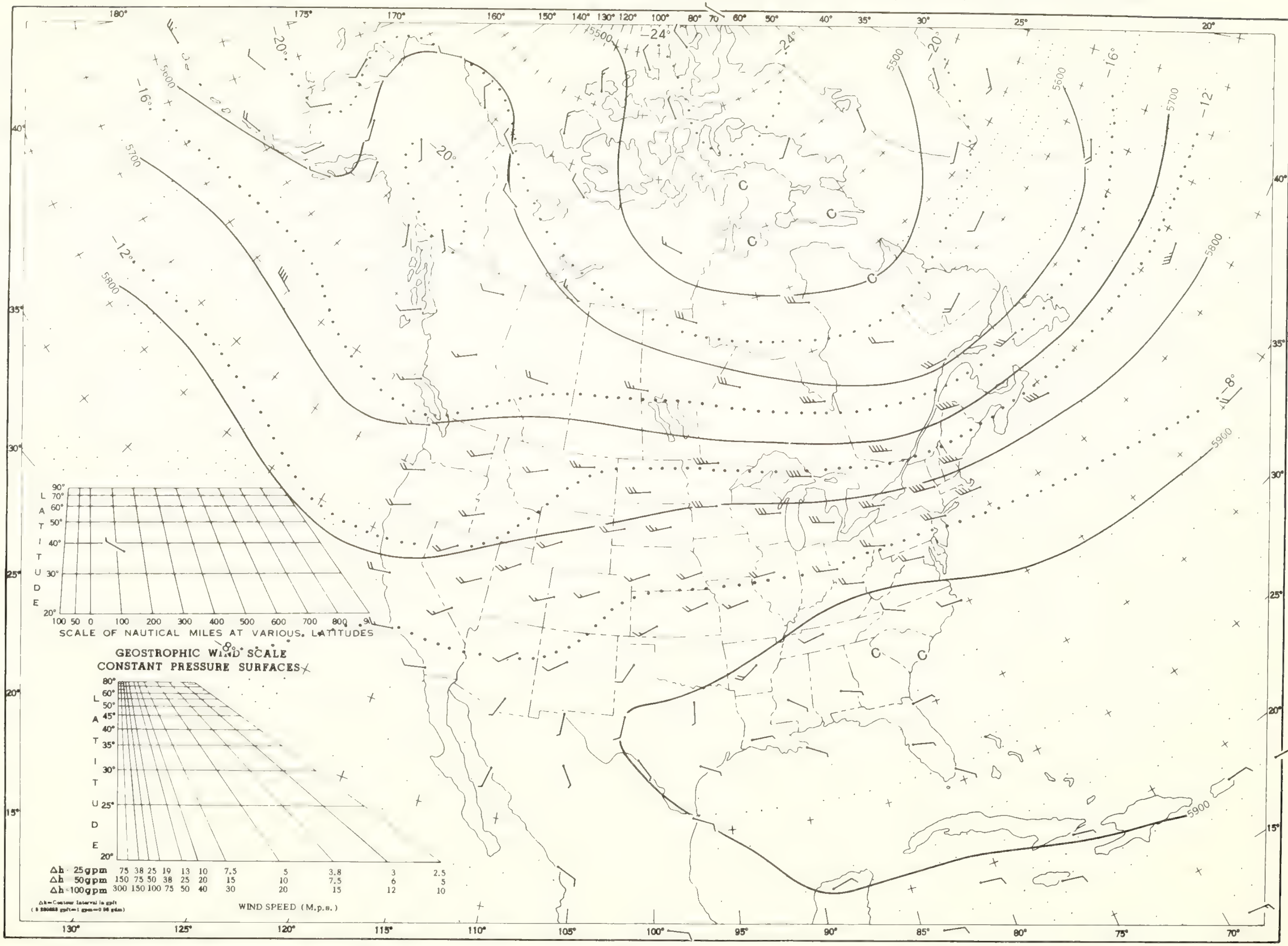
Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XII. 700-mb. Surface, 1200 GMT, **August 1968.** Average Height and Temperature, and Resultant Winds.



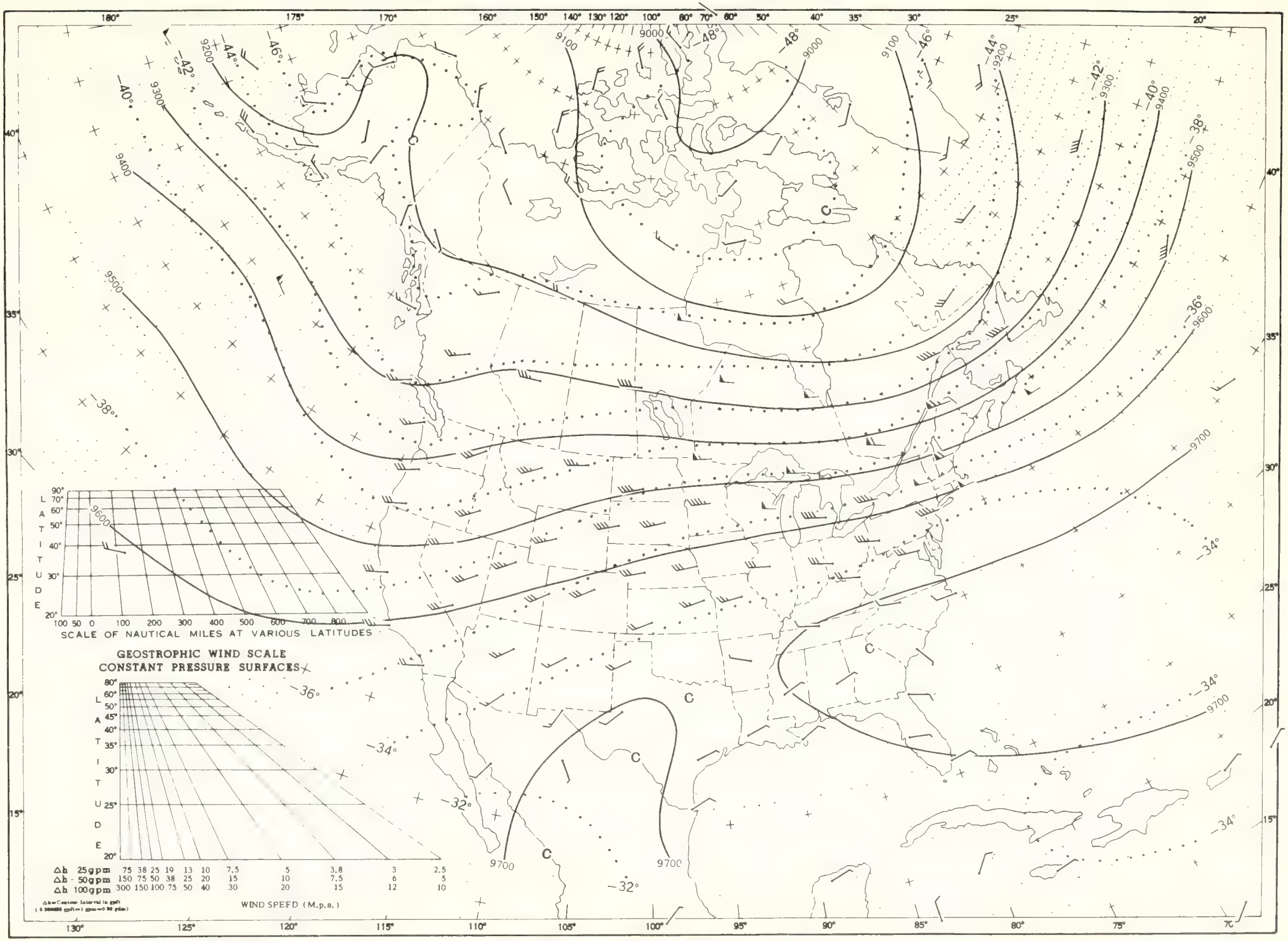
Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XIII. 500-mb. Surface, 1200 GMT, **August 1968**. Average Height and Temperature, and Resultant Winds



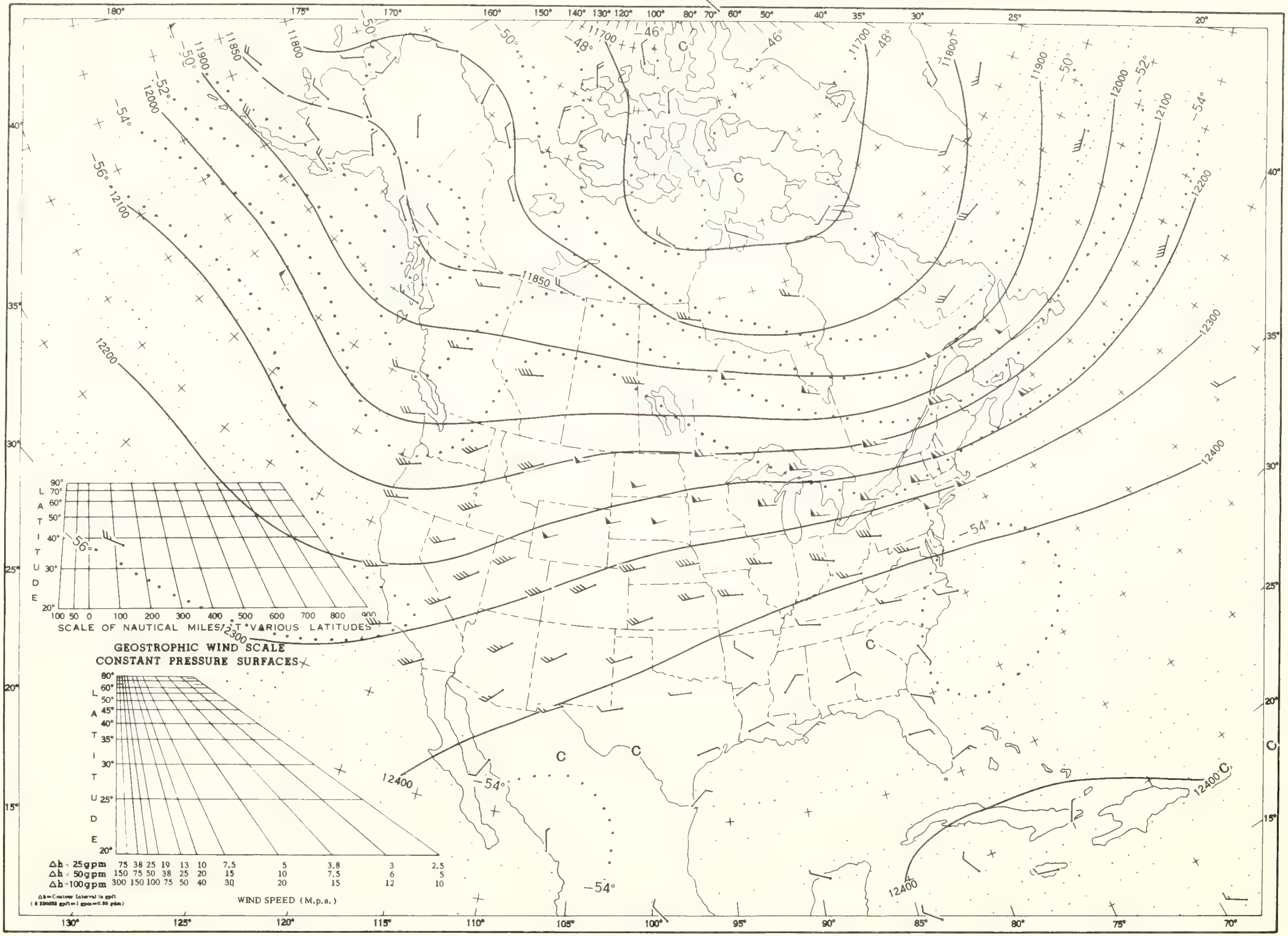
Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XIV. 300-mb. Surface, 1200 GMT, **August 1968**. Average Height and Temperature, and Resultant Winds.



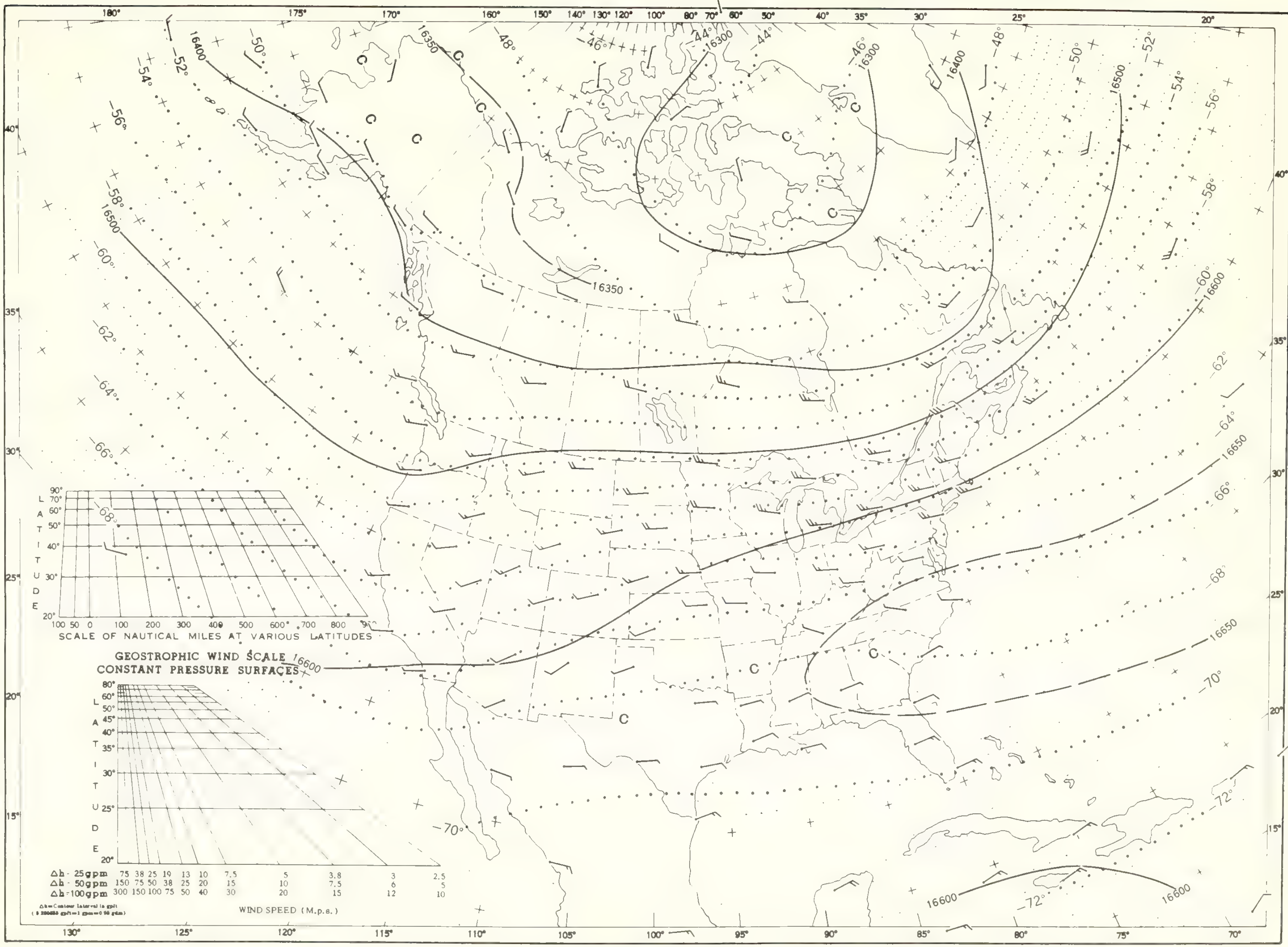
Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XV. 200-mb. Surface, 1200 GMT, August 1968. Average Height and Temperature, and Resultant Winds.



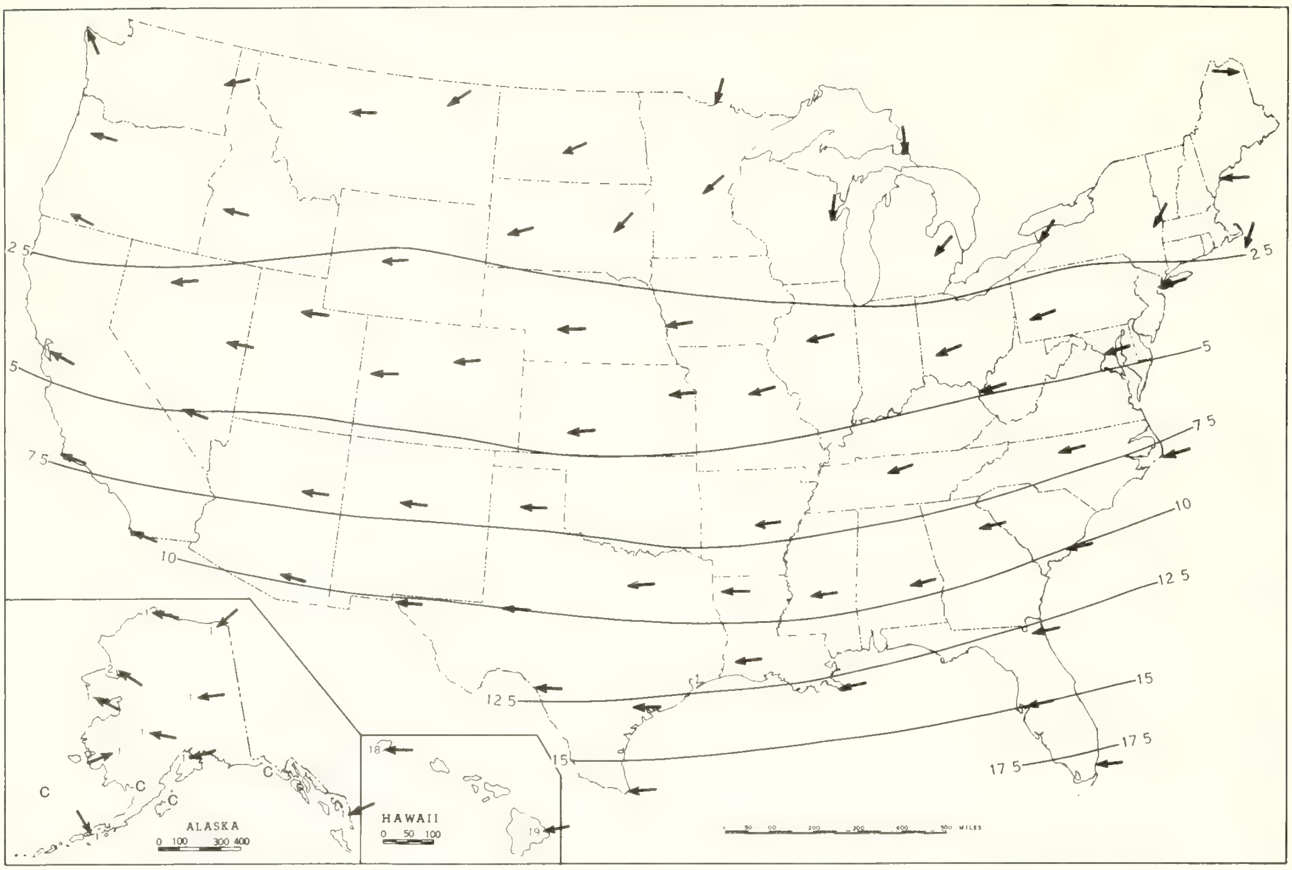
Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XVI. 100-mb. Surface, 1200 GMT, August 1968. Average Height and Temperature, and Resultant Winds.

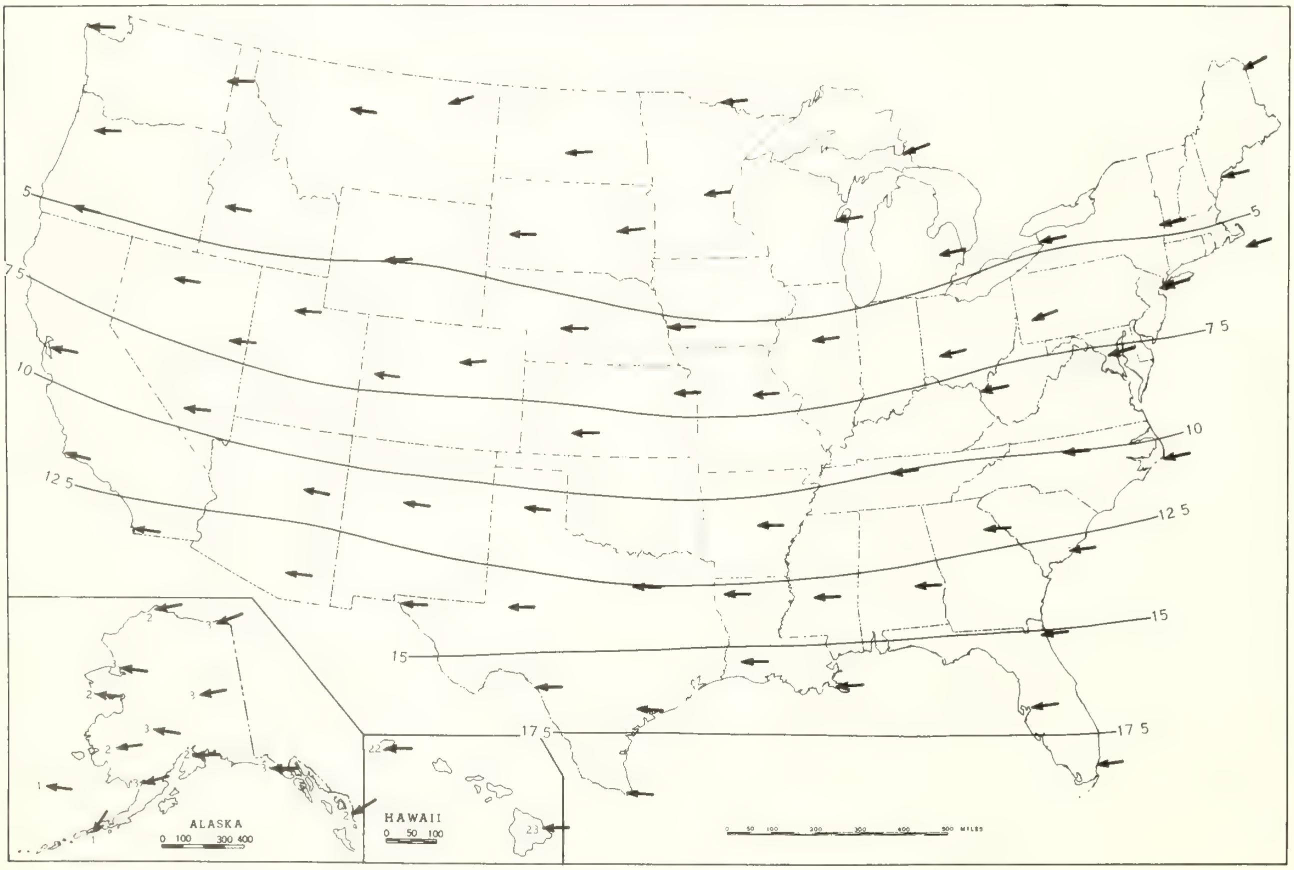


Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XVII. A. 50-mb. Surface, 1200 GMT, August 1968. Resultant Winds.



B. 30-mb. Surface, 1200 GMT, August 1968. Resultant Winds.



Wind speed (isotachs) in meters per second. Arrows show resultant wind direction. All wind data are based on rawin observations.

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ENVIRONMENTAL SCIENCE SERVICES ADMINISTRATION
ENVIRONMENTAL DATA SERVICE

CLIMATOLOGICAL DATA

NATIONAL SUMMARY

SEPTEMBER 1968
Volume 19 No. 9

Asheville 1969

CONTENTS

NOTE: Delayed data and corrections will be carried in the June and December issues of this publication. An explanatory page "Description of Charts" will be carried in the January and July issues.

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CLIMATOLOGICAL DATA

NATIONAL SUMMARY

Volume 19 No. 9 SEPTEMBER 1968

GENERAL SUMMARY OF WEATHER CONDITIONS

HIGHLIGHTS:

1. Rainfall ranged widely in September from over twice normal over parts of the northern Rockies and the Great Plains to less than half the normal over most ot the southwestern quarter of the Nation.
2. Most of the Country averaged cooler than normal with a few locations recording the coolest September of record.

TEMPERATURE.--The Pacific Coast States averaged slightly warmer than normal in the first week of September with cooler-than-normal temperatures predominating elsewhere. No pronounced temperature trends were noted in the West. The Central and East, however, cooled noticeably. Temperatures soared to the 90's over parts of the central Great Plains-- 97° at Lamar, Colo., on the 2d--and reached the 80's in central and eastern South Dakota. Cool air pushed southward, however, and by the 4th, the temperatures failed to reach 80° north of the Red River. Warm air soon returned to the western Great Plains with temperatures climbing to the low 80's in the Black Hills of South Dakota on the afternoon of the 6th. Subfreezing temperatures occurred in western Wyoming and the Colorado Rockies on several mornings in the latter part of the first week of September.

Most of the West and the northern Great Plains became abnormally warm in the second week of September with afternoon maximums reaching the high 80's and low 90's on a few days near midmonth. Pierre, S. Dak., registered 95° on the afternoon of September 14.

The Southwestern Deserts warmed to near or above 110° on many afternoons in the first half of September. Thermal, Calif., registered 115° on the afternoon of the 9th. The nights were cool in the higher Rockies and temperatures dropped to the low 30's in parts of Wyoming, Colorado, and in the higher elevations as far south as northern Arizona. Mild afternoons and cool mornings were common from Kansas to Texas and eastward to the Atlantic coast in the second week of September.

Texas, the Ohio River Valley, the Great Lakes region, and the Northeast averaged warmer than normal in the third week of September while the West, most of mid-America, and the Southeast averaged cooler than normal.

Typical autumn weather prevailed over most of the Nation in the last week of the month. Afternoons were sunny and mild; nights were clear and cool. Parts of the Great Basin warmed to above normal by the middle of the week but cooler weather returned by the weekend. A cold front brought cooler afternoons to the East, but sunny skies and pleasant temperatures followed the brief showers. The Nation's temperature extremes ranged widely during the last week, from over 100° on several days in the Desert Southwest to 12° at Fraser, Colo., on the 25th.

Considering the month as a whole, most of the Nation averaged slightly cooler than normal. While very warm (and dry) weather hurt the apples in New England, some southern locations recorded persistent cool temperatures. Minimums at Roswell, N. Mex., averaged 47.4°, the lowest average of record. Ely, Nev., set a new record low for September on the 21st and 22d when the temperature plummeted to 15°.

Precipitation.--Light rain fell early in September in the northern Rocky Mountains and the northern Great Plains. About the middle of the first week, generous showers fell in the humid air in advance of a front that stretched from the Great Lakes to the southern Great Plains. Amounts ranged widely from light sprinkles to several inches. Especially heavy rains occurred in eastern Texas and Louisiana where totals at a number of stations exceeded 4 inches. By the end of the week, the rains had spread eastward to the Atlantic Ocean. Shermans Dale, Pa., registered 4.85 inches on the morning of the 6th.

Early in the second week, a frontal system, moving eastward from the Mississippi River Valley, produced moderate to heavy rainfall from the lower Mississippi and upper Ohio Rivers to the Atlantic Ocean. Reports of unusually heavy amounts came from northern Virginia, western Maryland, and southeastern Pennsylvania with totals ranging up to several inches. At midmonth, a Pacific storm off the Washington coast started producing rains along the coast of Washington and Oregon and a slow-moving cold front stretching across mid-America doused wide areas from the Mississippi River Valley to the Appalachians. These rains were especially heavy from the 16th to the 19th. Over 5 inches of rain fell at Warren, Ark., in the 24-hour period ending on the morning of the 16th. Some localities in the eastern portions of Nebraska and Kansas received over 4 inches in 12 hours. Damaging tornadoes occurred in Texas and Tennessee and high winds damaged homes and downed trees at Batesville, Ark., on the 17th. Snow fell in the higher elevations of the northern and central Rocky Mountains during the latter half of the third week.

A slow-moving cold front, stretching from Michigan to Texas, produced copious rains early in the last week of September. A torrential downpour, accompanied by hail and high winds, stopped traffic at Boonville, Mo., in the late afternoon of September 23, and a few localities west of Dallas, Texas, received 2 to 5 inches of rain on the night of the 24th. As the front moved eastward, it produced lesser amounts of rain from New England to the Carolinas. Totals ranged widely in the East, however, and many localities, missed by the showers, continued dry.

September rainfall totals exceeded 8 inches in opposite corners of the Country--near Puget Sound in Washington and the southern portion of the Florida Peninsula; also, in spots from southern Minnesota to Texas. Most of the eastern half of the Nation received 2 to 4 inches during the month; most of the western half received less than 1 inch.

Compared with previous seasons, September rainfall was especially heavy in the northern Cascades, the northern Rockies, central and southern Minnesota, western and central Upper Michigan, northwestern Louisiana, and nearby areas in Texas and Louisiana.

The total at Stampede Pass, Wash., 8.99 inches, was the second greatest September rainfall of record. Similarly, 7.22 inches at Marquette, Mich., was the second greatest September total at that location in 98 years. The June-to-September total at Minneapolis, Minn.,

20.15 inches, was the greatest June-to-September rainfall in 54 years.

In contrast, no rain fell at Phoenix, Ariz., in September 1968. In only two previous Septembers of record has Phoenix received no rain. Savannah, Ga., established a new low record with a 0.48-inch total for the month.

CONDENSED CLIMATOLOGICAL SUMMARY

SEPTEMBER 1968

Section	Temperature						Precipitation			
	Monthly extremes						Monthly extremes			
	Station	Highest	Date	Station	Lowest	Date	Station	Greatest	Station	Least
		°F			°F			In.		In.
Alabama	Union Springs	98	5	Waterloo	36	27	Coden	7.17	Orrville	0.58
Alaska	Kenney Lake	77	17+	Kobuk	-1	27	Little Port Walter	39.48	3 Stations	.06
Arizona	2 Stations	115	10	Jacob Lake	18	22	Palisade RS	1.25	82 Stations	.00
Arkansas	Fort Smith WBAP	97	8	Huntsville	38	11+	Batesville L& D 1	10.47	Story	2.53
California	5 Stations	115	10+	Bridgeport	7	22	Gasquet Ranger Station	1.57	350 Stations	.00
Colorado	2 Stations	97	12+	Walden	11	23	Berthoud Pass	3.02	4 Stations	.00
Connecticut	Norwalk Gas Plant	88	23	2 Stations	30	30	Burlington	5.06	West Thompson Dam	1.46
Delaware	Milford 2WSW	92	25	Georgetown 5SW	39	30	Newark University Farm	2.76	Middletown 1WSW	1.05
Florida	Avon Park	100	5	Myakka River St Park	53	2	Royal Palm Ranger Station	15.56	Woodruff Dam	.95
Georgia	2 Stations	98	11+	Tallapoosa 2N	39	13+	Helen 1ESE	8.68	Fleming	.14
Hawaii	Mauna Kea Beach 98	98	15	Mauna Loa Slope Obs	32	17	Mount Waialeale 1047	21.84	Twin Gates 261.3	.00
Idaho	3 Stations	97	11+	Stanley 1NNE	13	27	Mullan FAA	6.70	3 Stations	.00
Illinois	5 Stations	91	24+	2 Stations	37	28	Tiskilwa	8.81	Tuscola	1.21
Indiana	Crane Naval Depot	94	24	LaGrange Sewage Plant	36	28	La Porte	6.61	West Lafayette FAA AP	1.10
Iowa	Greenfield	92	2	2 Stations	33	26+	Cascade	9.42	Lamoni	1.22
Kansas	4 Stations	96	22+	do	37	26+	Russell FAA AP	6.16	2 Stations	.00
Kentucky	3 Stations	93	4+	do	38	28+	Beaver Dam	6.37	Jeremiah	.35
Louisiana	do	95	21+	4 Stations	48	28+	Bodcau Fire Tower	12.69	Donaldsonville 3E	.87
Maine	Bridgewater	90	22	Squa Pan Dam	28	15	Farmington	4.72	Caribou WBAP	.86
Maryland	Cumberland	98	4	Oakland 1SE	32	30	Edgemont	6.44	Vienna	.85
Massachusetts	Lowell	89	25	2 Stations	31	30	Heath	5.82	Woods Hole	.86
Michigan	Detroit City Airport	90	4	Herman	28	28	Alberta Ford For Cntr	8.06	Cheboygan RR Light Sta	1.46
Minnesota	2 Stations	90	14+	Cotton 11E	25	29	Tracy	10.96	Ortonville	1.51
Mississippi	Waynesboro 2W	97	19	2 Stations	44	15+	University	10.02	Hattiesburg	1.36
Missouri	3 Stations	92	20+	do	37	30+	Hermann	8.72	Kansas City U of Mo	.92
Montana	Roy 24NE Mobridge	97	11	3 Stations	20	29+	Heron 2NW	6.79	Powderville 8NNE	.03
Nebraska	Merriman	96	14	Harrison	27	23	Lincoln WB City	6.33	2 Stations	T
Nevada	Sunrise Manor Las Vegas	108	10+	Midas 4SE	11	23	Snowball Ranch	1.12	27 Stations	.00
New Hampshire	2 Stations	88	22+	Mount Washington	23	30	Mount Sunapee	6.00	Whitefield	1.05
New Jersey	do	93	25+	2 Stations	36	30+	Charlotteburg	4.19	Hammonton 2NNE	.20
New Mexico	Jal	100	8	Eagle Nest	15	17	McCauley Ranch	1.80	20 Stations	.00
New York	New York Laurel Hill	92	22	4 Stations	30	30+	Whitney Point	6.66	Bridgehampton	.92
North Carolina	Williamston 1ENE	97	5	2 Stations	33	13	Lake Toxaway 2SW	9.18	2 Stations	T
North Dakota	Breien	98	14	Mandan Ft Lincoln Park	25	6	Hankinson RR Station	7.16	Breien	.35
Ohio	Jackson 2NW	96	4	Danville 2W	32	29	Montpelier	4.69	London Water Works	1.19
Oklahoma	2 Stations	102	8	Freedom	37	18	Kiamichi Tower	9.34	Freedom	T
Oregon	Medford WBAP	100	5	Fremont	15	22	Astor Experiment Sta	4.90	4 Stations	.00
Pennsylvania	Newell	94	5	Coudersport 5NW	28	29	Pleasant Mount 1W	7.99	Philadelphia WBAP	.44
Puerto Rico	Manati	98	29	Caney 1E	57	23	Maricao	24.75	Truman Fld FAA AP	1.43
Rhode Island	Providence WBAP	86	22	Kingston	31	30	Woonsocket	3.55	Block Island WBAP	.65
South Carolina	2 Stations	95	6+	Union 8SW	44	15+	Anderson	5.72	Florence 2N	.03
South Dakota	3 Stations	98	14+	2 Stations	25	23	Leola	4.90	Fort Sully 8NE	.16
Tennessee	Samburg Wildlife Ref	98	24	do	37	28+	Moscow	9.48	Bristol WBAP	.93
Texas	Wichita Falls WBAP	104	8	Marfa No 2	37	26	Dryer 1NW	17.22	Sunray 4SW	T
Utah	Saint George	105	10	Birdseye	10	24	Silver Lake Brighton	1.23	3 Stations	.00
Vermont	3 Stations	86	21+	Mount Mansfield	25	13	Bellows Falls	6.25	Gilman	.81
Virginia	Chase City	95	25+	Burkes Garden	33	29+	Vienna Dunn Loring	5.89	Bristol	.30
Washington	Lower Granite Dam near	102	10	Chesaw 4NNW	22	20	Clearwater	11.60	Wenatchee FAA AP	.01
West Virginia	2 Stations	93	24	Canaan Valley	28	27	Cairo 3S	5.51	Spruce Knob	1.02
Wisconsin	New London	90	4	Marshfield Exp Farm	27	27	Spring Valley	9.69	Two Rivers	2.42
Wyoming	3 Stations	91	14+	Sage 4NNW	11	23	Sheridan Field Sta	2.45	Dixon	.00

+ And also on an earlier date or dates.

NOTE: Dates in the above Condensed Climatological Summary apply to the period 24 hours prior to time of observation. In some cases the actual occurrence is on the calendar date preceding that shown. (See individual Climatological Data for times of observations).

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No. of days: Max. 90° F. or above	Temperature: No. of days: Min. 32° F. or below	Temperature: Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No. of days: .01 inch or more	Precipitation: No. of days: With thunderstorms	Snow, Sleet: Total	Snow, Sleet: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile: Speed	Wind: Fastest mile: Direction	Wind: Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	No. of days (sunrise to sunset): Partly cloudy, 4-7	No. of days (sunrise to sunset): Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	Ft.	Mb.	Mb.	°F.	°F.	°F.	°F.	F.		F.				F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
ALABAMA																																
BIRMINGHAM	620	994.9	1017.1	84	60	72.1	- 4.2	92	4	49	12	2	0	61	73	3.42	0.09	2.40	9	2	0.0	0	2.4	7	26	NW	18+	10	8	12	5.3	73
HUNTSVILLE	624	994.9	1017.6	83	60	71.4	- 3.1	89	4+	48	12	0	0	61	74	4.15	1.06	1.60	7	4	0.0	0	2.2	9	43	23	4	11	7	12	5.1	
MOBILE	211	1008.1	1015.9	88	68	78.1	0.2	93	7	59	19	11	0	54	68	6.13	- 0.12	3.60	8	5	0.0	0	2.0	7	31	23	9	10	10	10	5.4	
MONTGOMERY	183	1009.5	1016.6	88	63	75.6	- 1.5	93	4	54	13+	10	0	61	67	1.06	- 2.91	0.85	3	0	0.0	0	1.3	4	18	W	18	11	8	11	5.4	68
ALASKA																																
ANCHORAGE	114	1001.4	1006.1	54	40	47.1	- 0.9	64	3+	26	23	B 0	4	36	66	1.05	- 1.45	0.44	9	0	1.3	T	1.2	2	16	17	27	6	10	14	6.6	54
ANNETTE	110	1009.8	1013.8	59	48	53.4	- 0.7	66	6	39	30	0	0	47	84	15.19	5.31	2.25	26	0	0.0	0	6.2	15	45	13	9	1	6	23	8.6	
BARROW	31	1011.9	1012.4	37	29	32.8	2.3	49	1	6	30	0	20	29	85	0.61	- 0.03	0.11	15	0	5.4	4	1.2	32	35	24	22	0	2	28	9.3	
BARTER ISLAND	39			37	28	32.3	0.2	48	2	16	26	0	26			0.32	- 0.62	0.17	4	0	3.5	T			38	9	27	4	3	23	8.5	
BETHEL	125	1003.7	1009.4	51	33	42.1	- 2.5	65	3	21	30+	0	15	35	79	0.42	- 2.17	0.17	6	0	T	T	5.4	36	30	3	26	4	10	16	7.3	
COLD BAY	96	1005.8	1009.6	52	42	46.8	- 0.7	60	4+	32	30+	0	4	41	79	2.55	- 1.77	0.48	18	0	T	T	8.8	30	36	16	30+	1	8	21	8.4	
FAIRBANKS	436	991.9	1009.1	53	32	42.8	- 0.8	68	9	16	22	0	14	30	66	0.15	- 0.95	0.09	6	0	0.9	T	2.1	36	18	6	4	8	8	14	6.4	
JUNEAU	12	1009.8	1010.6	52	43	47.6	- 1.3	61	14	34	23	0	0	46	96	10.14	3.47	1.75	25	0	0.0	0	6.9	11	38	11	27	0	1	29	9.7	9
KING SALMON	49	1003.7	1005.9	53	34	43.3	- 4.6	65	4+	18	30	0	11	34	71	2.70	- 0.38	0.87	14	0	0.3	T	3.3	3	48	8	26	4	9	17	7.2	
KOTZEBUE	10	1011.2	1011.7	45	34	39.6	- 1.3	59	10	22	27	0	10	33	76	0.44	- 0.78	0.27	8	0	1.2	1	7.2	35	32	36	28	9	6	15	6.0	
MC GRATH	344	996.3	1009.2	51	30	40.3	- 3.6	66	3	12	30	0	18	28	64	0.45	- 2.16	0.17	10	1	2.5	2	3.5	34	17	2	26	4	9	17	7.2	
NOME	13	1010.8	1011.6	48	31	39.5	- 2.4	65	5	16	25	0	17	25	58	0.39	- 2.28	0.14	8	0	0.4	T	5.1	36	32	3	26	6	10	14	6.5	47
ST. PAUL ISLAND	22	1011.5	1012.3	48	38	42.9	- 1.7	53	6+	25	29	0	2	40	87	1.86	- 1.21	0.47	21	0	T	T	8.8	34	43	3	26	0	8	22	8.6	
SHEMYA	122	1014.6	1018.3	51	43	46.8	- 1.5	58	8	35	26	0	0	43	88	2.26	0.01	0.65	15	0	T	0	0.5	8	44	7	25	3	4	23	8.1	
YAKUTAT	28	1006.8	1007.8	52	38	45.3	- 3.9	61	1	25	23+	0	5	42	92	17.95	1.40	2.88	23	0	0.0	0	4.7	11	39	13	27	3	0	27	8.8	
ARIZONA																																
FLAGSTAFF	7006	790.0	1015.6	74	38	55.9	- 2.6	82	8	28	25	0	7	30	41	0.04	- 1.54	0.03	2	7	0.0	0	2.5	20	29	21	20	22	6	2	2.4	
PHOENIX	1117	970.9	1008.8	99	68	83.6	0.8	107	9+	54	23	30	0	45	28	0.00	- 0.73	0.00	0	0	0.0	0	2.1	13	38Y	S	29	28	2	0	0.7	99
TUCSON	2584	923.8	1009.7	94	67	80.7	0.3	102	9	55	23	27	0	45	31	T	- 1.00	T	0	0	0.0	0	4.2	15	30	E	12	28	2	0	1.4	92
WINSLOW	4895	852.0	1013.2	86	50	67.9	- 2.8	95	9	36	24	7	0	30	28	0.23	- 0.68	0.22	2	2	0.0	0	3.5	21	29	21	14	23	7	0	1.6	
YUMA	194	1001.4	1008.3	100	69	84.9	- 1.4	112	9	56	23	28	0	49	33	0.00	- 0.38	0.00	0	0	0.0	0	1.9	19	28	N	22	29	1	0	0.5	100
ARKANSAS																																
FORT SMITH	447	1000.0	1016.3	86	57	71.8	- 3.1	97	8	47	26	11	0	56	64	2.87	- 0.77	1.14	7	3	0.0	0	0.6	10	34	W	16	15	9	6	4.2	78
LITTLE ROCK	257	1006.8	1016.4	84	58	70.7	- 3.6	94	2	49	26+	3	0	59	71	5.99	2.76	2.74	9	3	0.0	0	1.1	19	31	E	8	17	2	11	4.3	70
CALIFORNIA																																
BAKERSFIELD	475	994.9	1012.3	91	63	76.9	0.4	101	2	50	21+	20	0	47	38	0.00	- 0.08	0.00	0	0	0.0	0	2.8	32	21	34	29	28	2	0	0.8	
BISHOP	4108	873.4		89	47	68.0	- 0.2	100	1	35	21	18	0			0.00	- 0.19	0.00	0		0.0	0						24	4	2	1.8	
BLUE CANYON	5280			74	54	63.8	0.9	81	25+	37	20	0	0			0.07	- 0.56	0.07	2		0.0	0			22	11	29	23	4	3	2.0	
EUREKA U	43			63	52	57.5	1.1	71	25+	43	21	0	0			0.60	- 0.04	0.58	3		0.0	0			28	N	21	10	6	14	5.6	54
FRESNO	328	1000.3	1012.1	92	55	73.7	- 0.5	100	2+	41	22	21	0	48	46	0.00	- 0.10	0.00	0	0	0.0	0	4.4	30	21	NW	13	28	2	0	1.0	99
LONG BEACH	34	1011.5	1012.8	83	61	71.8	0.5	101	25	54	22	8	0	55	64	T	- 0.06	T	0	0	0.0	0	2.1	23	17	27	23	15	10	5	3.6	
LOS ANGELES	105	1008.5	1012.1	75	63	68.6	0.1	95	24	57	23+	1	0	57	72	0.00	- 0.17	0.00	0	0	0.0	0	4.7	23	23Y	W	4	14	8	8	4.3	
LOS ANGELES U	270			82	65	73.4	1.5	99	24	58	22+	7	0			0.03	- 0.20	0.03	1		0.0	0			14	W	24	16	8	6	3.5	68
MT SHASTA R	3544			78	43	60.8	- 0.7	89	5+	33	21+	0	0			0.15	- 0.72	0.09	2		0.0	0										
OAKLAND	6	1014.2	1014.4	74	58	66.0	0.9	94	16	50	21	2	0	54	71	T	- 0.20	T	0	0	0.0	0	6.1	28	23	29	17	14	10	6	3.7	
RED BLUFF	342	1000.7	1013.1	92	60	75.8	- 0.2	102	17	52	20	21	0	45	40	0.01	- 0.36	0.01	1	0	0.0	0	2.5	34	31	N	16	22	3	5	2.5	96
SACRAMENTO	17	1011.9	1012.6	88	56	72.2	0.6	95	28+	50	29+	12	0	48	51	0.00	- 0.19	0.00	0	0	0.0	0	3.3	24	30	N	16	24	5	1	1.8	98
SANDBERG R	4517	863.2		78	56	66.9	- 2.4	90	8+	37	20	2	0	35	37	0.00	- 0.21	0.00	0		0.0	0	3.3	33	30	35	16+	28	1	1	0.9	
SAN DIEGO	13	1011.5	1012.4	78	65	71.3	1.4	93	24	59	22+	1	0	57	66	T	- 0.15	T	0	0	0.0	0	3.7	27	19	NW	22+	17	4	9	4.1	64
SAN FRANCISCO	8	1013.9	1014.7	74	55	64.2	0.3	91	24	48	29+	2	0	50	68	T	- 0.19	T	0	0	0.0	0	9.6	28	44	WNW	19	15	12	3	3.3	
SAN FRANCISCO U	52			69	57	63.1	1.1	89	16	49	28	0	0			0.06	- 0.16	0.06	2		0.0	0			28	W	19					74
SANTA MARIA	236			76	52	63.9	1.1	99	25	42	21	3	0			T	- 0.16	T	0		0.0	0						14	14	2	3.2	
STOCKTON	22	1012.2	1013.3	88	57	72.8	0.1	99	27	49	22	13	0	49	50	T	- 0.19	T	0	0	0.0	0	6.7	30	23	34	15	21	7	2	2.0	
COLORADO																																
ALAMOSA	7536	774.5		72	33	52.5	- 3.2	78	10+	20	17	0	12			0.41	- 0.36	0.23	5		0.0	0						20	9	1	2.9	
COLORADO SPRINGS	6145	813.1	1014.6	75	46	60.3	- 1.3	85	14+	35	17	0	0	31	36	1.03	- 0.04	0.56	5	3	0.0	0	2.1	3	32	35	7	16	8	6	3.9	
DENVER	5283	837.5	1013.3	77	45	60.9	- 2.1	88	11	36	16	0	0	38	50	0.59	- 0.54	0.26	4	2	0.0	0	2.3	20	29	NE	7	13	11	6	4.1	80
GRAND JUNCTION	4855	853.0	1013.6	80	49	64.2	- 3.6	91	10	38	23+	2	0	30	31	0.07	- 0.84	0.04	3	4	0.0	0	2.6	12	37	SW	20	16	9	5	3.8	77
PUEBLO	4684	856.1	1012.6	84	52	68.0	1.4	93	14+	41	17	7	0	38	38	0.52	- 0.32	0.38	3	1	0.0	0	0.6	28	35	N	7	17	10	3	3.4	86

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure: Station ∅	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No. of days: Max. 90°F. or above	Temperature: No. of days: Min. 32 F. or below	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No. of days: .01 inch or more	Precipitation: No. of days: With thunderstorms	Snow, Sleet: Total	Snow, Sleet: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile: Speed	Wind: Fastest mile: Direction	Wind: Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	No. of days (sunrise to sunset): Partly cloudy, 4-7	No. of days (sunrise to sunset): Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	Ft.	Mb.	Mb.	°F.	°F.	°F.	°F.	°F.		°F.				F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
CONNECTICUT																																
BRIDGEPORT	7	1018.3	1018.9	76	60	68.1	2.6	82	22	48	30	0	0	59	74	3.17	- 0.78	2.34	4	0	0.0	0	0.6	33	30	8	11	14	10	6	4.1	
HARTFORD	169	1011.9	1018.4	78	52	65.0	1.7	86	22	40	30	0	0	54	72	2.88	- 0.77	1.73	5	0	0.0	0	1.2	29	24	NW	12	12	9	9	4.9	75
NEW HAVEN	6	1018.3		75	56	65.7	1.8	81	19+	43	30	0	0			2.34	- 1.59	1.68	3		0.0	0			24	NE	11	16	8	6	4.0	79
DELAWARE																																
WILMINGTON	74	1016.3	1019.2	81	59	69.7	2.1	89	25	47	30	0	0	56	65	1.50	- 2.45	0.80	3	1	0.0	0	1.2	27	25	14	10	14	11	5	4.0	
DIST.OF COLUMBIA																																
WASH NATL AP	14	1016.6	1019.0	83	61	72.0	2.3	92	4	50	30	4	0	57	63	2.97	- 0.86	1.69	4	1	0.0	0	0.5	25	22	SE	10	16	7	7	4.0	75
FLORIDA																																
APALACHICOLA U	13			86	72	79.0	0.1	91	10+	66	22	5	0			6.37	- 2.16	4.46	7	4	0.0	0			28	E	20	11	13	6	4.8	69
DAYTONA BEACH	31	1014.9	1016.3	86	72	79.1	- 0.1	90	10+	68	15	3	0	68	72	6.07	- 0.93	1.99	14	5	0.0	0	4.3	5	25	25	10	3	23	4	6.0	
FORT MYERS	15	1014.6	1015.0	89	74	81.4	0.1	93	30+	71	17	19	0	73	80	8.92	0.42	2.52	14	11	0.0	0	3.8	6	25	13	5	7	16	7	5.4	
JACKSONVILLE	20	1015.6	1016.5	87	71	79.2	- 0.2	95	6	65	14	4	0	70	77	2.68	- 4.88	1.53	8	4	0.0	0	3.5	4	33	NE	22	5	18	7	5.9	59
KEY WEST	4	1013.5	1014.1	88	78	83.1	0.8	91	8	74	21	7	0	75	76	6.90	0.17	1.34	19	13	0.0	0	4.5	10	32	SE	26	1	19	10	6.8	78
LAKELAND U	214			87	71	79.4	- 0.8	93	6	68	15+	9	0			4.27	- 2.28	1.80	12		0.0	0						12	15	3	4.7	66
MIAMI	7	1013.9	1014.3	89	76	82.2	0.9	93	6	72	24	15	0	72	74	11.11	1.64	2.83	21	11	0.0	0	3.0	8	25	32	12	0	16	14	7.0	
ORLANDO	108	1011.9	1016.1	89	72	80.3	0.3	94	7	67	15	12	0	70	77	5.91	- 1.32	3.47	13	5	0.0	0	4.4	6	23	7	8+	0	24	6	5.9	
PENSACOLA	112	1011.5	1015.5	87	69	78.1	- 0.1	91	26	63	28	3	0	66	70	4.01	- 3.68	2.74	5		0.0	0	2.1	7	26	E	15	11	9	10	5.1	68
TALLAHASSEE	55	1013.9	1016.3	89	67	77.9	- 0.2	95	6	59	15	14	0	68	78	8.91	3.40	6.52	9	6	0.0	0	3.2	8	25	13	8	8	13	9	5.3	
TAMPA	19	1015.2	1015.3	88	71	79.6	- 0.9	92	7	67	15+	14	0	70	76	3.58	- 3.31	1.83	10	9	0.0	0	4.0	6	23	7	20	5	20	5	5.5	63
WEST PALM BEACH	15	1013.9	1014.7	88	73	80.4	- 1.7	92	8	70	24+	5	0	72	79	14.01	4.35	3.65	14	13	0.0	0	3.5	8	26	16	10+	3	12	15	6.8	
GEORGIA																																
ATHENS	802	989.5	1018.0	81	60	70.5	- 3.0	87	30+	52	12	0	0	61	75	1.94	- 1.08	0.53	6	3	0.0	0	3.1	4	14	30	26+	10	8	12	5.6	
ATLANTA	1010	981.4	1017.8	82	61	71.5	- 1.6	86	25+	51	12+	0	0	61	76	1.29	- 1.97	0.78	5	1	0.0	0	3.0	8	24	E	17	16	6	14	5.6	64
AUGUSTA	145	1012.2	1017.4	86	62	74.2	- 1.1	91	4	54	16+	2	0	63	76	4.85	1.85	1.99	9	4	0.0	0	1.8	4	18	22	9	11	10	9	5.6	
COLUMBUS	385			86	63	74.5	- 1.5	91	4	53	13	3	0	63	73	2.57	- 0.20	1.16	6		0.0	0	2.6	5	20	13	8	11	8	11	5.5	
MACON	354	1004.4	1017.3	86	60	73.3	- 3.1	93	5+	52	14+	8	0	64	78	2.67	- 0.10	1.08	7	5	0.0	0	2.3	5	22	E	17	8	8	14	5.9	68
ROME	637			83	57	70.2	- 2.2	92	3	44	12	1	0			4.57	1.27	1.25	8		0.0	0										
SAVANNAH	46	1015.2	1017.0	87	66	76.5	- 0.2	93	6	55	14	3	0	67	78	0.48	- 4.77	0.25	5	6	0.0	0	3.5	7	20	SE	19	4	12	14	6.6	74
HAWAII																																
HILO	27	1013.5	1014.9	85	69	76.8	1.3	88	16	67	30+	0	0	71	83	8.53	0.03	3.62	24	1	0.0	0	1.0	18	17	E	30+	5	7	18	7.2	41
HONOLULU	7	1013.9	1014.3	90	74	82.0	2.8	92	4	70	30	19	0	69	69	1.30	0.31	0.70	11	1	0.0	0	9.8	5	25	NE	17+	11	15	4	4.6	78
KAHULUI	48	1011.5	1013.8	90	69	79.9	1.5	95	1	62	5	20	0	68	71	0.21	- 0.04	0.10	7	1	0.0	0	9.8	5	31	NE	13	14	11	5	4.5	78
LIHUE	103	1010.2	1015.4	84	73	78.7	0.6	85	13+	65	30	0	0	68	73	3.17	1.09	1.62	17	2	0.0	0	8.1	6	19	NE	24	3	22	5	5.4	71
IDAHO																																
BOISE	2838	916.4	1015.5	77	49	63.0	0.3	93	9	38	22+	2	0	43	51	0.10	- 0.29	0.10	2	0	0.0	0	1.5	29	29	NW	18	14	9	7	4.2	79
LEWISTON	1413			75	51	62.9	- 0.6	94	9	40	22	2	0			1.27	0.37	0.50	8		0.0	0						9	10	11	5.9	
POCATELLO	4454	864.5	1016.5	72	41	56.5	- 3.8	91	10	32	23	1	1	36	51	0.64	0.03	0.36	6	1	T	0	5.7	23	34	SW	15	7	18	5	5.3	75
ILLINOIS																																
CAIRO U	314			80	62	70.8	- 1.7	87	22	52	26	0	0			5.00	1.99	2.03	9		0.0	0			30	SE	8	13	10	7	4.5	74
CHICAGO O HARE	658	992.2	1016.3	75	56	65.5	1.9	88	3	42	26	0	0	55	72	3.88	1.14	1.08	14	8	0.0	0	4.0	20	32	30	5	9	9	12	5.9	
CHICAGO MIDWAY	607	993.9	1016.3	76	57	66.7	0.6	90	3	48	28+	1	0	54	67	3.68	0.95	0.94	14	6	0.0	0	5.4	19	31	SE	16	10	9	11	5.7	60
MOLINE	582	994.2	1015.5	75	52	63.1	- 2.2	87	3	40	28	0	0	54	76	5.70	2.45	2.07	11	6	0.0	0	3.9	20	32	NW	5	9	11	10	5.7	60
PEORIA	652	992.2	1016.1	76	53	64.3	- 2.1	88	3	43	27	0	0	54	74	4.83	1.78	1.65	13	6	0.0	0	3.5	20	37	SE	16	10	7	13	5.9	61
ROCKFORD	724	988.8	1015.6	73	53	63.2	- 0.6	87	3	42	28+	0	0	55	76	6.76	3.25	2.48	13	5	0.0	0	3.9	20	25	16	19	10	7	13	5.6	
SPRINGFIELD	588	993.9	1016.0	79	55	66.7	- 0.9	88	22+	44	27+	0	0	55	70	3.29	0.36	1.69	9	3	0.0	0	4.1	19	26	SE	18	12	6	12	5.4	66
INDIANA																																
EVANSVILLE	381	1003.7	1017.5	81	56	68.4	- 1.7	90	3	44	12	1	0	57	72	3.05	0.18	1.63	7	2	0.0	0	2.2	20	25	S	8	10	9	11	5.1	70
FORT WAYNE	791	987.5	1017.4	75	54	64.4	- 0.4	86	23+	41	27	0	0	55	74	1.97	- 0.70	0.57	9	1	0.0	0	4.5	22	21	W	24+	8	7	15	6.3	66
INDIANAPOLIS	792	988.5	1017.5	77	55	65.8	- 0.7	86	22	42	12	0	0	56	75	1.54	- 1.70	0.36	9	2	0.0	0	3.3	19	31	NW	1	10	7	13	5.9	64
SOUTH BEND	773	988.8	1016.7	73	56	64.6	0.8	85	3	44	28	0	0	56	75	4.38	1.31	0.98	12	4	0.0	0	4.0	21	21	28	6+	6	10	14	6.6	

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

SEPTEMBER 1968

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	No. of days: Max. 90° F. or above	No. of days: Min. 32° F. or below	Average dew point	Average relative humidity	Precipitation: Total	Departure from normal	Greatest in 24 hours	No. of days: .01 inch or more	No. of days: With thunderstorms	Snow, Sleet: Total	Snow, Sleet: Maximum depth on ground	Wind: Resultant speed	Resultant direction	Fastest mile: Speed	Fastest mile: Direction	Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	Ft.	Mb.	Mb.	°F.	F.	°F.	F.	°F.		°F.				F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
IOWA																																
BURLINGTON	692			76	53	64.5	- 1.5	89	3	46	27+	0	0	54	72	6.15	2.96		13	7	0.0		3.7	21	23	24	30+	9	11	10	5.5	
DES MOINES	938	980.7	1015.3	74	53	63.3	- 2.1	85	2	43	25	0	0	53	72	2.63	- 0.25	1.12	13	4	0.0	0	2.7	22	32	NW	24	13	7	10	4.9	65
DUBUQUE	1056	976.6		70	51	60.6	- 1.1	84	3	40	26+	0	0			5.67	1.93	0.93	15		0.0	0						8	11	11	6.0	
SIOUX CITY	1095	974.6	1014.1	74	52	63.0	- 2.5	87	14	43	26+	0	0	52	72	4.12	1.38	1.50	10	6	0.0	0	1.0	16	35	NW	8	11	10	9	5.1	72
WATERLOO	868	983.1	1014.7	72	49	60.2	- 2.7	87	3	38	26	0	0	53	80	3.61	- 0.19	0.99	13	6	0.0	0	3.1	20	25	27	24	12	8	10	5.2	
KANSAS																																
CONCORDIA	1470	961.7	1013.9	79	55	66.9	- 2.7	91	2	46	18+	1	0	54	66	3.03	0.30	1.44	6	6	0.0	0	5.1	19	43	S	6	15	9	6	3.7	78
DODGE CITY	2582	924.1	1013.5	83	55	69.0	- 1.3	91	22+	48	26	6	0	49	54	0.23	- 1.30	0.13	3	3	0.0	0	5.2	18	32	N	16	17	9	4	3.4	91
GOODLAND	3650	887.6	1012.6	81	49	65.0	- 0.5	94	2	38	24	7	0	43	52	0.46	- 0.78	0.18	5	2	0.0	0	2.7	21	32	33	15	18	9	3	3.2	
TOPEKA	876	983.4	1015.0	78	55	66.6	- 2.8	88	20	42	11	0	0	56	71	2.50	- 0.48	1.73	6	4	0.0	0	3.1	19	26	SW	7	13	9	8	4.4	76
WICHITA	1321	967.5	1014.7	80	55	67.9	- 3.4	92	20	43	18	1	0	55	65	5.91	2.69	3.03	6	4	0.0	0	4.7	18	40	N	3	17	5	8	3.9	74
KENTUCKY																																
COVINGTON	869	986.8	1018.2	78	57	67.4	0.2	88	3	45	26	0	0	57	73	2.16	- 0.67	0.78	9	1	0.0	0	2.4	19	17	27	6	10	8	12	5.8	
LEXINGTON	966	983.4	1018.5	78	58	67.8	- 1.5	87	3	48	28+	0	0	57	71	2.98	0.18	1.26	7	2	0.0	0	2.7	18	29	22	9	15	4	11	5.0	
LOUISVILLE	477	1000.0	1017.5	80	58	69.0	- 0.5	89	3	48	28	0	0	58	71	2.61	- 0.02	0.90	8	1	0.0	0	2.3	19	29	W	9	10	9	11	5.2	67
LOUISIANA																																
ALEXANDRIA	92	1012.2	1016.3	85	62	73.4	- 3.6	91	16+	52	19	2	0	66	81	2.71	- 0.42	1.04	5	2	0.0	0	1.6	6	23	34	9	12	8	10	5.1	
BATON ROUGE	64	1013.2	1015.8	87	66	76.7	- 1.2	92	21	58	28+	8	0	66	74	1.68	- 1.84	0.96	5	4	0.0	0	2.6	4	30	13	3	14	5	11	5.1	
LAKE CHARLES	9	1014.2	1015.4	85	66	75.6	- 3.1	90	22+	57	19	3	0	67	81	3.11	- 0.91	1.37	6	7	0.0	0	2.5	7	32	20	15	13	5	12	5.4	
NEW ORLEANS	3	1014.9	1015.8	85	65	75.4	- 2.9	91	3	59	30+	1	0	66	76	2.44	- 2.59	1.06	6	2	0.0	0	2.7	6	30	19	17	12	5	13	5.5	
SHREVEPORT	254	1006.8	1015.9	84	63	73.6	- 5.2	92	2	56	27+	7	0	62	72	9.59	7.31	5.14	6	4	0.0	0	1.2	12	21	3	15+	13	8	9	4.8	68
MAINE																																
CARIBOU	624	994.9		70	47	58.5	4.7	85	20	35	30	0	0			0.86	- 2.67	0.21	10		0.0	0						8	5	17	6.5	
PORTLAND	47	1016.3	1018.7	73	51	61.7	3.0	85	22	37	30	0	0	53	77	1.40	- 2.12	0.69	8	0	0.0	0	0.8	21	26	SE	11	11	9	10	5.0	63
MARYLAND																																
BALTIMORE	148	1013.5	1019.1	82	59	70.3	2.2	91	4	49	30	2	0	55	64	4.39	1.06	3.72	3	2	0.0	0	1.3	26	20	W	30+	15	8	7	3.7	72
MASSACHUSETTS																																
BLUE HILL OBS R	629			73	55	63.9	1.5	85	22	42	30	0	0			2.45	- 1.50	1.41	5		0.0	0			42	ESE	11					68
BOSTON	15	1018.0	1019.0	71	59	65.0	- 0.3	84	22	51	30	0	0	55	72	1.79	- 1.67	1.14	6	1	0.0	0	0.1	19	35	E	11	14	8	8	4.7	72
NANTUCKET	43	1018.3	1018.7	72	54	62.8	- 0.1	77	24+	43	30	0	0	59	88	2.63	- 0.88	1.36	6	2	0.0	0	1.4	4	31	N	17	9	12	9	5.4	61
WORCESTER	986	982.7	1019.6	73	54	63.5	2.7	81	25+	41	30	0	0	50	65	1.94	- 1.98	1.04	5	1	0.0	0	2.3	28	27	26	12	12	10	8	4.5	
MICHIGAN																																
ALPENA	689	991.2	1016.4	71	50	60.5	4.5	85	4	40	28	0	0	53	79	6.67	3.06	3.02	16	7	0.0	0	2.5	20	25	SE	18	7	13	10	5.9	57
DETROIT	619			77	61	68.5	3.4	90	4	48	28	1	0	56	67	1.70	- 0.74	0.81	9	6	0.0		3.6	23	23	29	22					
DETROIT M WAYNE CO	633	992.9	1016.8	76	55	65.5	2.2	86	23	43	29+	0	0	56	74	1.87	- 0.45	0.54	10	4	0.0	0	3.6	22	21	SE	18+	6	13	11	6.0	62
DETROIT WILLOW RUN	711	985.4	1017.2	74	54	63.9	- 0.9	83	23+	40	28	0	0	53	71	1.84	- 0.45	0.35	12	5	0.0	0	4.1	22	23	31	22	6	11	13	6.4	
FLINT	770	988.8	1016.5	72	53	62.3	0.3	82	4	39	28	0	0	55	78	2.21	- 0.73	0.52	12	5	0.0	0	4.7	21	24	18	18	4	13	13	6.5	
GRAND RAPIDS	784	987.5	1016.4	74	53	63.7	1.5	86	3	38	28	0	0	54	74	4.21	1.23	0.80	13	6	0.0	0	3.7	20	30	SW	6	6	13	11	6.5	50
HOUGHTON LAKE	1149	974.9	1016.9	70	50	60.2	2.9	83	4	34	28	0	0	53	79	4.17	1.23	1.26	13	8	0.0	0	3.3	21	24	27	6	3	16	11	6.5	
LANSING	841	985.4	1016.8	74	51	62.7	0.7	85	23+	35	28	0	0	54	76	2.73	0.13	1.06	14	1	0.0	0	4.2	21	30	W	6	5	12	13	6.5	55
MARQUETTE U	677			67	53	60.3	2.6	84	14	44	28+	0	0			7.22	3.94	2.77	15		0.0	0			26	SE	17	4	9	17	7.0	52
MUSKEGON	627	992.9	1015.8	71	54	62.6	- 0.4	82	16+	38	28	0	0	55	78	3.55	0.49	1.43	12	4	0.0	0	3.5	20	22	12	19	4	15	11	6.4	
SAULT STE MARIE	721	989.2	1015.6	69	50	59.5	3.7	80	15	35	29	0	0	54	83	4.05	0.24	1.16	13	7	0.0	0	1.8	15	30	W	24+	6	11	13	6.5	50
MINNESOTA																																
DULUTH	1428	963.1	1014.5	66	47	56.6	2.4	79	14	33	29+	0	0	48	77	3.42	0.56	1.33	10	2	0.0	0	1.0	22	36	E	22	7	9	14	6.5	58
INTERNATIONAL FALLS	1179	970.9	1013.8	66	46	56.0	3.1	85	14	33	29+	0	0	48	77	4.33	1.43	1.72	15	3	0.0	0	2.4	20	23	25	29+	7	6	17	6.5	
MINNEAPOLIS	834	984.1	1014.3	71	51	61.1	0.7	85	14	39	27	0	0	52	73	6.16	3.73	2.01	9	5	0.0	0	1.4	22	32	S	15	8	9	13	6.0	66
ROCHESTER	1297	967.5	1014.9	69	48	58.2	- 2.5	84	3	36	26	0	0	50	78	3.93	0.83	1.41	14	6	0.0	0	3.8	21	28	21	3	8	6	16	6.2	
ST CLOUD	1034	976.0	1013.7	70	48	59.2	0.4	84	14	36	29+	0	0		75	4.74	2.33	1.96	11		0.0	0						10	9	11	5.9	
MISSISSIPPI																																
JACKSON	310	1004.7	1016.5	87	60	73.3	- 3.2	90	22+	50	13	4	0	61	70	1.95	- 0.58	0.95	8	3	0.0	0	1.6	7	20	SE	15	16	4	10	4.3	66

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No. of days: Max. 90° F. or above	Temperature: No. of days: Min. 32° F. or below	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No. of days: .01 inch or more	Precipitation: No. of days: With thunderstorms	Snow, Sleet: Total	Snow, Sleet: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile: Speed	Wind: Fastest mile: Direction	Wind: Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	No. of days (sunrise to sunset): Partly cloudy, 4-7	No. of days (sunrise to sunset): Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	Ft.	Mb.	Mb.	F.	F.	°F.	°F.	°F.		°F.				F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
MISSISSIPPI																																
MERIDIAN	290	1006.1	1017.2	85	59	72.3	- 3.6	88	29+	50	13	0	0	62	77	2.91	- 0.42	1.17	[illegible]	4	0.0	0	0.9	2	16	5	27+	14	5	11	5.0	
MISSOURI																																
COLUMBIA	778	987.8	1015.6	78	57	67.6	- 1.7	87	3	47	11	0	0	55	69	4.64	0.76	2.01	9	6	0.0	0	3.5	19	28	NW	16	16	2	12	4.8	62
KANSAS CITY	742	988.5	1015.2	81	58	69.5	- 1.8	90	20	47	11	1	0	56	66	1.04	- 2.21	0.61	7	3	0.0	0	3.5	20	28	S	7	15	6	9	4.2	74
ST JOSEPH	811			80	55	67.1	- 1.5	86	2	41	11	0	0	56	74	2.10	- 1.34		7	4	0.0		2.3	19	29	21	3	15	8	7	4.1	
ST LOUIS	535	996.3	1016.6	79	57	68.0	- 1.5	88	7+	47	12	0	0	57	70	3.74	0.98	2.25	9	4	0.0	0	3.5	20	24	SE	18	11	7	12	5.4	68
SPRINGFIELD	1268	971.6	1016.6	78	55	66.5	- 3.9	88	21	42	11	0	0	54	70	3.09	- 0.76	1.77	7	6	0.0	0	4.0	18	20	SW	16+	13	9	8	4.3	67
MONTANA																																
BILLINGS	3567	890.6	1013.1	73	50	61.6	1.2	90	11	38	22	1	0	43	55	1.38	0.19	0.50	10	1	T	0	5.9	26	54	W	12	11	7	12	5.3	67
GLASGOW	2284	930.9	1012.1	72	44	57.6	0.9	87	11+	34	21	0	0	43	62	0.75	- 0.21	0.28	7	6	0.0	0	1.3	31	30	34	20	3	14	13	6.5	
GREAT FALLS	3662	887.6	1014.0	68	45	56.5	- 0.9	90	10	31	21	1	2	40	59	2.92	1.72	1.31	11	2	3.9	2	7.2	24	36	SW	17	7	6	17	6.8	56
HAVRE	2584	921.1	1012.8	69	42	55.9	0.3	91	11	34	24+	2	0	43	68	2.47	1.46	1.21	13	6	T	0	6.3	26	33	NW	7	1	11	18	7.4	70
HELENA	3828	881.1	1016.0	68	42	55.0	- 1.0	87	10	33	21	0	0	41	64	2.22	1.27	1.34	9	1	3.0	3	4.4	27	46	W	18	9	7	14	6.0	55
KALISPELL	2965	911.6	1016.2	65	41	53.0	- 1.7	83	10	32	29	0	1	45	80	3.33	2.29	0.82	14	4	3.1	T	1.6	17	23	31	13	6	9	15	6.8	
MILES CITY	2629	920.4	1012.4	75	47	61.3	0.3	92	11	34	22	2	0	44	57	0.48	- 0.48		7	2	0.0		4.0	29								
MISSOULA	3190	905.2	1017.1	67	42	54.7	- 0.7	87	10	34	29+	0	0	44	70	1.92	0.90	0.55	12	1	T	0	2.0	31	31	N	2	5	6	19	7.1	56
NEBRASKA																																
GRAND ISLAND	1841	948.5	1013.9	77	51	64.2	- 1.0	91	2	42	10	2	0	52	68	2.33	0.18	1.74	6	7	0.0	0	2.5	20	30	34	7	12	11	7	4.8	
LINCOLN U	1150			76	56	66.2	- 2.0	90	2	47	25+	1	0			6.33	3.46	2.54	10		0.0	0			34	SW	7	11	11	8	4.8	73
NORFOLK	1544			74	51	62.1	- 2.9	86	14+	40	25+	0	0			2.38	0.13	1.53	7		0.0	0						10	10	10	5.0	
NORTH PLATTE	2775	916.7	1013.5	77	45	61.1	- 2.6	88	14+	35	26+	0	0	46	63	0.82	- 0.85	0.35	5	5	0.0	0	0.4	9	33	NW	7	10	15	5	4.2	78
OMAHA	977	979.0	1014.1	76	55	65.4	- 1.5	88	2	44	25	0	0	55	72	5.74	3.11	2.06	10	5	0.0	0	1.4	19	31	NW	8	10	11	9	4.9	73
SCOTTSBLUFF	3957	879.4	1014.1	77	43	59.9	- 2.4	91	11	35	4	1	0	41	56	0.25	- 0.96	0.09	6	2	0.0	0	2.5	33	35	34	16	16	7	7	3.9	
VALENTINE	2587			76	45	60.3	- 1.5	91	14	35	25	3	0			0.60	- 0.65	0.22	6		0.0	0			43	N	7	13	9	8	4.6	78
NEVADA																																
ELKO	5050	846.3	1015.6	79	39	59.2	1.3	93	10+	22	21	6	5	31	40	0.36	0.02	0.26	3	3	T	0	1.4	27	21	27	14	15	10	5	4.3	
ELY	6253	810.7	1014.8	74	35	54.5	- 3.0	87	9+	15	22+	0	13	24	35	0.10	- 0.46	0.07	3	2	T	0	3.6	22	34	S	19	20	5	5	3.4	88
LAS VEGAS	2162	935.7	1010.4	95	65	79.7	- 0.3	105	11+	50	21	22	0	30	17	0.01	- 0.33	0.01	1	1	0.0	0	2.3	24	30	SW	20+	25	3	2	1.4	93
RENO	4404	867.3	1015.5	81	38	59.6	0.8	94	6+	23	22	6	6	35	44	0.15	- 0.08	0.15	1	1	0.0	0	1.4	31	42	W	19	20	7	3	2.5	96
WINNEMUCCA	4301	868.9	1015.6	77	39	57.9	- 0.7	89	9+	22	21	0	5	23	26	0.00	- 0.34	0.00	0	0	0.0	0	1.2	28	38	SW	18	15	9	6	3.7	80
NEW HAMPSHIRE																																
CONCORD	342	1006.4	1019.0	74	48	61.0	1.7	85	25	30	30	0	1	52	76	2.34	- 1.41	0.78	8	2	0.0	0	0.6	23	27	E	11	12	8	10	5.3	62
MT WASHINGTON OBS	6262			49	38	43.4	2.4	63	21	23	30	0	6			3.89	- 3.11	1.74	10	0	1.5	T			100Y	SE	11	8	3	19	7.0	41
NEW JERSEY																																
ATLANTIC CITY	64	1016.3	1018.7	80	53	66.5	- 0.7	90	23	39	18	1	0	55	72	0.43	- 2.88	0.19	5	0	0.0	0	0.4	27	21	23	11+	14	11	5	4.1	69
ATLANTIC CITY U	11			78	64	71.0	2.6	86	4	54	29	0	0			2.17	- 1.23	1.31	6		0.0				31	W	30					
NEWARK	7	1017.6	1018.7	80	62	70.7	3.4	90	25	51	30	1	0	57	65	2.48	- 1.28	1.09	4	2	0.0	0	1.3	26	22	10	10+	14	10	6	4.2	
TRENTON U	56			79	60	69.3	2.2	88	25+	51	30	0	0			1.19	- 2.31	0.49	5		0.0	0			22	W	30	15	10	5	4.0	73
NEW MEXICO																																
ALBUQUERQUE	5311	839.8	1013.4	83	53	68.0	- 2.0	90	8	41	17	1	0	36	35	0.30	- 0.65	0.24	5	5	0.0	0	1.6	20	36	E	29	24	4	2	1.9	90
CLAYTON	4969			79	49	63.9	- 2.1	88	7	39	17	0	0			0.73	- 0.92	0.55	4		0.0	0						18	12	0	2.5	
RATON	6379			77	42	59.4	- 2.5	85	7	29	17	0	2			0.48	- 1.20	0.38	4		T	0						16	9	5	3.9	
ROSWELL	3617	892.0		87	47	67.2	- 2.5	98	20	36	18	10	0	45	50	0.10	- 1.72	0.08	2	2	0.0	0	2.9	15	26	NW	6	20	9	1	2.6	86
NEW YORK																																
ALBANY	275	1008.1	1018.9	78	50	63.7	2.1	85	25+	40	29	0	0	54	73	1.49	- 2.09	0.61	5	4	0.0	0	1.9	23	24	W	27+	10	11	9	5.3	65
BINGHAMTON	1590	961.1	1019.7	71	53	61.8	2.3	80	24	41	29	0	0	54	78	5.49	2.54	3.40	9	4	0.0	0	2.0	22	25	SW	2	9	11	10	5.4	72
BUFFALO	705	992.6	1017.9	74	58	66.1	4.7	84	20+	45	29	0	0	55	70	5.63	2.50	1.97	13	7	0.0	0	4.6	22	29	SW	30+	8	12	10	5.6	68
J.F. KENNEDY	13	1018.0	1018.9	78	62	70.1	2.3	85	22	54	30	0	0	57	67	2.54	- 1.62	1.56	4	2	0.0	0	0.7	20	31	11	11	15	11	4	3.9	
NEW YORK U	132	1014.9	1018.2	79	62	70.6	2.1	87	25+	53	29	0	0	55	63	1.97	- 1.90	0.80	5	0	0.0	0	0.5	28	21	NW	12+					77
NEW YORK LA GUARDIA	11	1016.9	1018.7	78	63	70.6	1.8	89	22	55	30	0	0	54	60	1.84	- 2.08	0.71	5	2	0.0	0	0.9	34	37	NE	11	13	12	5	4.1	
ROCHESTER	547	998.0	1018.1	76	54	64.8	2.4	86	24+	43	29	0	0	56	77	1.86	- 0.67	0.44	11	5	0.0	0	3.4	23	28	SW	30	9	10	11	5.5	67

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

SEPTEMBER 1968

State and Station	Elevation (ground)	Pressure: Station ∅	Pressure: Sea level	Temperature: Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	No. of days: Max. 90°F. or above	No. of days: Min. 32°F. or below	Average dew point	Average relative humidity	Precipitation: Total	Departure from normal	Greatest in 24 hours	No. of days: .01 inch or more	No. of days: With thunderstorms	Snow, Sleet: Total	Snow, Sleet: Maximum depth on ground	Wind: Resultant speed	Resultant direction	Fastest mile: Speed	Fastest mile: Direction	Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	Ft.	Mb.	Mb.	°F.	°F.	°F.	°F.	°F.		°F.				°F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
NEW YORK																																
SYRACUSE	410	1003.7	1018.4	75	55	64.8	2.4	83	24	45	8	0	0	56	75	3.43	0.59	1.92	9	4	0.0	0	1.3	22	26	W	30+	12	10	8	4.7	68
NORTH CAROLINA																																
ASHEVILLE	2140	943.8	1019.5	76	52	64.1	- 1.8	82	24	43	14	0	0	58	86	2.64	- 0.98	1.16	9	3	0.0	0	0.7	36	18	34	12+	9	8	13	5.8	60
CAPE HATTERAS R	7	1018.0	1018.4	80	67	73.0	- 1.1	85	6	54	30	0	0	65	78	6.47	0.58	3.31	5	6	0.0	0	6.0	4	29	SE	10	10	9	11	5.4	
CHARLOTTE	736	991.2	1018.4	82	61	71.4	- 1.5	87	25+	53	13	0	0	59	70	1.46	- 2.03	0.92	5	2	0.0	0	2.8	4	17	NE	7	13	6	11	4.9	79
GREENSBORO	897	987.8	1019.1	82	56	69.4	- 0.7	88	25+	50	13	0	0	55	64	0.58	- 3.08	0.30	5	0	0.0	0	2.2	3	26	NW	26	12	10	8	4.9	74
RALEIGH	434	1002.7	1018.5	84	58	70.9	- 0.3	89	3	51	14	0	0	59	71	1.77	- 2.08	1.54	3	2	0.0	0	2.7	6	23	30	6	14	11	5	4.4	75
WILMINGTON	28	1016.6	1017.9	84	63	73.6	- 1.6	90	6+	57	20	2	0	65	80	1.24	- 5.05	0.85	4	2	0.0	0	3.6	6	17	NE	22+	7	12	11	5.7	63
NORTH DAKOTA																																
BISMARCK	1647	953.9	1013.4	70	45	57.5	- 1.2	89	14	34	6	0	0	45	66	1.20	0.01	0.54	8	1	0.0	0	1.7	26	38	NW	23	11	9	10	5.6	78
FARGO	896	980.7	1013.3	71	48	59.3	0.5	89	14	35	27	0	0	50	74	2.23	0.75	0.93	11	6	0.0	0	1.5	21	29	NW	24+	9	11	10	5.5	68
WILLISTON	1899	944.1	1012.1	72	44	58.0	0.8	88	14	31	22	0	1	45	65	0.85	- 0.27	0.50	7	2	0.0	0	2.6	26	33	NW	23	11	8	11	5.4	72
OHIO																																
AKRON	1208	974.6	1018.6	76	56	66.4	2.5	88	4	44	29	0	0	56	74	3.25	0.63	1.07	11	7	0.0	0	4.0	20	21	14	10+	7	15	8	5.7	
CINCINNATI OBS	761			78	57	67.5	- 1.5	89	22	47	26	0	0			3.00	0.29	0.93	11		0.0	0			16	SE	4					60
CLEVELAND	777	989.2	1018.3	74	54	63.9	- 0.3	86	4	40	29	0	0	56	78	3.36	0.46	0.90	12	6	0.0		4.2	20	27	S	18	8	12	10	5.7	64
COLUMBUS	812	988.8	1018.5	76	55	65.5	- 0.4	86	23	42	30	0	0	55	71	1.77	- 0.88	0.72	9	4	0.0	0	2.5	17	27	W	24	10	9	11	6.0	59
DAYTON	1002	982.4	1018.1	75	56	65.5	- 1.3	85	23	45	26+	0	0	55	72	2.74	0.15	0.76	10	3	0.0	0	3.5	19	23	W	2	11	7	12	5.7	65
MANSFIELD	1295			76	57	66.4	3.1	86	23+	44	29	0	0	54	68	2.26	- 0.72	1.02	9	3	0.0	0	5.4	21	18	20	20+	11	9	10	5.4	
TOLEDO	669	992.9	1017.8	77	53	65.2	1.8	88	4	40	29+	0	0	56	77	1.52	- 0.61	0.57	9	3	0.0	0	3.6	22	22	SE	17	8	9	13	6.0	63
YOUNGSTOWN	1178	976.3	1018.8	75	54	64.5	2.0	85	4	39	29	0	0	55	76	2.88	- 0.01	1.45	12	7	0.0	0	2.9	19	21	34	22	6	15	9	5.7	
OKLAHOMA																																
OKLAHOMA CITY	1285	969.5	1015.5	83	58	70.5	- 3.3	92	19	46	18	3	0	57	68	2.64	- 0.38	1.83	7	4	0.0	0	3.9	17	30	SW	18	17	7	6	3.7	79
TULSA	650	991.9	1015.7	85	58	71.9	- 1.9	94	8	48	18+	6	0	56	64	2.80	- 1.21	2.45	6	3	0.0	0	5.2	19	29	E	4	17	6	7	4.0	78
OREGON																																
ASTORIA	8	1017.3	1018.1	66	50	57.9	- 0.1	86	5	41	28+	0	0	51	80	4.60	1.47	1.10	13	2	0.0	0	2.0	22	21	18	14	9	5	16	6.5	
BURNS U	4151	875.0	1017.1	74	41	57.4	- 1.4	88	9	25	22	0	4	35	47	0.03	- 0.47	0.02	2		0.0	0	3.5	31				13	12	5	4.2	
EUGENE	359	1004.1	1017.6	75	50	62.2	0.7	93	5	40	22	1	0	52	77	2.57	1.30	0.88	7	1	0.0	0	1.5	30	22	36	28	5	14	11	6.4	
MEACHAM	4050	878.4	1016.6	65	45	55.0	- 0.7	85	9	32	19	0	1			2.14	0.68	0.70	8		2.3	T			21	25	14	12	7	11	5.2	
MEDFORD	1298	969.5	1016.5	85	51	68.2	4.0	100	5	38	22	13	0	46	52	0.32	- 0.28	0.14	5	0	0.0	0	2.0	31	20	35	19	16	8	6	3.7	
PENDLETON	1482	963.1	1016.3	79	53	65.9	1.7	94	8+	40	20	4	0	43	49	0.57	- 0.06	0.27	6	0	0.0	0	4.9	26	29	26	14+	11	10	9	4.8	
PORTLAND	21	1016.3	1017.4	71	52	61.5	- 0.7	92	5	44	27	1	0	54	79	2.20	0.57	1.08	10	0	0.0	0	1.8	30	33	SW	14	8	5	17	6.7	50
SALEM	196	1010.2	1017.6	73	48	60.5	- 2.0	93	5	40	21	1	0	52	78	2.48	1.10	1.03	9	1	0.0	0	0.6	28	21	35	28	7	9	14	6.1	
SEXTON SUMMIT R	3836	885.9	1015.9	71	51	60.8	1.1	85	5	35	20+	0	0			0.90	- 0.35	0.41	5		0.1	T			33	10	28	18	7	5	3.0	
PACIFIC AREA																																
JOHNSTON	7	1011.2	1011.9	87	77	82.1	0.5	88	28+	72	23	0	0	74	76	2.68	0.33	1.14	17	0	0.0	0	11.1	9	48	E	22	5	7	18	7.4	63
KOROR R	94	1005.8	1009.5	88	76	82.1	1.1	91	27	72	8	4	0	75	82	12.25	- 2.08	3.03	18	5	0.0	0	4.6	24	32	SW	25	0	5	25	9.1	65
KWAJALEIN	8	1008.8	1009.5	88	78	82.9	1.0	90	17+	73	24	3	0	76	78	7.25	- 2.94	1.53	21	2	0.0	0	2.5	13	30	17	29+	0	2	28	9.5	
MAJURO	10	1009.8	1010.3	87	77	81.8	1.4	89	13	72	19	0	0	74	77	9.77	- 2.29	2.22	18	1	0.0	0	1.7	11	23	N	26+	5	9	16	7.2	70
PAGO PAGO	12	1012.2	1012.5	84	74	79.1		89	6	69	4	0	0	73	84	8.01		4.86	21	1	0.0	0	8.5	10	30	SE	1	4	15	11	6.3	48
PONAPE R	123	1004.4	1009.8	88	72	79.9	0.4	91	6	70	27+	6	0	74	87	17.58	1.77	3.59	20	5	0.0	0	1.4	16	16	NE	19+	2	7	21	8.2	60
TAGUAC GUAM R	361			85	72	78.5	- 0.8	88	14+	67	27+	0	0			11.82	- 1.54	2.54	26		0.0	0			24	W	3	0	8	22	8.5	47
TRUK MOEN ISLAND	5	1009.1	1009.5	88	74	80.9	0.5	90	5	71	4	1	0	75	83	12.37	- 0.21	4.14	21	2	0.0	0	1.4	22	27	N	30+	1	8	21	8.3	73
WAKE	11	1010.2	1010.4	88	78	82.9	0.4	90	29+	74	15	5	0	75	79	3.69	- 1.55	0.67	19	1	0.0	0	9.0	11	37	S	25	2	12	16	7.5	49
YAP R	44	1006.8	1008.8	87	75	80.8	- 0.6	89	19	72	1	0	0	76	84	10.66	- 3.35	2.66	24	2	0.0	0	4.4	24	24	SW	5+	0	5	25	9.0	53
PENNSYLVANIA																																
ALLENTOWN	387	1005.1	1019.0	80	53	66.5	1.8	89	25	43	29	0	0	55	71	2.64	- 1.11	0.88	5	1	0.0	0	1.1	26	25	26	2	14	11	5	4.0	
ERIE	731	991.5	1018.2	74	58	65.9	2.6	82	24+	45	29	0	0	55	71	2.93	- 0.63	0.68	13	7	0.0	0	5.6	20	23	27	30	5	16	9	6.0	
HARRISBURG	338	1006.4	1019.1	79	57	67.6	0.7	88	4	45	29	0	0	57	72	5.18	2.36	3.74	5	2	0.0	0	1.8	25	26	NW	2	11	14	5	4.4	77
PHILADELPHIA	5	1017.6	1018.6	81	58	69.4	2.7	90	25+	46	30	2	0	55	65	0.44	- 3.02	0.26	3	1	0.0	0	0.9	29	25	NW	2	14	11	5	4.1	72
PITTSBURGH	1137	975.3	1019.0	75	54	64.8	0.6	86	4	40	29	0	0	52	66	3.08	0.54	1.41	8	2	0.0	0	2.1	22	18	27	30+	6	15	9	6.1	73
READING U	266			80	59	69.5	2.0	88	22+	49	29	0	0			3.86	0.54	2.51	7		0.0	0			33	SE	5	14	11	5	3.9	69

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	No. of days: Max. 90° F. or above	No. of days: Min. 32° F. or below	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	No. of days: .01 inch or more	No. of days: With thunderstorms	Snow, Sleet: Total	Snow, Sleet: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Fastest mile: Speed	Fastest mile: Direction	Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	No. of days (sunrise to sunset): Partly cloudy, 4-7	No. of days (sunrise to sunset): Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	Ft.	Mb.	Mb.	°F.	°F.	°F.	F.	F.		F.				F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
PENNSYLVANIA																																
SCRANTON	930	985.4	1019.6	75	53	64.4	1.9	83	25+	42	29	0	0	55	76	4.20	1.23	2.12	8	3	0.0	0	1.7	16	34	S	2	12	14	4	4.3	71
WILLIAMSPORT	524	1000.3	1019.3	77	52	64.5	0.4	83	4	40	29	0	0	58	85	6.41	3.14	3.07	8	3	0.0	0	1.9	27	30	17	22	9	16	5	5.2	
RHODE ISLAND																																
BLOCK ISLAND	110			73	58	65.3	1.3	81	19	47	30	0	0			0.65	- 2.55	0.39	5		0.0	0						14	9	7	4.5	
PROVIDENCE	51	1016.3	1018.7	76	54	64.8	1.6	86	22	43	30+	0	0	53	68	1.14	- 2.38	0.85	3	0	0.0	0	0.8	31	29	14	11	13	10	7	4.6	66
SOUTH CAROLINA																																
CHARLESTON	40	1015.6	1017.3	85	65	75.1	- 0.5	91	6	57	14	2	0	66	78	1.66	- 4.17	0.98	6	6	0.0	0	3.9	6	33Y	NW	10	7	13	10	6.0	50
CHARLESTON U	9			83	70	76.2	- 0.9	92	6	63	22	1	0			3.15	- 3.17	2.31	5		0.0	0			44	SW	11					
COLUMBIA	213	1009.8	1018.0	85	60	72.4	- 2.9	93	3	49	13	4	0	52	77	2.40	- 1.91	1.69	4	2	0.0	0	2.1	6	16	11	19	12	8	10	5.1	67
GNVLE-SPARTANBURG	957	984.4	1018.7	81	59	69.8	- 2.9	87	25+	51	14	0	0	58	73	3.04	- 0.84	1.51	7	3	0.0	0	3.9	3	19	E	9	11	7	12	5.4	58
SOUTH DAKOTA																																
ABERDEEN	1296	966.8	1013.3	72	45	58.9	- 1.7	91	14	33	27	1	0	48	69	2.82	1.42	0.89	7	5	0.0	0	1.0	20	31	30	22+	10	10	10	5.4	
HURON	1282	967.2	1013.5	73	47	59.7	- 2.2	89	14	36	27	0	0	50	73	2.66	1.13	0.88	9	5	0.0	0	1.9	19	38	S	14	8	11	11	5.7	65
RAPID CITY	3162	903.8	1013.6	75	45	59.8	- 1.8	91	14	36	23	2	0	42	56	0.89	- 0.06	0.40	6	3	0.0	0	2.7	32	43	NW	7	14	9	7	4.5	68
SIOUX FALLS	1418	962.8	1013.8	73	49	61.0	- 0.8	88	14	36	27	0	0	49	68	4.01	1.40	1.42	10	9	0.0	0	1.5	22	40	29	3	12	7	11	5.1	
TENNESSEE																																
BRISTOL	1507	965.8	1019.4	80	54	67.1	- 2.0	87	24+	44	13	0	0	54	70	0.93	- 1.69	0.46	8	3	0.0	0	0.9	3	16	29	10+	8	10	12	5.7	
CHATTANOOGA	665	993.2	1017.6	84	61	72.5	- 1.3	94	3	50	27+	3	0	61	73	2.82	- 0.28	1.10	8	2	0.0	0	0.7	6	22	NW	26	10	9	11	5.7	58
KNOXVILLE	980	983.1	1017.8	80	58	69.1	- 3.1	88	3	51	14+	0	0	58	72	2.53	- 0.01	1.42	8	1	0.0	0	2.2	4	20	S	18	7	9	14	6.0	69
MEMPHIS	258	1006.8	1016.8	83	60	71.3	- 2.6	90	2	50	26	1	0	59	69	5.58	2.76	2.74	9	5	0.0	0	1.8	14	47	SE	9	17	5	8	4.1	71
NASHVILLE	590	995.9	1017.5	83	57	69.9	- 2.9	92	3	47	12	2	0	59	73	2.76	- 0.11	0.72	6	2	0.0	0	2.0	17	26	SE	17	10	12	8	5.2	62
OAK RIDGE R	905			80	56	68.1	- 2.9	87	8+	46	27	0	0			3.47	0.17	2.07	9		0.0	0			21Y		10	8	8	14	6.6	
TEXAS																																
ABILENE	1762	954.3	1014.8	86	62	74.4	- 1.5	97	8	50	26	8	0	54	53	0.53	- 1.54	0.43	4	1	0.0	0	5.0	17	27	NE	16	14	7	9	4.2	83
AMARILLO	3604	892.0	1012.9	84	55	69.1	- 2.7	95	20+	46	18	5	0	48	52	0.62	- 1.27	0.48	5	5	0.0	0	7.0	19	36	W	20	22	7	1	2.1	91
AUSTIN	597	993.6	1015.2	86	66	76.0	- 3.1	94	4+	54	18	10	0	63	69	3.42	- 0.02	1.86	11	7	0.0	0	2.0	12	28	N	17	8	16	6	5.1	64
BROWNSVILLE	19	1013.2	1013.6	89	74	81.6	0.4	93	17+	64	27	17	0	73	78	4.48	- 0.51	1.66	8	8	0.0	0	3.1	10	45	NE	17	7	14	9	6.1	69
CORPUS CHRISTI	41	1012.9	1014.5	87	72	79.1	- 1.7	94	4	61	27	7	0	71	79	6.34	1.94	2.55	10	5	0.0	0	4.8	10	39	N	5	6	10	14	6.7	51
DALLAS	481	998.3	1015.4	86	65	75.9	- 2.0	98	16+	55	26	8	0	60	62	2.31	- 0.51	1.00	9	3	0.0	0	4.1	14	26	NW	17+	13	7	10	4.9	71
DEL RIO	1026	978.7	1014.1	88	66	77.4	- 2.5	100	16	36	28+	13	0	63	65	1.20	- 1.41	0.77	4	3	0.0	0	5.9	12	21	16	20+	9	9	12	5.7	
EL PASO	3918	882.2	1012.0	87	57	72.4	- 2.1	95	8	45	27+	8	0	43	36	0.53	- 0.61	0.46	2	2	0.0	0	1.3	18	32	NE	10	27	3	0	1.5	96
FORT WORTH	537	995.3	1015.6	87	62	74.6	- 3.8	100	16	50	18	10	0	62	69	2.53	- 0.01	1.46	9	4	0.0	0	2.6	16	29	33	17	13	8	9	4.7	
GALVESTON U	7			84	74	79.0	- 1.1	87	30+	66	26	0	0			3.95	- 1.14	1.34	8		0.0	0			40	W	15					65
HOUSTON	50	1013.2	1015.2	88	70	78.6	- 0.6	93	16	60	19	9	0	67	73	3.87	- 0.39	1.61	11	9	0.0	0	3.0	8	28	36	17	8	10	12	5.7	58
LUBBOCK	3254	904.5	1014.5	81	52	66.7	- 4.7	92	20+	44	25	3	0	50	61	0.67	- 1.69	0.44	6	5	0.0	0	4.2	18	23	35	16	20	4	6	3.0	
MIDLAND	2851	917.0	1013.9	86	59	72.6	- 2.8	96	20+	51	28+	7	0	50	50	1.39	- 0.40	1.05	4	1	0.0	0	4.3	15	26	4	17	21	1	8	3.0	
PORT ARTHUR	16	1015.2	1015.8	86	67	76.6	- 1.6	91	8+	58	28+	5	0	67	75	6.01	1.13	3.36	8	6	0.0	0	2.8	7	56	SW	17	8	8	14	5.6	65
SAN ANGELO	1903	948.5	1014.2	87	61	74.4	- 3.9	99	8	46	27	11	0	57	62	1.81	- 0.85	1.22	4	2	0.0	0	4.6	16	24	20	19+	16	6	8	4.4	
SAN ANTONIO	788	987.5	1015.1	87	65	76.0	- 2.6	98	16	52	27+	11	0	63	70	2.99	- 0.50	1.77	8	3	0.0	0	2.4	11	29	N	17	7	16	7	5.8	63
VICTORIA	104	1010.8	1014.8	88	69	78.4	- 0.7	95	16+	57	27	12	0	68	76	4.28	0.05	1.25	13	7	0.0	0	3.4	9	40Y	N	5	6	10	14	6.5	
WACO	501	997.6	1015.4	87	66	76.3	- 2.7	97	3	55	27	9	0	62	66	5.61	2.84	1.90	9	4	0.0	0	2.8	15	23	34	24	10	10	10	5.3	
WICHITA FALLS	994	978.7	1014.8	88	59	73.7	- 3.7	104	8	50	12+	11	0	57	61	2.21	- 0.12	1.33	5	5	0.0	0	4.7	14	30	35	16	17	6	7	3.8	
UTAH																																
MILFORD	5028	847.3		79	43	61.0	- 2.1	93	7	25	22	5	5			0.12	- 0.31	0.09	2		0.0	0						18	7	5	3.1	
SALT LAKE CITY	4220	872.7	1015.3	77	46	61.4	- 3.0	92	10	31	23	1	2	36	44	0.56	0.03	0.50	4	4	0.0	0	2.5	17	38	S	14	12	12	6	4.7	85
WENDOVER	4237	872.0	1015.7	76	52	63.5	- 3.2	90	13+	36	21	2	0			0.06	- 0.26	0.06	1		0.0	0										
VERMONT																																
BURLINGTON	332	1005.8	1018.1	72	50	61.0	2.6	83	21	37	29	0	0	52	76	2.06	- 1.25	1.13	9	1	0.0	0	1.3	19	25	NW	12	10	10	10	5.5	75
VIRGINIA																																
LYNCHBURG	916			80	56	68.0	- 0.7	89	24	45	13	0	0			1.74	- 1.62	1.08	4		0.0	0			17	W	11+	16	4	10	4.2	73
NORFOLK	22	1018.0	1018.8	80	63	71.5	- 1.1	89	25	55	23+	0	0	61	71	1.51	- 2.71	1.13	7	3	0.0	0	2.9	4	21	SW	26+	13	8	9	5.0	83

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	No. of days: Max. 90°F. or above	No. of days: Min. 32 F. or below	Average dew point	Average relative humidity	Precipitation: Total	Departure from normal	Greatest in 24 hours	No. of days: .01 inch or more	No. of days: With thunderstorms	Snow, Sleet: Total	Snow, Sleet: Maximum depth on ground	Wind: Resultant speed	Resultant direction	Fastest mile: Speed	Fastest mile: Direction	Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	Ft.	Mb.	Mb.	F.	°F.	°F.	F.	F.		°F.				°F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
VIRGINIA																																
RICHMOND	164	1013.2	1019.1	84	58	70.9	0.7	92	25	49	13	3	0	58	70	1.78	- 1.87	1.44	3	2	0.0	0	1.3	7	15	W	11	15	8	7	4.5	76
ROANOKE	1149	977.7	1019.5	79	54	66.7	- 2.4	88	24+	46	13	0	0	53	67	0.44	- 2.82	0.24	4	0	0.0	0	1.0	28	21	30	6	13	8	9	4.6	
WALLOPS ISLAND	9			78	62	69.9		88	4	53	30	0	0			2.35		1.31	5		0.0	0			32Y	SSE	26+					
WASHINGTON																																
OLYMPIA	195	1010.5	1017.7	69	47	57.7	- 0.8	83	5	35	20	0	0	51	83	2.51	0.42	0.97	9	0	0.0	0	2.8	21	21	22	14+	7	7	16	6.8	
QUILLAYUTE	179	1010.2	1017.8	66	47	56.2	- 1.0	86	5	36	20	0	0	52	87	8.46	3.78	4.13	13	1	0.0	0	1.2	22	19	S	16	6	9	15	6.7	43
SEATTLE TACOMA	400	1001.4	1017.7	66	52	59.1	- 0.8	80	5	45	28	0	0	52	81	1.93	- 0.12	0.72	10	1	0.0	0	1.3	21	28	21	15	6	6	18	7.2	54
SPOKANE	2356	931.9	1014.9	72	46	58.9	- 2.0	86	9	35	20+	0	0	43	60	0.63	- 0.12	0.30	7	0	0.0	0	3.3	21	34	SW	14	6	11	13	6.1	65
STAMPEDE PASS R	3958	881.1		58	44	50.7	- 1.2	76	5	32	18	0	1			8.99	4.60	2.41	13		1.8	T						7	6	17	6.8	
WALLA WALLA U	949			77	55	65.7	- 0.3	92	6	45	20	3	0			1.45	0.67	0.65	7		0.0	0			25	NW	15	12	8	10	5.2	67
YAKIMA	1052	977.3	1015.6	76	47	61.0	- 0.3	86	9+	35	20	0	0	44	56	0.32	- 0.03	0.11	4	0	0.0	0	4.5	29	25	30	18+	13	7	10	4.7	
WEST INDIES																																
SAN JUAN P.R.	13	1012.5	1015.0	88	75	81.8	1.3	91	28	73	23	4	0	76	86	5.26	- 1.50	1.45	20	8	0.0	0	5.3	9	25	E	18	4	15	11	6.4	78
SWAN ISLAND	28			87	78	82.7	- 0.3	90	5+	72	7	3	0			7.80	2.61	3.43	17		0.0	0						0	16	14	7.4	
WEST VIRGINIA																																
BECKLEY	2504	931.9	1019.6	71	51	61.2	- 2.6	82	24	39	27	0	0	53	77	2.20	- 0.92	0.94	10	2	0.0	0	3.4	16	28	14	18	11	7	12	5.6	
CHARLESTON	939	984.8	1018.8	77	56	66.3	- 1.9	85	3	45	27	0	0	58	82	3.32	0.40	1.92	10	1	0.0	0	1.1	14	18	29	9	5	14	11	6.1	
ELKINS	1970	949.5		74	48	61.3	- 1.3	83	24	34	30	0	0			3.01	- 0.06	1.29	7		0.0	0			16	16	18+	4	12	14	7.0	
HUNTINGTON	827	989.2	1019.0	78	56	67.0	- 1.2	86	24+	45	28+	0	0	58	79	1.14	- 1.40	0.40	7	1	0.0	0	1.5	17	16	25	10	10	9	11	5.6	
PARKERSBURG U	615			78	57	67.6	- 0.5	87	23	44	30	0	0			3.06	0.35	1.25	8		0.0	0			21	SE	18					59
WISCONSIN																																
GREEN BAY	682	989.5	1015.0	73	51	61.6	1.1	87	3	40	29+	0	0	52	75	3.31	0.39	1.17	13	5	0.0	0	3.2	22	25	SE	4	8	12	10	6.1	47
LA CROSSE	651	990.5	1014.8	72	52	62.1	- 0.1	88	3	39	26	0	0	55	81	5.10	1.62	2.25	10	4	0.0	0	2.4	22	23	22	15+	9	8	13	6.1	
MADISON	858	983.7	1015.1	72	48	60.1	- 0.9	86	3	37	28	0	0	53	79	4.45	1.13	1.26	12	4	0.0	0	3.4	22	29	SE	19	10	7	13	5.8	63
MILWAUKEE	672	990.5	1015.6	73	54	63.5	3.2	88	3	41	28	0	0	56	79	3.36	0.64	1.22	12	5	0.0	0	4.4	21	33	SW	6	11	7	12	5.5	64
WYOMING																																
CASPER	5338	838.1	1014.3	74	39	56.5	- 3.2	88	11	31	29+	0	5	32	45	0.30	- 0.60	0.14	6	4	T	T	6.2	24	46	29	14	10	11	9	4.9	
CHEYENNE	6126	813.8	1014.5	73	42	57.6	- 1.0	87	11	34	17	0	0	30	39	0.20	- 0.90	0.18	2	1	0.0	0	6.3	30	48	N	7	14	10	6	4.1	72
LANDER	5563	830.0	1014.3	72	42	56.9	- 2.1	85	1	29	22	0	3	33	45	0.48	- 0.55	0.21	5	5	0.0	0	3.5	26	46	W	2	11	11	8	4.9	78
SHERIDAN	3964	878.8	1014.8	71	40	55.9	- 2.9	84	1	30	22	0	2	42	62	2.12	0.95	1.20	7	6	0.0	0	1.6	31	42	NW	12	13	7	10	4.8	73

Data from airport unless otherwise specified. U indicates Urban, R indicates Rural, sites.

Precipitation data in column headed "Greatest in 24 hours" are computed on a 24-hour basis without regard to calendar day - data may include precipitation with a measurable amount from the last day of the previous month or the first day of the following month.

Wind directions under resultant direction are in tens of degrees.

Value entered in column "Fastest Mile" is the highest observed 1-minute wind speed when the direction is in tens of degrees. These stations are not equipped with a recording anemometer from which "Fastest Mile" data can be evaluated.

B Number of days maximum 70°F. or above for Alaskan Stations.
Y Peak Gust.
\+ And also on an earlier date or dates.
Ø Station pressures apply to elevations shown in the "Elevations - Station Pressure" table of the annual issue of this publication.

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Date	Temperature: Lowest	Date	No. of days: Max 32.2 °C or above	No. of days: Min 0 C or lower	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	No. of days: .25 mm or more	No. of days: With thunderstorms	Snow, Sleet: Total	Snow, Sleet: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Fastest mile (1.6 kilometers): Speed	Fastest mile: Direction	Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	M.	Mb.	Mb.	C.	C.	C.	C.	C.		C.				C.	%	Mm.	Mm.	Mm.			Mm.	Mm.	M.p.s.		M.p.s.							%
ALABAMA																																
BIRMINGHAM	189	994.9	1017.1	28.9	15.6	22.3	-2.3	33.3	4	9.4	12	2	0	16.1	73	87	2	61	9	2	0	0	1.1	7	11.6	NW	18+	10	8	12	5.3	73
HUNTSVILLE	190	994.9	1017.6	28.3	15.6	21.9	-1.7	31.7	4+	8.9	12	0	0	16.1	74	105	27	41	7	4	0	0	1.0	9	19.2	23	4	11	7	12	5.1	
MOBILE	64	1008.1	1015.9	31.1	20.0	25.6	0.1	33.9	7	15.0	19	11	0	17.8	68	156	- 3	91	8	5	0	0	0.9	7	13.9	23	9	10	10	10	5.4	
MONTGOMERY	56	1009.5	1016.6	31.1	17.2	24.2	-0.8	33.9	4	12.2	13+	10	0	16.1	67	27	- 74	22	3	0	0	0	0.6	4	8.0	W	18	11	8	11	5.4	68
ALASKA												B																				
ANCHORAGE	35	1001.4	1006.1	12.2	4.4	8.4	-0.5	17.8	3+	- 3.3	23	0	4	2.2	66	27	- 37	11	9	0	33	T	0.5	2	7.2	17	27	6	10	14	6.6	54
ANNETTE	34	1009.8	1013.8	15.0	8.9	11.9	-0.4	18.9	6	3.9	30	0	0	8.3	84	386	135	57	26	0	0	0	2.8	15	20.1	13	9	1	6	23	8.6	
BARROW	9	1011.9	1012.4	2.8	- 1.7	0.4	1.3	9.4	1	-14.4	30	0	20	- 1.7	85	15	- 1	3	15	0	137	102	0.5	32	15.6	24	22	0	2	28	9.3	
BARTER ISLAND	12			2.8	- 2.2	0.2	0.1	8.9	2	- 8.9	26	0	26			8	- 16	4	4	0	89	T			17.0	9	27	4	3	23	8.5	
BETHEL	38	1003.7	1009.4	10.6	0.6	5.6	-1.4	18.3	3	- 6.1	30+	0	15	1.7	79	11	- 55	4	6	0	T	T	2.4	36	13.4	3	26	4	10	16	7.3	
COLD BAY	29	1005.8	1009.6	11.1	5.6	8.2	-0.4	15.6	4+	0.0	30+	0	4	5.0	79	65	- 45	12	18	0	T	T	3.9	30	16.1	16	30+	1	8	21	8.4	
FAIRBANKS	133	991.9	1009.1	11.7	0.0	6.0	-0.4	20.0	9	- 8.9	22	0	14	- 1.1	66	4	- 24	2	6	0	23	T	0.9	36	8.0	6	4	8	8	14	6.4	
JUNEAU	4	1009.8	1010.6	11.1	6.1	8.7	-0.7	16.1	14	1.1	23	0	0	7.8	96	258	88	44	25	0	0	0	3.1	11	17.0	11	27	0	1	29	9.7	9
KING SALMON	15	1003.7	1005.9	11.7	1.1	6.3	-2.6	18.3	4+	- 7.8	30	0	11	1.1	71	69	- 10	22	14	0	8	T	1.5	3	21.5	8	26	4	9	17	7.2	
KOTZEBUE	3	1011.2	1011.7	7.2	1.1	4.2	-0.7	15.0	10	- 5.6	27	0	10	0.6	76	11	- 20	7	8	0	30	25	3.2	35	14.3	36	28	9	6	15	6.0	
MC GRATH	105	996.3	1009.2	10.6	- 1.1	4.6	-2.0	18.9	3	-11.1	30	0	18	- 2.2	64	11	- 55	4	10	1	64	51	1.6	34	7.6	2	26	4	9	17	7.2	
NOME	4	1010.8	1011.6	8.9	- 0.6	4.2	-1.3	18.3	5	- 8.9	25	0	17	- 3.9	58	10	- 58	4	8	0	10	T	2.3	36	14.3	3	26	6	10	14	6.5	47
ST. PAUL ISLAND	7	1011.5	1012.3	8.9	3.3	6.1	-0.9	11.7	6+	- 3.9	29	0	2	4.4	87	47	- 31	12	21	0	T	T	3.9	34	19.2	3	26	0	8	22	8.6	
SHEMYA	37	1014.6	1018.3	10.6	6.1	8.2	-0.8	14.4	8	1.7	26	0	0	6.1	88	57	T	17	15	0	T	0	0.2	8	19.7	7	25	3	4	23	8.1	
YAKUTAT	9	1006.8	1007.8	11.1	3.3	7.4	-2.2	16.1	1	- 3.9	23+	0	5	5.6	92	456	36	73	23	0	0	0	2.1	11	17.4	13	27	3	0	27	8.8	
ARIZONA																																
FLAGSTAFF	2135	790.0	1015.6	23.3	3.3	13.3	-1.4	27.8	8	- 2.2	25	0	7	- 1.1	41	1	- 39	1	2	7	0	0	1.1	20	13.0	21	20	22	6	2	2.4	
PHOENIX	340	970.9	1008.8	37.2	20.0	28.7	0.4	41.7	9+	12.2	23	30	0	7.2	28	0	- 19	0	0	0	0	0	0.9	13	17.0Y	S	29	28	2	0	0.7	99
TUCSON	788	923.8	1009.7	34.4	19.4	27.1	0.2	38.9	9	12.8	23	27	0	7.2	31	T	- 25	T	0	0	0	0	1.9	15	13.4	E	12	28	2	0	1.4	92
WINSLOW	1492	852.0	1013.2	30.0	10.0	19.9	-1.6	35.0	9	2.2	24	7	0	- 1.1	28	6	- 17	6	2	2	0	0	1.6	21	13.0	21	14	23	7	0	1.6	
YUMA	59	1001.4	1008.3	37.8	20.6	29.4	-0.8	44.4	9	13.3	23	28	0	9.4	33	0	- 10	0	0	0	0	0	0.8	19	12.5	N	22	29	1	0	0.5	100
ARKANSAS																																
FORT SMITH	136	1000.0	1016.3	30.0	13.9	22.1	-1.7	36.1	8	8.3	26	11	0	13.3	64	73	- 20	29	7	3	0	0	0.3	10	15.2	W	16	15	9	6	4.2	78
LITTLE ROCK	78	1006.8	1016.4	28.9	14.4	21.5	-2.0	34.4	2	9.4	26+	3	0	15.0	71	152	70	70	9	3	0	0	0.5	19	13.9	E	8	17	2	11	4.3	70
CALIFORNIA																																
BAKERSFIELD	145	994.9	1012.3	32.8	17.2	24.9	0.2	38.3	2	10.0	21+	20	0	8.3	38	0	- 2	0	0	0	0	0	1.3	32	9.4	34	29	28	2	0	0.8	
BISHOP	1252	873.4		31.7	8.3	20.0	-0.1	37.8	1	1.7	21	18	0			0	- 5	0	0		0	0						24	4	2	1.8	
BLUE CANYON	1609			23.3	12.2	17.7	0.5	27.2	25+	2.8	20	0	0			2	- 14	2	2		0	0			9.8	11	29	23	4	3	2.0	
EUREKA U	13			17.2	11.1	14.2	0.6	21.7	25+	6.1	21	0	0			15	- 1	15	3		0	0			12.5	N	21	10	6	14	5.6	54
FRESNO	100	1000.3	1012.1	33.3	12.8	23.2	-0.3	37.8	2+	5.0	22	21	0	8.9	46	0	- 3	0	0	0	0	0	2.0	30	9.4	NW	13	28	2	0	1.0	99
LONG BEACH	10	1011.5	1012.8	28.3	16.1	22.1	0.3	38.3	25	12.2	22	8	0	12.8	64	T	- 2	T	0	0	0	0	0.9	23	7.6	27	23	15	10	5	3.6	
LOS ANGELES	32	1008.5	1012.1	23.9	17.2	20.3	0.1	35.0	24	13.9	23+	1	0	13.9	72	0	- 4	0	0	0	0	0	2.1	23	10.3Y	W	4	14	8	8	4.3	
LOS ANGELES U	82			27.8	18.3	23.0	0.8	37.2	24	14.4	22+	7	0			1	- 5	1	1		0	0			6.3	W	24	16	8	6	3.5	68
MT SHASTA R	1080			25.6	6.1	16.0	-0.4	31.7	5+	0.6	21+	0	0			4	- 18	2	2		0	0										
OAKLAND	2	1014.2	1014.4	23.3	14.4	18.9	0.5	34.4	16	10.0	21	2	0	12.2	71	T	- 5	T	0	0	0	0	2.7	28	10.3	29	17	14	10	6	3.7	
RED BLUFF	104	1000.7	1013.1	33.3	15.6	24.3	-0.1	38.9	17	11.1	20	21	0	7.2	40	T	- 9	T	1	0	0	0	1.1	34	13.9	N	16	22	3	5	2.5	96
SACRAMENTO	5	1011.9	1012.6	31.1	13.3	22.3	0.3	35.0	28+	10.0	29+	12	0	8.9	51	0	- 5	0	0	0	0	0	1.5	24	13.4	N	16	24	5	1	1.8	98
SANDBERG R	1377	863.2		25.6	13.3	19.4	-1.3	32.2	8+	2.8	20	2	0	1.7	37	0	- 5	0	0		0	0	1.5	33	13.4	35	16+	28	1	1	0.9	
SAN DIEGO	4	1011.5	1012.4	25.6	18.3	21.8	0.8	33.9	24	15.0	22+	1	0	13.9	66	T	- 4	T	0	0	0	0	1.7	27	8.5	NW	22+	17	4	9	4.1	64
SAN FRANCISCO	2	1013.9	1014.7	23.3	12.8	17.9	0.2	32.8	24	8.9	29+	2	0	10.0	68	T	- 5	T	0	0	0	0	4.3	28	19.7	WNW	19	15	12	3	3.3	
SAN FRANCISCO U	16			20.6	13.9	17.3	0.6	31.7	16	9.4	28	0	0			2	- 4	2	2		0	0			12.5	W	19					74
SANTA MARIA	72			24.4	11.1	17.7	0.6	37.2	25	5.6	21	3	0			T	- 4	T	0		0	0						14	14	2	3.2	
STOCKTON	7	1012.2	1013.3	31.1	13.9	22.7	0.1	37.2	27	9.4	22	13	0	9.4	50	T	- 5	T	0	0	0	0	3.0	30	10.3	34	15	21	7	2	2.0	
COLORADO																																
ALAMOSA	2297	774.5		22.2	0.6	11.4	-1.8	25.6	10+	- 6.7	17	0	12			10	- 9	6	5		0	0						20	9	1	2.9	
COLORADO SPRINGS	1873	813.1	1014.6	23.9	7.8	15.7	-0.7	29.4	14+	1.7	17	0	0	- 0.6	36	26	- 1	14	5	3	0	0	0.9	3	14.3	35	7	16	8	6	3.9	
DENVER	1610	837.5	1013.3	25.0	7.2	16.1	-1.2	31.1	11	2.2	16	0	0	3.3	50	15	- 14	7	4	2	0	0	1.0	20	13.0	NE	7	13	11	6	4.1	80
GRAND JUNCTION	1480	853.0	1013.6	26.7	9.4	17.9	-2.0	32.8	10	3.3	23+	2	0	- 1.1	31	2	- 21	1	3	4	0	0	1.2	12	16.5	SW	20	16	9	5	3.8	77
PUEBLO	1428	856.1	1012.6	28.9	11.1	20.0	0.8	33.9	14+	5.0	17	7	0	3.3	38	13	- 8	10	3	1	0	0	0.3	28	15.6	N	7	17	10	3	3.4	86
CONNECTICUT																																
BRIDGEPORT	2	1018.3	1018.9	24.4	15.6	20.1	1.4	27.8	22	8.9	30	0	0	15.0	74	81	- 20	59	4	0	0	0	0.3	33	13.4	8	11	14	10	6	4.1	

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days							No. of days		Snow, Sleet				Fastest mile (1.6 kilometers)							
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 32.2 °C or above	Min. 0 C or lower	Average dew point		Total	Departure from normal	Greatest in 24 hours	.25 mm. or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	M.	Mb.	Mb.	C.	C.	C.	C.	C.		C.				C.	%	Mm.	Mm.	Mm.			Mm.	Mm.	M.p.s.		M.p.s.							%
CONNECTICUT																																
HARTFORD	52	1011.9	1018.4	25.6	11.1	18.3	0.9	30.0	22	4.4	30	0	0	12.2	72	73	- 20	44	5	0	0	0	0.5	29	10.7	NW	12	12	9	9	4.9	75
NEW HAVEN	2	1018.3		23.9	13.3	18.7	1.0	27.2	19+	6.1	30	0	0			59	- 40	43	3		0	0			10.7	NE	11	16	8	6	4.0	79
DELAWARE																																
WILMINGTON	23	1016.3	1019.2	27.2	15.0	20.9	1.2	31.7	25	8.3	30	0	0	13.3	65	38	- 62	20	3	1	0	0	0.5	27	11.2	14	10	14	11	5	4.0	
DIST.OF COLUMBIA																																
WASH NATL AP	4	1016.6	1019.0	28.3	16.1	22.2	1.3	33.3	4	10.0	30	4	0	13.9	63	75	- 22	43	4	1	0	0	0.2	25	9.8	SE	10	16	7	7	4.0	75
FLORIDA																																
APALACHICOLA U	4			30.0	22.2	26.1	0.1	32.8	10+	18.9	22	5	0			162	- 55	113	7	4	0	0			12.5	E	20	11	13	6	4.8	69
DAYTONA BEACH	9	1014.9	1016.3	30.0	22.2	26.2	-0.1	32.2	10+	20.0	15	3	0	20.0	72	154	- 24	51	14	5	0	0	1.9	5	11.2	25	10	3	23	4	6.0	
FORT MYERS	5	1014.6	1015.0	31.7	23.3	27.4	0.1	33.9	30+	21.7	17	19	0	22.8	80	227	11	64	14	11	0	0	1.7	6	11.2	13	5	7	16	7	5.4	
JACKSONVILLE	6	1015.6	1016.5	30.6	21.7	26.2	-0.1	35.0	6	18.3	14	4	0	21.1	77	68	-124	39	8	4	0	0	1.6	4	14.8	NE	22	5	18	7	5.9	59
KEY WEST	1	1013.5	1014.1	31.1	25.6	28.4	0.4	32.8	8	23.3	21	7	0	23.9	76	175	4	34	19	13	0	0	2.0	10	14.3	SE	26	1	19	10	6.8	78
LAKELAND U	65			30.6	21.7	26.3	-0.4	33.9	6	20.0	15+	9	0			108	- 58	46	12		0	0						12	15	3	4.7	66
MIAMI	2	1013.9	1014.3	31.7	24.4	27.9	0.5	33.9	6	22.2	24	15	0	22.2	74	282	42	72	21	11	0	0	1.3	8	11.2	32	12	0	16	14	7.0	
ORLANDO	33	1011.9	1016.1	31.7	22.2	26.8	0.2	34.4	7	19.4	15	12	0	21.1	77	150	- 34	88	13	5	0	0	2.0	6	10.3	7	8+	0	24	6	5.9	
PENSACOLA	34	1011.5	1015.5	30.6	20.6	25.6	-0.1	32.8	26	17.2	28	3	0	18.9	70	102	- 93	70	5		0	0	0.9	7	11.6	E	15	11	9	10	5.1	68
TALLAHASSEE	17	1013.9	1016.3	31.7	19.4	25.5	-0.1	35.0	6	15.0	15	14	0	20.0	78	226	86	166	9	6	0	0	1.4	8	11.2	13	8	8	13	9	5.3	
TAMPA	6	1015.2	1015.3	31.1	21.7	26.4	-0.5	33.3	7	19.4	15+	14	0	21.1	76	91	- 84	46	10	9	0	0	1.8	6	10.3	7	20	5	20	5	5.5	63
WEST PALM BEACH	5	1013.9	1014.7	31.1	22.8	26.9	-0.9	33.3	8	21.1	24+	5	0	22.2	79	356	110	93	14	13	0	0	1.6	8	11.6	16	10+	3	12	15	6.8	
GEORGIA																																
ATHENS	244	989.5	1018.0	27.2	15.6	21.4	-1.7	30.6	30+	11.1	12	0	0	16.1	75	49	- 27	13	6	3	0	0	1.4	4	6.3	30	26+	10	8	12	5.6	
ATLANTA	308	981.4	1017.8	27.8	16.1	21.9	-0.9	30.0	25+	10.6	12+	0	0	16.1	76	33	- 50	20	5	1	0	0	1.3	8	10.7	E	17	16	6	14	5.6	64
AUGUSTA	44	1012.2	1017.4	30.0	16.7	23.4	-0.6	32.8	4	12.2	16+	2	0	17.2	76	123	47	51	9	4	0	0	0.8	4	8.0	22	9	11	10	9	5.6	
COLUMBUS	117			30.0	17.2	23.6	-0.8	32.8	4	11.7	13	3	0	17.2	73	65	- 5	29	6		0	0	1.2	5	8.9	13	8	11	8	11	5.5	
MACON	108	1004.4	1017.3	30.0	15.6	22.9	-1.7	33.9	5+	11.1	14+	8	0	17.8	78	68	- 3	27	7	5	0	0	1.0	5	9.8	E	17	8	8	14	5.9	68
ROME	194			28.3	13.9	21.2	-1.2	33.3	3	6.7	12	1	0			116	32	32	8		0	0										
SAVANNAH	14	1015.2	1017.0	30.6	18.9	24.7	-0.1	33.9	6	12.8	14	3	0	19.4	78	12	-121	6	5	6	0	0	1.6	7	8.9	SE	19	4	12	14	6.6	74
HAWAII																																
HILO	8	1013.5	1014.9	29.4	20.6	24.9	0.7	31.1	16	19.4	30+	0	0	21.7	83	217	1	92	24	1	0	0	0.4	18	7.6	E	30+	5	7	18	7.2	41
HONOLULU	2	1013.9	1014.3	32.2	23.3	27.8	1.6	33.3	4	21.1	30	19	0	20.6	69	33	8	18	11	1	0	0	4.4	5	11.2	NE	17+	11	15	4	4.6	78
KAHULUI	15	1011.5	1013.8	32.2	20.6	26.6	0.8	35.0	1	16.7	5	20	0	20.0	71	5	- 1	3	7	1	0	0	4.4	5	13.9	NE	13	14	11	5	4.5	78
LIHUE	31	1010.2	1015.4	28.9	22.8	25.9	0.3	29.4	13+	18.3	30	0	0	20.0	73	81	28	41	17	2	0	0	3.6	6	8.5	NE	24	3	22	5	5.4	71
IDAHO																																
BOISE	865	916.4	1015.5	25.0	9.4	17.2	0.2	33.9	9	3.3	22+	2	0	6.1	51	3	- 7	3	2	0	0	0	0.7	29	13.0	NW	18	14	9	7	4.2	79
LEWISTON	431			23.9	10.6	17.2	-0.3	34.4	9	4.4	22	2	0			32	9	13	8		0	0						9	10	11	5.9	
POCATELLO	1358	864.5	1016.5	22.2	5.0	13.6	-2.1	32.8	10	0.0	23	1	1	2.2	51	16	1	9	6	1	T	0	2.5	23	15.2	SW	15	7	18	5	5.3	75
ILLINOIS																																
CAIRO U	96			26.7	16.7	21.6	-0.9	30.6	22	11.1	26	0	0			127	51	52	9		0	0			13.4	SE	8	13	10	7	4.5	74
CHICAGO O HARE	201	992.2	1016.3	23.9	13.3	18.6	1.1	31.1	3	5.6	26	0	0	12.8	72	99	29	27	14	8	0	0	1.8	20	14.3	30	5	9	9	12	5.9	
CHICAGO MIDWAY	185	993.9	1016.3	24.4	13.9	19.3	0.3	32.2	3	8.9	28+	1	0	12.2	67	93	24	24	14	6	0	0	2.4	19	13.9	SE	16	10	9	11	5.7	60
MOLINE	177	994.2	1015.5	23.9	11.1	17.3	-1.2	30.6	3	4.4	28	0	0	12.2	76	145	62	53	11	6	0	0	1.7	20	14.3	NW	5	9	11	10	5.7	60
PEORIA	199	992.2	1016.1	24.4	11.7	17.9	-1.2	31.1	3	6.1	27	0	0	12.2	74	123	45	42	13	6	0	0	1.6	20	16.5	SE	16	10	7	13	5.9	61
ROCKFORD	221	988.8	1015.6	22.8	11.7	17.3	-0.3	30.6	3	5.6	28+	0	0	12.8	76	172	83	63	13	5	0	0	1.7	20	11.2	16	19	10	7	13	5.6	
SPRINGFIELD	179	993.9	1016.0	26.1	12.8	19.3	-0.5	31.1	22+	6.7	27+	0	0	12.8	70	84	9	43	9	3	0	0	1.8	19	11.6	SE	18	12	6	12	5.4	66
INDIANA																																
EVANSVILLE	116	1003.7	1017.5	27.2	13.3	20.2	-0.9	32.2	3	6.7	12	1	0	13.9	72	77	5	41	7	2	0	0	1.0	20	11.2	S	8	10	9	11	5.1	70
FORT WAYNE	241	987.5	1017.4	23.9	12.2	18.0	-0.2	30.0	23+	5.0	27	0	0	12.8	74	50	- 18	14	9	1	0	0	2.0	22	9.4	W	24+	8	7	15	6.3	66
INDIANAPOLIS	241	988.5	1017.5	25.0	12.8	18.8	-0.4	30.0	22	5.6	12	0	0	13.3	75	39	- 43	9	9	2	0	0	1.5	19	13.9	NW	1	10	7	13	5.9	64
SOUTH BEND	236	988.8	1016.7	22.8	13.3	18.1	0.4	29.4	3	6.7	28	0	0	13.3	75	111	33	25	12	4	0	0	1.8	21	9.4	28	6+	6	10	14	6.6	
IOWA																																
BURLINGTON	211			24.4	11.7	18.1	-0.8	31.7	3	7.8	27+	0	0	12.2	72	156	75		13	7	0		1.7	21	10.3	24	30+	9	11	10	5.5	

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	No. of days: Max 32.2 °C or above	No. of days: Min 0 C or lower	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	No. of days: 25 mm or more	No. of days: With thunderstorms	Snow Sleet: Total	Snow Sleet: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Fastest mile (1.6 kilometers): Speed	Fastest mile: Direction	Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	M.	Mb.	Mb.	C.	C.	C	C	C		C.				C.	%	Mm	Mm	Mm			Mm	Mm	M.p.s		M.p.s							%
IOWA																																
DES MOINES	286	980.7	1015.3	23.3	11.7	17.4	-1.2	29.4	2	6.1	25	0	0	11.7	72	67	- 6	28	13	4	0	0	1.2	22	14.3	NW	24	13	7	10	4.9	65
DUBUQUE	322	976.6		21.1	10.6	15.9	-0.6	28.9	3	4.4	26+	0	0			144	49	24	15		0	0						8	11	11	6.0	
SIOUX CITY	334	974.6	1014.1	23.3	11.1	17.2	-1.4	30.6	14	6.1	26+	0	0	11.1	72	105	35	38	10	6	0	0	0.4	16	15.6	NW	8	11	10	9	5.1	72
WATERLOO	265	983.1	1014.7	22.2	9.4	15.7	-1.5	30.6	3	3.3	26	0	0	11.7	80	92	- 5	25	13	6	0	0	1.4	20	11.2	27	24	12	8	10	5.2	
KANSAS																																
CONCORDIA	448	961.7	1013.9	26.1	12.8	19.4	-1.5	32.8	2	7.8	18+	1	0	12.2	66	77	8	37	6	6	0	0	2.3	19	19.2	S	6	15	9	6	3.7	78
DODGE CITY	787	924.1	1013.5	28.3	12.8	20.6	-0.7	32.8	22+	8.9	26	6	0	9.4	54	6	- 33	3	3	3	0	0	2.3	18	14.3	N	16	17	9	4	3.4	91
GOODLAND	1113	887.6	1012.6	27.2	9.4	18.3	-0.3	34.4	2	3.3	24	7	0	6.1	52	12	- 20	5	5	2	0	0	1.2	21	14.3	33	15	18	9	3	3.2	
TOPEKA	267	983.4	1015.0	25.6	12.8	19.2	-1.6	31.1	20	5.6	11	0	0	13.3	71	64	- 12	44	6	4	0	0	1.4	19	11.6	SW	7	13	9	8	4.4	76
WICHITA	403	967.5	1014.7	26.7	12.8	19.9	-1.9	33.3	20	6.1	18	1	0	12.8	65	150	68	77	6	4	0	0	2.1	18	17.9	N	3	17	5	8	3.9	74
KENTUCKY																																
COVINGTON	265	986.8	1018.2	25.6	13.9	19.7	0.1	31.1	3	7.2	26	0	0	13.9	73	55	- 17	20	9	1	0	0	1.1	19	7.6	27	6	10	8	12	5.8	
LEXINGTON	294	983.4	1018.5	25.6	14.4	19.9	-0.8	30.6	3	8.9	28+	0	0	13.9	71	76	5	32	7	2	0	0	1.2	18	13.0	22	9	15	4	11	5.0	
LOUISVILLE	145	1000.0	1017.5	26.7	14.4	20.6	-0.3	31.7	3	8.9	28	0	0	14.4	71	66	- 1	23	8	1	0	0	1.0	19	13.0	W	9	10	9	11	5.2	67
LOUISIANA																																
ALEXANDRIA	28	1012.2	1016.3	29.4	16.7	23.0	-2.0	32.8	16+	11.1	19	2	0	18.9	81	69	- 11	26	5	2	0	0	0.7	6	10.3	34	9	12	8	10	5.1	
BATON ROUGE	20	1013.2	1015.8	30.6	18.9	24.8	-0.7	33.3	21	14.4	28+	8	0	18.9	74	43	- 47	24	5	4	0	0	1.2	4	13.4	13	3	14	5	11	5.1	
LAKE CHARLES	3	1014.2	1015.4	29.4	18.9	24.2	-1.7	32.2	22+	13.9	19	3	0	19.4	81	79	- 23	35	6	7	0	0	1.1	7	14.3	20	15	13	5	12	5.4	
NEW ORLEANS	1	1014.9	1015.8	29.4	18.3	24.1	-1.6	32.8	3	15.0	30+	1	0	18.9	76	62	- 66	27	6	2	0	0	1.2	6	13.4	19	17	12	5	13	5.5	
SHREVEPORT	77	1006.8	1015.9	28.9	17.2	23.1	-2.9	33.3	2	13.3	27+	7	0	16.7	72	244	186	131	6	4	0	0	0.5	12	9.4	3	15+	13	8	9	4.8	68
MAINE																																
CARIBOU	190	994.9		21.1	8.3	14.7	2.6	29.4	20	1.7	30	0	0			22	- 68	5	10		0	0						8	5	17	6.5	
PORTLAND	14	1016.3	1018.7	22.8	10.6	16.5	1.7	29.4	22	2.8	30	0	0	11.7	77	36	- 54	18	8	0	0	0	0.4	21	11.6	SE	11	11	9	10	5.0	63
MARYLAND																																
BALTIMORE	45	1013.5	1019.1	27.8	15.0	21.3	1.2	32.8	4	9.4	30	2	0	12.8	64	112	27	94	3	2	0	0	0.6	26	8.9	W	30+	15	8	7	3.7	72
MASSACHUSETTS																																
BLUE HILL OBS R	192			22.8	12.8	17.7	0.8	29.4	22	5.6	30	0	0			62	- 38	36	5		0	0			18.8	ESE	11					68
BOSTON	5	1018.0	1019.0	21.7	15.0	18.3	-0.2	28.9	22	10.6	30	0	0	12.8	72	45	- 42	29	6	1	0	0	0.0	19	15.6	E	11	14	8	8	4.7	72
NANTUCKET	13	1018.3	1018.7	22.2	12.2	17.1	-0.1	25.0	24+	6.1	30	0	0	15.0	88	67	- 22	35	6	2	0	0	0.6	4	13.9	N	17	9	12	9	5.4	61
WORCESTER	301	982.7	1019.6	22.8	12.2	17.5	1.5	27.2	25+	5.0	30	0	0	10.0	65	49	- 50	26	5	1	0	0	1.0	28	12.1	26	12	12	10	8	4.5	
MICHIGAN																																
ALPENA	210	991.2	1016.4	21.7	10.0	15.8	2.5	29.4	4	4.4	28	0	0	11.7	79	169	78	77	16	7	0	0	1.1	20	11.2	SE	18	7	13	10	5.9	57
DETROIT	189			25.0	16.1	20.3	1.9	32.2	4	8.9	28	1	0	13.3	67	43	- 19	21	9	6	0		1.6	23	10.3	29	22					
DETROIT M WAYNE CO	193	992.9	1016.8	24.4	12.8	18.6	1.2	30.0	23	6.1	29+	0	0	13.3	74	47	- 11	14	10	4	0	0	1.6	22	9.4	SE	18+	6	13	11	6.0	62
DETROIT WILLOW RUN	217	985.4	1017.2	23.3	12.2	17.7	-0.5	28.3	23+	4.4	28	0	0	11.7	71	47	- 11	9	12	5	0	0	1.8	22	10.3	31	22	6	11	13	6.4	
FLINT	235	988.8	1016.5	22.2	11.7	16.8	0.2	27.8	4	3.9	28	0	0	12.8	78	56	- 19	13	12	5	0	0	2.1	21	10.7	18	18	4	13	13	6.5	
GRAND RAPIDS	239	987.5	1016.4	23.3	11.7	17.6	0.8	30.0	3	3.3	28	0	0	12.2	74	107	31	20	13	6	0	0	1.7	20	13.4	SW	6	6	13	11	6.5	50
HOUGHTON LAKE	350	974.9	1016.9	21.1	10.0	15.7	1.6	28.3	4	1.1	28	0	0	11.7	79	106	31	32	13	8	0	0	1.5	21	10.7	27	6	3	16	11	6.5	
LANSING	256	985.4	1016.8	23.3	10.6	17.1	0.4	29.4	23+	1.7	28	0	0	12.2	76	69	3	27	14	1	0	0	1.9	21	13.4	W	6	5	12	13	6.5	55
MARQUETTE U	206			19.4	11.7	15.7	1.4	28.9	14	6.7	28+	0	0			183	100	70	15		0	0			11.6	SE	17	4	9	17	7.0	52
MUSKEGON	191	992.9	1015.8	21.7	12.2	17.0	-0.2	27.8	16+	3.3	28	0	0	12.8	78	90	12	36	12	4	0	0	1.6	20	9.8	12	19	4	15	11	6.4	
SAULT STE MARIE	220	989.2	1015.6	20.6	10.0	15.3	2.1	26.7	15	1.7	29	0	0	12.2	83	103	6	29	13	7	0	0	0.8	15	13.4	W	24+	6	11	13	6.5	50
MINNESOTA																																
DULUTH	435	963.1	1014.5	18.9	8.3	13.7	1.3	26.1	14	0.6	29+	0	0	8.9	77	87	14	34	10	2	0	0	0.4	22	16.1	E	22	7	9	14	6.5	58
INTERNATIONAL FALLS	359	970.9	1013.8	18.9	7.8	13.3	1.7	29.4	14	0.6	29+	0	0	8.9	77	110	36	44	15	3	0	0	1.1	20	10.3	25	29+	7	6	17	6.5	
MINNEAPOLIS	254	984.1	1014.3	21.7	10.6	16.2	0.4	29.4	14	3.9	27	0	0	11.1	73	156	95	51	9	5	0	0	0.6	22	14.3	S	15	8	9	13	6.0	66
ROCHESTER	395	967.5	1014.9	20.6	8.9	14.6	-1.4	28.9	3	2.2	26	0	0	10.0	78	100	21	36	14	6	0	0	1.7	21	12.5	21	3	8	6	16	6.2	
ST CLOUD	315	976.0	1013.7	21.1	8.9	15.1	0.2	28.9	14	2.2	29+	0	0		75	120	59	50	11		0	0						10	9	11	5.9	
MISSISSIPPI																																
JACKSON	94	1004.7	1016.5	30.6	15.6	22.9	-1.8	32.2	22+	10.0	13	4	0	16.1	70	50	- 15	24	8	3	0	0	0.7	7	8.9	SE	15	16	4	10	4.3	66
MERIDIAN	88	1006.1	1017.2	29.4	15.0	22.4	-2.0	31.1	29+	10.0	13	0	0	16.7	77	74	- 11	30	8	4	0	0	0.4	2	7.2	5	27+	14	5	11	5.0	

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	No. of days: Max 32.2 °C or above	No. of days: Min. 0 °C or lower	Average dew point	Average relative humidity	Precipitation: Total	Departure from normal	Greatest in 24 hours	No. of days: .25 mm. or more	No. of days: With thunderstorms	Snow, Sleet: Total	Snow, Sleet: Maximum depth on ground	Wind: Resultant speed	Resultant direction	Fastest mile (1.6 kilometers): Speed	Direction	Date	No. of days (sunrise to sunset): Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	M.	Mb.	Mb.	C.	C.	C.	C.	C.		C.				C.	%	Mm.	Mm.	Mm.			Mm	Mm.	M.p.s.		M.p.s.							%
MISSOURI																																
COLUMBIA	237	987.8	1015.6	25.6	13.9	19.8	-0.9	30.6	3	8.3	11	0	0	12.8	69	118	19	51	9	6	0	0	1.6	19	12.5	NW	16	16	2	12	4.8	62
KANSAS CITY	226	988.5	1015.2	27.2	14.4	20.8	-1.0	32.2	20	8.3	11	1	0	13.3	66	26	-56	15	7	3	0	0	1.6	20	12.5	S	7	15	6	9	4.2	74
ST JOSEPH	247			26.7	12.8	19.5	-0.8	30.0	2	5.0	11	0	0	13.3	74	53	-34		7	4	0		1.0	19	13.0	21	3	15	8	7	4.1	
ST LOUIS	163	996.3	1016.6	26.1	13.9	20.0	-0.8	31.1	7+	8.3	12	0	0	13.9	70	95	25	57	9	4	0	0	1.6	20	10.7	SE	18	11	7	12	5.4	68
SPRINGFIELD	386	971.6	1016.6	25.6	12.8	19.2	-2.2	31.1	21	5.6	11	0	0	12.2	70	78	-19	45	7	6	0	0	1.8	18	8.9	SW	16+	13	9	8	4.3	67
MONTANA																																
BILLINGS	1087	890.6	1013.1	22.8	10.0	16.4	0.7	32.2	11	3.3	22	1	0	6.1	55	35	5	13	10	1	T	0	2.6	26	24.1	W	12	11	7	12	5.3	67
GLASGOW	696	930.9	1012.1	22.2	6.7	14.2	0.5	30.6	11+	1.1	21	0	0	6.1	62	19	-5	7	7	6	0	0	0.6	31	13.4	34	20	3	14	13	6.5	
GREAT FALLS	1116	887.6	1014.0	20.0	7.2	13.6	-0.5	32.2	10	-0.6	21	1	2	4.4	59	74	44	33	11	2	99	51	3.2	24	16.1	SW	17	7	6	17	6.8	56
HAVRE	788	921.1	1012.8	20.6	5.6	13.3	0.2	32.8	11	1.1	24+	2	0	6.1	68	63	37	31	13	6	T	0	2.8	26	14.8	NW	7	1	11	18	7.4	70
HELENA	1167	881.1	1016.0	20.0	5.6	12.8	-0.6	30.6	10	0.6	21	0	0	5.0	64	56	32	34	9	1	76	76	2.0	27	20.6	W	18	9	7	14	6.0	55
KALISPELL	904	911.6	1016.2	18.3	5.0	11.7	-0.9	28.3	10	0.0	29	0	1	7.2	80	85	58	21	14	4	79	T	0.7	17	10.3	31	13	6	9	15	6.8	
MILES CITY	801	920.4	1012.4	23.9	8.3	16.3	0.2	33.3	11	1.1	22	2	0	6.7	57	12	-12		7	2	0		1.8	29								
MISSOULA	972	905.2	1017.1	19.4	5.6	12.6	-0.4	30.6	10	1.1	29+	0	0	6.7	70	49	23	14	12	1	T	0	0.9	31	13.9	N	2	5	6	19	7.1	56
NEBRASKA																																
GRAND ISLAND	561	948.5	1013.9	25.0	10.6	17.9	-0.6	32.8	2	5.6	10	2	0	11.1	68	59	5	44	6	7	0	0	1.1	20	13.4	34	7	12	11	7	4.8	
LINCOLN U	351			24.4	13.3	19.0	-1.1	32.2	2	8.3	25+	1	0			161	88	65	10		0	0			15.2	SW	7	11	11	8	4.8	73
NORFOLK	471			23.3	10.6	16.7	-1.6	30.0	14+	4.4	25+	0	0			60	3	39	7		0	0						10	10	10	5.0	
NORTH PLATTE	846	916.7	1013.5	25.0	7.2	16.2	-1.4	31.1	14+	1.7	26+	0	0	7.8	63	21	-22	9	5	5	0	0	0.2	9	14.8	NW	7	10	15	5	4.2	78
OMAHA	298	979.0	1014.1	24.4	12.8	18.6	-0.8	31.1	2	6.7	25	0	0	12.8	72	146	79	52	10	5	0	0	0.6	19	13.9	NW	8	10	11	9	4.9	73
SCOTTSBLUFF	1206	879.4	1014.1	25.0	6.1	15.5	-1.3	32.8	11	1.7	4	1	0	5.0	56	6	-24	2	6	2	0	0	1.1	33	15.6	34	16	16	7	7	3.9	
VALENTINE	789			24.4	7.2	15.7	-0.8	32.8	14	1.7	25	3	0			15	-17	6	6		0	0			19.2	N	7	13	9	8	4.6	78
NEVADA																																
ELKO	1539	846.3	1015.6	26.1	3.9	15.1	0.7	33.9	10+	-5.6	21	6	5	-0.6	40	9	1	7	3	3	T	0	0.6	27	9.4	27	14	15	10	5	4.3	
ELY	1906	810.7	1014.8	23.3	1.7	12.5	-1.7	30.6	9+	-9.4	22+	0	13	-4.4	35	3	-12	2	3	2	T	0	1.6	22	15.2	S	19	20	5	5	3.4	88
LAS VEGAS	659	935.7	1010.4	35.0	18.3	26.5	-0.2	40.6	11+	10.0	21	22	0	-1.1	17	T	-8	T	1	1	0	0	1.0	24	13.4	SW	20+	25	3	2	1.4	93
RENO	1342	867.3	1015.5	27.2	3.3	15.3	0.4	34.4	6+	-5.0	22	6	6	1.7	44	4	-2	4	1	1	0	0	0.6	31	18.8	W	19	20	7	3	2.5	96
WINNEMUCCA	1311	868.9	1015.6	25.0	3.9	14.4	-0.4	31.7	9+	-5.6	21	0	5	-5.0	26	0	-9	0	0	0	0	0	0.5	28	17.0	SW	18	15	9	6	3.7	80
NEW HAMPSHIRE																																
CONCORD	104	1006.4	1019.0	23.3	8.9	16.1	0.9	29.4	25	-1.1	30	0	1	11.1	76	59	-36	20	8	2	0	0	0.3	23	12.1	E	11	12	8	10	5.3	62
MT WASHINGTON OBS	1909			9.4	3.3	6.3	1.3	17.2	21	-5.0	30	0	6			99	-79	44	10	0	38	T			44.7Y	SE	11	8	3	19	7.0	41
NEW JERSEY																																
ATLANTIC CITY	20	1016.3	1018.7	26.7	11.7	19.2	-0.4	32.2	23	3.9	18	1	0	12.8	72	11	-73	5	5	0	0	0	0.2	27	9.4	23	11+	14	11	5	4.1	69
ATLANTIC CITY U	3			25.6	17.8	21.7	1.4	30.0	4	12.2	29	0	0			55	-31	33	6		0				13.9	W	30					
NEWARK	2	1017.6	1018.7	26.7	16.7	21.5	1.9	32.2	25	10.6	30	1	0	13.9	65	63	-33	28	4	2	0	0	0.6	26	9.8	10	10+	14	10	6	4.2	
TRENTON U	17			26.1	15.6	20.7	1.2	31.1	25+	10.6	30	0	0			30	-59	12	5		0	0			9.8	W	30	15	10	5	4.0	73
NEW MEXICO																																
ALBUQUERQUE	1619	839.8	1013.4	28.3	11.7	20.0	-1.1	32.2	8	5.0	17	1	0	2.2	35	8	-17	6	5	5	0	0	0.7	20	16.1	E	29	24	4	2	1.9	90
CLAYTON	1515			26.1	9.4	17.7	-1.2	31.1	7	3.9	17	0	0			19	-23	14	4		0	0						18	12	0	2.5	
RATON	1944			25.0	5.6	15.2	-1.4	29.4	7	-1.7	17	0	2			12	-30	10	4		T	0						16	9	5	3.9	
ROSWELL	1102	892.0		30.6	8.3	19.6	-1.4	36.7	20	2.2	18	10	0	7.2	50	3	-44	2	2	2	0	0	1.3	15	11.6	NW	6	20	9	1	2.6	86
NEW YORK																																
ALBANY	84	1008.1	1018.9	25.6	10.0	17.6	1.2	29.4	25+	4.4	29	0	0	12.2	73	38	-53	15	5	4	0	0	0.8	23	10.7	W	27+	10	11	9	5.3	65
BINGHAMTON	485	961.1	1019.7	21.7	11.7	16.6	1.3	26.7	24	5.0	29	0	0	12.2	78	139	65	86	9	4	0	0	0.9	22	11.2	SW	2	9	11	10	5.4	72
BUFFALO	215	992.6	1017.9	23.3	14.4	18.9	2.6	28.9	20+	7.2	29	0	0	12.8	70	143	64	50	13	7	0	0	2.1	22	13.0	SW	30+	8	12	10	5.6	68
J.F. KENNEDY	4	1018.0	1018.9	25.6	16.7	21.2	1.3	29.4	22	12.2	30	0	0	13.9	67	65	-41	40	4	2	0	0	0.3	20	13.9	11	11	15	11	4	3.9	
NEW YORK LA GUARDIA	3	1016.9	1018.7	25.6	17.2	21.4	1.0	31.7	22	12.8	30	0	0	12.2	60	47	-53	18	5	2	0	0	0.4	34	16.5	NE	11	13	12	5	4.1	
NEW YORK U	40	1014.9	1018.2	26.1	16.7	21.4	1.2	30.6	25+	11.7	29	0	0	12.8	63	50	-48	20	5	0	0	0	0.2	28	9.4	NW	12+					77
ROCHESTER	167	998.0	1018.1	24.4	12.2	18.2	1.3	30.0	24+	6.1	29	0	0	13.3	77	47	-17	11	11	5	0	0	1.5	23	12.5	SW	30	9	10	11	5.5	67
SYRACUSE	125	1003.7	1018.4	23.9	12.8	18.2	1.3	28.3	24	7.2	8	0	0	13.3	75	87	15	49	9	4	0	0	0.6	22	11.6	W	30+	12	10	8	4.7	68
NORTH CAROLINA																																
ASHEVILLE	652	943.8	1019.5	24.4	11.1	17.8	-1.0	27.8	24	6.1	14	0	0	14.4	86	67	-25	29	9	3	0	0	0.3	36	8.0	34	12+	9	8	13	5.8	60

See footnotes at end of table

CLIMATOLOGICAL DATA
METRIC UNITS

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	No. of days: Max 32.2 °C or above	No. of days: Min. 0 C or lower	Average dew point	Average relative humidity
	M.	Mb.	Mb.	C.	C.	C.	C.	C		C.				C.	%
NORTH CAROLINA															
CAPE HATTERAS R	2	1018.0	1018.4	26.7	19.4	22.8	-0.6	29.4	6	12.2	30	0	0	18.3	78
CHARLOTTE	224	991.2	1018.4	27.8	16.1	21.9	-0.8	30.6	25+	11.7	13	0	0	15.0	70
GREENSBORO	273	987.8	1019.1	27.8	13.3	20.8	-0.4	31.1	25+	10.0	13	0	0	12.8	64
RALEIGH	132	1002.7	1018.5	28.9	14.4	21.6	-0.2	31.7	3	10.6	14	0	0	15.0	71
WILMINGTON	9	1016.6	1017.9	28.9	17.2	23.1	-0.9	32.2	6+	13.9	20	2	0	18.3	80
NORTH DAKOTA															
BISMARCK	502	953.9	1013.4	21.1	7.2	14.2	-0.7	31.7	14	1.1	6	0	0	7.2	66
FARGO	273	980.7	1013.3	21.7	8.9	15.2	0.3	31.7	14	1.7	27	0	0	10.0	74
WILLISTON	579	944.1	1012.1	22.2	6.7	14.4	0.4	31.1	14	- 0.6	22	0	1	7.2	65
OHIO															
AKRON	368	974.6	1018.6	24.4	13.3	19.1	1.4	31.1	4	6.7	29	0	0	13.3	74
CINCINNATI OBS	232			25.6	13.9	19.7	-0.8	31.7	22	8.3	26	0	0		
CLEVELAND	237	989.2	1018.3	23.3	12.2	17.7	-0.2	30.0	4	4.4	29	0	0	13.3	78
COLUMBUS	247	988.8	1018.5	24.4	12.8	18.6	-0.2	30.0	23	5.6	30	0	0	12.8	71
DAYTON	305	982.4	1018.1	23.9	13.3	18.6	-0.7	29.4	23	7.2	26+	0	0	12.8	72
MANSFIELD	395			24.4	13.9	19.1	1.7	30.0	23+	6.7	29	0	0	12.2	68
TOLEDO	204	992.9	1017.8	25.0	11.7	18.4	1.0	31.1	4	4.4	29+	0	0	13.3	77
YOUNGSTOWN	359	976.3	1018.8	23.9	12.2	18.1	1.1	29.4	4	3.9	29	0	0	12.8	76
OKLAHOMA															
OKLAHOMA CITY	392	969.5	1015.5	28.3	14.4	21.4	-1.8	33.3	19	7.8	18	3	0	13.9	68
TULSA	198	991.9	1015.7	29.4	14.4	22.2	-1.1	34.4	8	8.9	18+	6	0	13.3	64
OREGON															
ASTORIA	2	1017.3	1018.1	18.9	10.0	14.4	-0.1	30.0	5	5.0	28+	0	0	10.6	80
BURNS U	1265	875.0	1017.1	23.3	5.0	14.1	-0.8	31.1	9	- 3.9	22	0	4	1.7	47
EUGENE	109	1004.1	1017.6	23.9	10.0	16.8	0.4	33.9	5	4.4	22	1	0	11.1	77
MEACHAM	1234	878.4	1016.6	18.3	7.2	12.8	-0.4	29.4	9	0.0	19	0	1		
MEDFORD	396	969.5	1016.5	29.4	10.6	20.1	2.2	37.8	5	3.3	22	13	0	7.8	52
PENDLETON	452	963.1	1016.3	26.1	11.7	18.8	0.9	34.4	8+	4.4	20	4	0	6.1	49
PORTLAND	6	1016.3	1017.4	21.7	11.1	16.4	-0.4	33.3	5	6.7	27	1	0	12.2	79
SALEM	60	1010.2	1017.6	22.8	8.9	15.8	-1.1	33.9	5	4.4	21	1	0	11.1	78
SEXTON SUMMIT R	1169	885.9	1015.9	21.7	10.6	16.0	0.6	29.4	5	1.7	20+	0	0		
PACIFIC AREA															
JOHNSTON	2	1011.2	1011.9	30.6	25.0	27.8	0.3	31.1	28+	22.2	23	0	0	23.3	76
KOROR R	29	1005.8	1009.5	31.1	24.4	27.8	0.6	32.8	27	22.2	8	4	0	23.9	82
KWAJALEIN	2	1008.8	1009.5	31.1	25.6	28.3	0.6	32.2	17+	22.8	24	3	0	24.4	78
MAJURO	3	1009.8	1010.3	30.6	25.0	27.7	0.8	31.7	13	22.2	19	0	0	23.3	77
PAGO PAGO	4	1012.2	1012.5	28.9	23.3	26.2		31.7	6	20.6	4	0	0	22.8	84
PONAPE R	37	1004.4	1009.8	31.1	22.2	26.6	0.2	32.8	6	21.1	27+	6	0	23.3	87
TAGUAC GUAM R	110			29.4	22.2	25.8	-0.4	31.1	14+	19.4	27+	0	0		
TRUK MOEN ISLAND	2	1009.1	1009.5	31.1	23.3	27.2	0.3	32.2	5	21.7	4	1	0	23.9	83
WAKE	3	1010.2	1010.4	31.1	25.6	28.3	0.2	32.2	29+	23.3	15	5	0	23.9	79
YAP R	13	1006.8	1008.8	30.6	23.9	27.1	-0.3	31.7	19	22.2	1	0	0	24.4	84
PENNSYLVANIA															
ALLENTOWN	118	1005.1	1019.0	26.7	11.7	19.2	1.0	31.7	25	6.1	29	0	0	12.8	71
ERIE	223	991.5	1018.2	23.3	14.4	18.8	1.4	27.8	24+	7.2	29	0	0	12.8	71
HARRISBURG	103	1006.4	1019.1	26.1	13.9	19.8	0.4	31.1	4	7.2	29	0	0	13.9	72
PHILADELPHIA	2	1017.6	1018.6	27.2	14.4	20.8	1.5	32.2	25+	7.8	30	2	0	12.8	65
PITTSBURGH	347	975.3	1019.0	23.9	12.2	18.2	0.3	30.0	4	4.4	29	0	0	11.1	66
READING U	81			26.7	15.0	20.8	1.1	31.1	22+	9.4	29	0	0		
SCRANTON	283	985.4	1019.6	23.9	11.7	18.0	1.1	28.3	25+	5.6	29	0	0	12.8	76
WILLIAMSPORT	160	1000.3	1019.3	25.0	11.1	18.1	0.2	28.3	4	4.4	29	0	0	14.4	85
RHODE ISLAND															
BLOCK ISLAND	34			22.8	14.4	18.5	0.7	27.2	19	8.3	30	0	0		

State and Station	Precipitation: Total	Departure from normal	Greatest in 24 hours	No. of days: 25 mm or more	No. of days: With thunderstorms	Snow, Sleet: Total	Snow, Sleet: Maximum depth on ground	Wind: Resultant speed	Resultant direction	Fastest mile (1.6 kilometers): Speed	Direction	Date	No. of days (sunrise to sunset): Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	Mm.	Mm.	Mm			Mm	Mm.	M.p.s		M.p.s.							%
NORTH CAROLINA																	
CAPE HATTERAS R	164	15	84	5	6	0	0	2.7	4	13.0	SE	10	10	9	11	5.4	
CHARLOTTE	37	- 52	23	5	2	0	0	1.3	4	7.6	NE	7	13	6	11	4.9	79
GREENSBORO	15	- 78	8	5	0	0	0	1.0	3	11.6	NW	26	12	10	8	4.9	74
RALEIGH	45	- 53	39	3	2	0	0	1.2	6	10.3	30	6	14	11	5	4.4	75
WILMINGTON	31	-128	22	4	2	0	0	1.6	6	7.6	NE	22+	7	12	11	5.7	63
NORTH DAKOTA																	
BISMARCK	30	T	14	8	1	0	0	0.8	26	17.0	NW	23	11	9	10	5.6	78
FARGO	57	19	24	11	6	0	0	0.7	21	13.0	NW	24+	9	11	10	5.5	68
WILLISTON	22	- 7	13	7	2	0	0	1.2	26	14.8	NW	23	11	8	11	5.4	72
OHIO																	
AKRON	83	16	27	11	7	0	0	1.8	20	9.4	14	10+	7	15	8	5.7	
CINCINNATI OBS	76	7	24	11		0	0			7.2	SE	4					60
CLEVELAND	85	12	23	12	6	0		1.9	20	12.1	S	18	8	12	10	5.7	64
COLUMBUS	45	- 22	18	9	4	0	0	1.1	17	12.1	W	24	10	9	11	6.0	59
DAYTON	70	4	19	10	3	0	0	1.6	19	10.3	W	2	11	7	12	5.7	65
MANSFIELD	57	- 18	26	9	3	0	0	2.4	21	8.0	20	20+	11	9	10	5.4	
TOLEDO	39	- 15	14	9	3	0	0	1.6	22	9.8	SE	17	8	9	13	6.0	63
YOUNGSTOWN	73	- T	37	12	7	0	0	1.3	19	9.4	34	22	6	15	9	5.7	
OKLAHOMA																	
OKLAHOMA CITY	67	- 10	46	7	4	0	0	1.7	17	13.4	SW	18	17	7	6	3.7	79
TULSA	71	- 31	62	6	3	0	0	2.3	19	13.0	E	4	17	6	7	4.0	78
OREGON																	
ASTORIA	117	37	28	13	2	0	0	0.9	22	9.4	18	14	9	5	16	6.5	
BURNS U	1	- 12	1	2		0	0	1.6	31				13	12	5	4.2	
EUGENE	65	33	22	7	1	0	0	0.7	30	9.8	36	28	5	14	11	6.4	
MEACHAM	54	17	18	8		58	T			9.4	25	14	12	7	11	5.2	
MEDFORD	8	- 7	4	5	0	0	0	0.9	31	8.9	35	19	16	8	6	3.7	
PENDLETON	14	- 2	7	6	0	0	0	2.2	26	13.0	26	14+	11	10	9	4.8	
PORTLAND	56	14	27	10	0	0	0	0.8	30	14.8	SW	14	8	5	17	6.7	50
SALEM	63	28	26	9	1	0	0	0.3	28	9.4	35	28	7	9	14	6.1	
SEXTON SUMMIT R	23	- 9	10	5		T	T			14.8	10	28	18	7	5	3.0	
PACIFIC AREA																	
JOHNSTON	68	8	29	17	0	0	0	5.0	9	21.5	E	22	5	7	18	7.4	63
KOROR R	311	- 53	77	18	5	0	0	2.1	24	14.3	SW	25	0	5	25	9.1	65
KWAJALEIN	184	- 75	39	21	2	0	0	1.1	13	13.4	17	29+	0	2	28	9.5	
MAJURO	248	- 58	56	18	1	0	0	0.8	11	10.3	N	26+	5	9	16	7.2	70
PAGO PAGO	203		123	21	1	0	0	3.8	10	13.4	SE	1	4	15	11	6.3	48
PONAPE R	447	45	91	20	5	0	0	0.6	16	7.2	NE	19+	2	7	21	8.2	60
TAGUAC GUAM R	300	- 39	65	26		0	0			10.7	W	3	0	8	22	8.5	47
TRUK MOEN ISLAND	314	- 5	105	21	2	0	0	0.6	22	12.1	N	30+	1	8	21	8.3	73
WAKE	94	- 39	17	19	1	0	0	4.0	11	16.5	S	25	2	12	16	7.5	49
YAP R	271	- 85	68	24	2	0	0	2.0	24	10.7	SW	5+	0	5	25	9.0	53
PENNSYLVANIA																	
ALLENTOWN	67	- 28	22	5	1	0	0	0.5	26	11.2	26	2	14	11	5	4.0	
ERIE	74	- 16	17	13	7	0	0	2.5	20	10.3	27	30	5	16	9	6.0	
HARRISBURG	132	60	95	5	2	0	0	0.8	25	11.6	NW	2	11	14	5	4.4	77
PHILADELPHIA	11	- 77	7	3	1	0	0	0.4	29	11.2	NW	2	14	11	5	4.1	72
PITTSBURGH	78	14	36	8	2	0	0	0.9	22	8.0	27	30+	6	15	9	6.1	73
READING U	98	14	64	7		0	0			14.8	SE	5	14	11	5	3.9	69
SCRANTON	107	31	54	8	3	0	0	0.8	16	15.2	S	2	12	14	4	4.3	71
WILLIAMSPORT	163	80	78	8	3	0	0	0.8	27	13.4	17	22	9	16	5	5.2	
RHODE ISLAND																	
BLOCK ISLAND	17	- 65	10	5		0	0						14	9	7	4.5	

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	No. of days: Max. 32.2 °C or above	No. of days: Min. 0 C or lower	Average dew point	Average relative humidity	Precipitation: Total	Departure from normal	Greatest in 24 hours	No. of days: .25 mm or more	No. of days: With thunderstorms	Snow, Sleet: Total	Snow, Sleet: Maximum depth on ground	Wind: Resultant speed	Resultant direction	Fastest mile (1.6 kilometers): Speed	Direction	Date	No. of days (sunrise to sunset): Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	M.	Mb.	Mb.	C.	C.	C.	C.	C.		C.				C.	%	Mm.	Mm.	Mm.			Mm.	Mm.	M.p.s.		M.p.s.							%
RHODE ISLAND																																
PROVIDENCE	16	1016.3	1018.7	24.4	12.2	18.2	0.9	30.0	22	6.1	30+	0	0	11.7	68	29	- 60	22	3	0	0	0	0.4	31	13.0	14	11	13	10	7	4.6	66
SOUTH CAROLINA																																
CHARLESTON	12	1015.6	1017.3	29.4	18.3	23.9	-0.3	32.8	6	13.9	14	2	0	18.9	78	42	-106	25	6	6	0	0	1.7	6	14.8Y	NW	10	7	13	10	6.0	50
CHARLESTON U	3			28.3	21.1	24.6	-0.5	33.3	6	17.2	22	1	0			80	- 81	59	5		0	0			19.7	SW	11					
COLUMBIA	65	1009.8	1018.0	29.4	15.6	22.4	-1.6	33.9	3	9.4	13	4	0	16.7	77	61	- 49	43	4	2	0	0	0.9	6	7.2	11	19	12	8	10	5.1	67
GNVLE-SPARTANBURG	292	984.4	1018.7	27.2	15.0	21.0	-1.6	30.6	25+	10.6	14	0	0	14.4	73	77	- 21	38	7	3	0	0	1.7	3	8.5	E	9	11	7	12	5.4	58
SOUTH DAKOTA																																
ABERDEEN	395	966.8	1013.3	22.2	7.2	14.9	-0.9	32.8	14	0.6	27	1	0	8.9	69	72	36	23	7	5	0	0	0.4	20	13.9	30	22+	10	10	10	5.4	
HURON	391	967.2	1013.5	22.8	8.3	15.4	-1.2	31.7	14	2.2	27	0	0	10.0	73	68	29	22	9	5	0	0	0.8	19	17.0	S	14	8	11	11	5.7	65
RAPID CITY	964	903.8	1013.6	23.9	7.2	15.4	-1.0	32.8	14	2.2	23	2	0	5.6	56	23	- 2	10	6	3	0	0	1.2	32	19.2	NW	7	14	9	7	4.5	68
SIOUX FALLS	432	962.8	1013.8	22.8	9.4	16.1	-0.4	31.1	14	2.2	27	0	0	9.4	68	102	36	36	10	9	0	0	0.7	22	17.9	29	3	12	7	11	5.1	
TENNESSEE																																
BRISTOL	459	965.8	1019.4	26.7	12.2	19.5	-1.1	30.6	24+	6.7	13	0	0	12.2	70	24	- 43	12	8	3	0	0	0.4	3	7.2	29	10+	8	10	12	5.7	
CHATTANOOGA	203	993.2	1017.6	28.9	16.1	22.5	-0.7	34.4	3	10.0	27+	3	0	16.1	73	72	- 7	28	8	2	0	0	0.3	6	9.8	NW	26	10	9	11	5.7	58
KNOXVILLE	299	983.1	1017.8	26.7	14.4	20.6	-1.7	31.1	3	10.6	14+	0	0	14.4	72	64	- T	36	8	1	0	0	1.0	4	8.9	S	18	7	9	14	6.0	69
MEMPHIS	79	1006.8	1016.8	28.3	15.6	21.8	-1.4	32.2	2	10.0	26	1	0	15.0	69	142	70	70	9	5	0	0	0.8	14	21.0	SE	9	17	5	8	4.1	71
NASHVILLE	180	995.9	1017.5	28.3	13.9	21.1	-1.6	33.3	3	8.3	12	2	0	15.0	73	70	- 3	18	6	2	0	0	0.9	17	11.6	SE	17	10	12	8	5.2	62
OAK RIDGE R	276			26.7	13.3	20.1	-1.6	30.6	8+	7.8	27	0	0			88	4	53	9		0	0			9.4Y		10	8	8	14	6.6	
TEXAS																																
ABILENE	537	954.3	1014.8	30.0	16.7	23.6	-0.8	36.1	8	10.0	26	8	0	12.2	53	13	- 39	11	4	1	0	0	2.2	17	12.1	NE	16	14	7	9	4.2	83
AMARILLO	1098	892.0	1012.9	28.9	12.8	20.6	-1.5	35.0	20+	7.8	18	5	0	8.9	52	16	- 32	12	5	5	0	0	3.1	19	16.1	W	20	22	7	1	2.1	91
AUSTIN	182	993.6	1015.2	30.0	18.9	24.4	-1.7	34.4	4+	12.2	18	10	0	17.2	69	87	- 1	47	11	7	0	0	0.9	12	12.5	N	17	8	16	6	5.1	64
BROWNSVILLE	6	1013.2	1013.6	31.7	23.3	27.6	0.2	33.9	17+	17.8	27	17	0	22.8	78	114	- 13	42	8	8	0	0	1.4	10	20.1	NE	17	7	14	9	6.1	69
CORPUS CHRISTI	12	1012.9	1014.5	30.6	22.2	26.2	-0.9	34.4	4	16.1	27	7	0	21.7	79	161	49	65	10	5	0	0	2.1	10	17.4	N	5	6	10	14	6.7	51
DALLAS	147	998.3	1015.4	30.0	18.3	24.4	-1.1	36.7	16+	12.8	26	8	0	15.6	62	59	- 13	25	9	3	0	0	1.8	14	11.6	NW	17+	13	7	10	4.9	71
DEL RIO	313	978.7	1014.1	31.1	18.9	25.2	-1.4	37.8	16	13.3	28+	13	0	17.2	65	30	- 36	20	4	3	0	0	2.6	12	9.4	16	20+	9	9	12	5.7	
EL PASO	1194	882.2	1012.0	30.6	13.9	22.4	-1.2	35.0	8	7.2	27+	8	0	6.1	36	13	- 15	12	2	2	0	0	0.6	18	14.3	NE	10	27	3	0	1.5	96
FORT WORTH	164	995.3	1015.6	30.6	16.7	23.7	-2.1	37.8	16	10.0	18	10	0	16.7	69	64	- T	37	9	4	0	0	1.2	16	13.0	33	17	13	8	9	4.7	
GALVESTON U	2			28.9	23.3	26.1	-0.6	30.6	30+	18.9	26	0	0			100	- 29	34	8		0	0			17.9	W	15					65
HOUSTON	15	1013.2	1015.2	31.1	21.1	25.9	-0.3	33.9	16	15.6	19	9	0	19.4	73	98	- 10	41	11	9	0	0	1.3	8	12.5	36	17	8	10	12	5.7	58
LUBBOCK	992	904.5	1014.5	27.2	11.1	19.3	-2.6	33.3	20+	6.7	25	3	0	10.0	61	17	- 43	11	6	5	0	0	1.9	18	10.3	35	16	20	4	6	3.0	
MIDLAND	869	917.0	1013.9	30.0	15.0	22.6	-1.6	35.6	20+	10.6	28+	7	0	10.0	50	35	- 10	27	4	1	0	0	1.9	15	11.6	4	17	21	1	8	3.0	
PORT ARTHUR	5	1015.2	1015.8	30.0	19.4	24.8	-0.9	32.8	8+	14.4	28+	5	0	19.4	75	153	29	85	8	6	0	0	1.3	7	25.0	SW	17	8	8	14	5.6	65
SAN ANGELO	580	948.5	1014.2	30.6	16.1	23.6	-2.2	37.2	8	7.8	27	11	0	13.9	62	46	- 22	31	4	2	0	0	2.1	16	10.7	20	19+	16	6	8	4.4	
SAN ANTONIO	240	987.5	1015.1	30.6	18.3	24.4	-1.4	36.7	16	11.1	27+	11	0	17.2	70	76	- 13	45	8	3	0	0	1.1	11	13.0	N	17	7	16	7	5.8	63
VICTORIA	32	1010.8	1014.8	31.1	20.6	25.8	-0.4	35.0	16+	13.9	27	12	0	20.0	76	109	1	32	13	7	0	0	1.5	9	17.9Y	N	5	6	10	14	6.5	
WACO	153	997.6	1015.4	30.6	18.9	24.6	-1.5	36.1	3	12.8	27	9	0	16.7	66	142	72	48	9	4	0	0	1.3	15	10.3	34	24	10	10	10	5.3	
WICHITA FALLS	303	978.7	1014.8	31.1	15.0	23.2	-2.1	40.0	8	10.0	12+	11	0	13.9	61	56	- 3	34	5	5	0	0	2.1	14	13.4	35	16	17	6	7	3.8	
UTAH																																
MILFORD	1533	847.3		26.1	6.1	16.1	-1.2	33.9	7	- 3.9	22	5	5			3	- 8	2	2		0	0						18	7	5	3.1	
SALT LAKE CITY	1286	872.7	1015.3	25.0	7.8	16.3	-1.7	33.3	10	- 0.6	23	1	2	2.2	44	14	1	13	4	4	0	0	1.1	17	17.0	S	14	12	12	6	4.7	85
WENDOVER	1291	872.0	1015.7	24.4	11.1	17.5	-1.8	32.2	13+	2.2	21	2	0			2	- 7	2	1		0	0										
VERMONT																																
BURLINGTON	101	1005.8	1018.1	22.2	10.0	16.1	1.4	28.3	21	2.8	29	0	0	11.1	76	52	- 32	29	9	1	0	0	0.6	19	11.2	NW	12	10	10	10	5.5	75
VIRGINIA																																
LYNCHBURG	279			26.7	13.3	20.0	-0.4	31.7	24	7.2	13	0	0			44	- 41	27	4		0	0			7.6	W	11+	16	4	10	4.2	73
NORFOLK	7	1018.0	1018.8	26.7	17.2	21.9	-0.6	31.7	25	12.8	23+	0	0	16.1	71	38	- 69	29	7	3	0	0	1.3	4	9.4	SW	26+	13	8	9	5.0	83
RICHMOND	50	1013.2	1019.1	28.9	14.4	21.6	0.4	33.3	25	9.4	13	3	0	14.4	70	45	- 47	37	3	2	0	0	0.6	7	6.7	W	11	15	8	7	4.5	76
ROANOKE	350	977.7	1019.5	26.1	12.2	19.3	-1.3	31.1	24+	7.8	13	0	0	11.7	67	11	- 72	6	4	0	0	0	0.4	28	9.4	30	6	13	8	9	4.6	
WALLOPS ISLAND	3			25.6	16.7	21.1		31.1	4	11.7	30	0	0			60		33	5		0	0			14.3Y	SSE	26+					
WASHINGTON																																
OLYMPIA	59	1010.5	1017.7	20.6	8.3	14.3	-0.4	28.3	5	1.7	20	0	0	10.6	83	64	11	25	9	0	0	0	1.3	21	9.4	22	14+	7	7	16	6.8	

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	No. of days: Max 32.2 °C or above	No. of days: Min. 0 C or lower	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	No. of days: 25 mm. or more	No. of days: With thunderstorms	Snow, Sleet: Total	Snow, Sleet: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Fastest mile (1.6 kilometers): Speed	Fastest mile: Direction	Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	M.	Mb.	Mb.	C.	C.	C.	C.	C.		C.				C.	%	Mm.	Mm.	Mm.			Mm.	Mm.	M.p.s.		M.p.s.							%
WASHINGTON																																
QUILLAYUTE	55	1010.2	1017.8	18.9	8.3	13.4	-0.6	30.0	5	2.2	20	0	0	11.1	87	215	96	105	13	1	0	0	0.5	22	8.5	S	16	6	9	15	6.7	43
SEATTLE TACOMA	122	1001.4	1017.7	18.9	11.1	15.1	-0.4	26.7	5	7.2	28	0	0	11.1	81	49	- 3	18	10	1	0	0	0.6	21	12.5	21	15	6	6	18	7.2	54
SPOKANE	718	931.9	1014.9	22.2	7.8	14.9	-1.1	30.0	9	1.7	20+	0	0	6.1	60	16	- 3	8	7	0	0	0	1.5	21	15.2	SW	14	6	11	13	6.1	65
STAMPEDE PASS R	1206	881.1		14.4	6.7	10.4	-0.7	24.4	5	0.0	18	0	1			228	117	61	13		46	T						7	6	17	6.8	
WALLA WALLA U	289			25.0	12.8	18.7	-0.2	33.3	6	7.2	20	3	0			37	17	17	7		0	0			11.2	NW	15	12	8	10	5.2	67
YAKIMA	321	977.3	1015.6	24.4	8.3	16.1	-0.2	30.0	9+	1.7	20	0	0	6.7	56	8	- 1	3	4	0	0	0	2.0	29	11.2	30	18+	13	7	10	4.7	
WEST INDIES																																
SAN JUAN P.R.	4	1012.5	1015.0	31.1	23.9	27.7	0.7	32.8	28	22.8	25	4	0	24.4	86	134	- 38	37	20	8	0	0	2.4	9	11.2	E	18	4	15	11	6.4	78
SWAN ISLAND	9			30.6	25.6	28.2	-0.2	32.2	5+	22.2	7	3	0			198	66	87	17		0	0						0	16	14	7.4	
WEST VIRGINIA																																
BECKLEY	763	931.9	1019.6	21.7	10.6	16.2	-1.4	27.8	24	3.9	27	0	0	11.7	77	56	- 23	24	10	2	0	0	1.5	16	12.5	14	18	11	7	12	5.6	
CHARLESTON	286	984.8	1018.8	25.0	13.3	19.1	-1.1	29.4	3	7.2	27	0	0	14.4	82	84	10	49	10	1	0	0	0.5	14	8.0	29	9	5	14	11	6.1	
ELKINS	600	949.5		23.3	8.9	16.3	-0.7	28.3	24	1.1	30	0	0			76	- 2	33	7		0	0			7.2	16	18+	4	12	14	7.0	
HUNTINGTON	252	989.2	1019.0	25.6	13.3	19.4	-0.7	30.0	24+	7.2	28+	0	0	14.4	79	29	- 36	10	7	1	0	0	0.7	17	7.2	25	10	10	9	11	5.6	
PARKERSBURG U	187			25.6	13.9	19.8	-0.3	30.6	23	6.7	30	0	0			78	9	32	8		0	0			9.4	SE	18					59
WISCONSIN																																
GREEN BAY	208	989.5	1015.0	22.8	10.6	16.4	0.6	30.6	3	4.4	29+	0	0	11.1	75	84	10	30	13	5	0	0	1.4	22	11.2	SE	4	8	12	10	6.1	47
LA CROSSE	198	990.5	1014.8	22.2	11.1	16.7	-0.1	31.1	3	3.9	26	0	0	12.8	81	130	41	57	10	4	0	0	1.1	22	10.3	22	15+	9	8	13	6.1	
MADISON	262	983.7	1015.1	22.2	8.9	15.6	-0.5	30.0	3	2.8	28	0	0	11.7	79	113	29	32	12	4	0	0	1.5	22	13.0	SE	19	10	7	13	5.8	63
MILWAUKEE	205	990.5	1015.6	22.8	12.2	17.5	1.8	31.1	3	5.0	28	0	0	13.3	79	85	16	31	12	5	0	0	2.0	21	14.8	SW	6	11	7	12	5.5	64
WYOMING																																
CASPER	1627	838.1	1014.3	23.3	3.9	13.6	-1.8	31.1	11	- 0.6	29+	0	5	0.0	45	8	- 15	4	6	4	T	T	2.8	24	20.6	29	14	10	11	9	4.9	
CHEYENNE	1867	813.8	1014.5	22.8	5.6	14.2	-0.6	30.6	11	1.1	17	0	0	- 1.1	39	5	- 23	5	2	1	0	0	2.8	30	21.5	N	7	14	10	6	4.1	72
LANDER	1696	830.0	1014.3	22.2	5.6	13.8	-1.2	29.4	1	- 1.7	22	0	3	0.6	45	12	- 14	5	5	5	0	0	1.6	26	20.6	W	2	11	11	8	4.9	78
SHERIDAN	1208	878.8	1014.8	21.7	4.4	13.3	-1.6	28.9	1	- 1.1	22	0	2	5.6	62	54	24	30	7	6	0	0	0.7	31	18.8	NW	12	13	7	10	4.8	73

Data from airport unless otherwise specified. U indicates Urban, R indicates Rural, sites.

Precipitation data in column headed "Greatest in 24 hours" are computed on a 24-hour basis without regard to calendar day - data may include precipitation with a measurable amount from the last day of the previous month or the first day of the following month.

Wind directions under resultant direction are in tens of degrees.

Value entered in column "Fastest Mile" is the highest observed 1-minute wind speed when the direction is in tens of degrees. These stations are not equipped with a recording anemometer from which "Fastest Mile" data can be evaluated.

B Number of days maximum 21.1°C. or above for Alaskan Stations.
Y Peak Gust.
\+ And also on an earlier date or dates.
Ø Station pressures apply to elevations shown in the "Elevations - Station Pressure" table of the annual issue of this publication.

Data in this table are obtained by conversion from data in the English Units table.

HEATING DEGREE DAYS

(Base 65°F.)

SEPTEMBER 1968

State and station	Current season: This month	Current season: Period July through this month	Normals July through this month
ALABAMA			
BIRMINGHAM	1	1	6
HUNTSVILLE	7	7	12
MOBILE	0	0	0
MONTGOMERY	0	0	0
ALASKA			
ANCHORAGE	530	891	3
ANNETTE	342	639	777
BARROW	958	2373	2678
BARTER ISLAND	974	2396	2497
BETHEL	681	1245	1325
COLD BAY	538	1300	1424
FAIRBANKS	657	915	1145
JUNEAU	516	1045	1122
KING SALMON	647	1247	1148
KOTZEBUE	753	1282	1550
MC GRATH	735	1152	1179
NOME	760	1491	1670
SHEMYA	541	1629	1553
ST. PAUL ISLAND	652	1780	1756
YAKUTAT	587	1322	1159
ARIZONA			
FLAGSTAFF	267	469	315
PHOENIX	0	0	0
TUCSON	0	0	0
WINSLOW	43	46	6
YUMA	0	0	0
ARKANSAS			
FORT SMITH	0	0	12
LITTLE ROCK	3	3	9
CALIFORNIA			
BAKERSFIELD	3	3	0
BISHOP	47	62	42
BLUE CANYON	93	262	204
EUREKA U	220	659	785
FRESNO	12	12	0
LONG BEACH	0	0	12
LOS ANGELES	1	4	71
LOS ANGELES U	0	0	6
MT SHASTA R	140	290	182
OAKLAND	16	105	148
RED BLUFF	1	4	0
SACRAMENTO	2	5	12
SANDBERG R	90	186	30
SAN DIEGO	0	0	21
SAN FRANCISCO	56	206	219
SAN FRANCISCO U	92	403	468
SANTA MARIA	54	113	288
STOCKTON	2	6	6
COLORADO			
ALAMOSA	370	553	443
COLORADO SPRINGS	149	223	166
DENVER	145	190	132
GRAND JUNCTION	86	98	30
PUEBLO	20	37	54
CONNECTICUT			
BRIDGEPORT	12	13	66
HARTFORD	56	72	105
NEW HAVEN	38	46	99
DELAWARE			
WILMINGTON	7	7	51
DIST.OF COLUMBIA			
WASH NATL AP	0	0	33
FLORIDA			
APALACHICOLA U	0	0	0
DAYTONA BEACH	0	0	0
FORT MYERS	0	0	0
JACKSONVILLE	0	0	0
KEY WEST	0	0	0
LAKELAND U	0	0	0
MIAMI	0	0	0
ORLANDO	0	0	0
PENSACOLA	0	0	0
TALLAHASSEE	0	0	0
TAMPA	0	0	0
WEST PALM BEACH	0	0	0
GEORGIA			
ATHENS	1	1	12
ATLANTA	0	2	18
AUGUSTA	0	0	0
COLUMBUS	0	0	0
MACON	0	0	0
ROME	6	8	24
SAVANNAH	0	0	0
IDAHO			
BOISE	119	178	132
LEWISTON	115	145	123
POCATELLO	260	412	172
ILLINOIS			
CAIRO U	3	3	36
CHICAGO O HARE	59	85	129
CHICAGO MIDWAY	41	54	81
MOLINE	96	119	108
PEORIA	68	80	93
ROCKFORD	95	131	129
SPRINGFIELD	31	34	72
INDIANA			
EVANSVILLE	15	15	66
FORT WAYNE	82	112	114
INDIANAPOLIS	49	66	90
SOUTH BEND	69	107	117
IOWA			
BURLINGTON	65	69	93
DES MOINES	92	105	108
DUBUQUE	149	184	199
SIOUX CITY	102	109	117
WATERLOO	163	212	169
KANSAS			
CONCORDIA	47	53	57
DODGE CITY	17	18	33
GOODLAND	82	109	87
TOPEKA	35	36	57
WICHITA	22	27	33
KENTUCKY			
COVINGTON	32	36	75
LEXINGTON	20	25	54
LOUISVILLE	10	11	54
LOUISIANA			
ALEXANDRIA	0	0	0
BATON ROUGE	0	0	0
LAKE CHARLES	0	0	0
NEW ORLEANS	0	0	0
SHREVEPORT	0	0	0
MAINE			
CARIBOU	199	438	529
PORTLAND	110	164	260
MARYLAND			
BALTIMORE	4	5	48
MASSACHUSETTS			
BLUE HILL OBS R	81	104	130
BOSTON	46	56	69
NANTUCKET	78	126	127
WORCESTER	79	118	187
MICHIGAN			
ALPENA	143	344	446
DETROIT	42	50	87
DETROIT M WAYNE CO	71	91	122
DETROIT WILLOW RUN	86	137	90
FLINT	118	206	165
GRAND RAPIDS	90	156	170
HOUGHTON LAKE	159	330	382
LANSING	111	192	166
MARQUETTE U	166	353	380
MUSKEGON	103	178	160
SAULT STE MARIE	172	486	480
MINNESOTA			
DULUTH	254	484	510
INTERNATIONAL FALLS	272	491	546
MINNEAPOLIS	143	181	242
ROCHESTER	214	315	245
ST CLOUD	188	272	300
MISSISSIPPI			
JACKSON	0	0	0
MERIDIAN	0	0	0
MISSOURI			
COLUMBIA	16	16	54
KANSAS CITY	13	14	39
ST JOSEPH	39	40	66
ST LOUIS	14	16	60
SPRINGFIELD	33	33	45
MONTANA			
BILLINGS	147	205	207
GLASGOW	235	351	348
GREAT FALLS	261	392	339
HAVRE	273	384	387
HELENA	294	419	384
KALISPELL	354	567	470
MILES CITY	159	204	186
MISSOULA	305	412	411
NEBRASKA			
GRAND ISLAND	84	94	114
LINCOLN U	48	52	81
NORFOLK	129	139	120
NORTH PLATTE	150	185	129
OMAHA	60	63	96
SCOTTSBLUFF	171	217	138
VALENTINE	179	218	186
NEVADA			
ELKO	195	292	268
ELY	316	477	305
LAS VEGAS	1	1	0
RENO	180	271	334
WINNEMUCCA	217	338	244
NEW HAMPSHIRE			
CONCORD	133	243	233
MT WASHINGTON OBS	640	1775	1749
NEW JERSEY			
ATLANTIC CITY	45	63	39
ATLANTIC CITY U	1	1	29
NEWARK	6	6	39
TRENTON U	9	9	57
NEW MEXICO			
ALBUQUERQUE	12	14	12
CLAYTON	68	92	72
RATON	161	223	163
ROSWELL	26	26	18
NEW YORK			
ALBANY	76	128	157
BINGHAMTON	106	197	288
BUFFALO	58	98	197
NEW YORK U	3	3	30
J.F. KENNEDY	3	3	36
NEW YORK LA GUARDIA	3	3	27
ROCHESTER	67	118	166
SYRACUSE	54	122	166
NORTH CAROLINA			
ASHEVILLE	42	62	75
CAPE HATTERAS R	0	0	0
CHARLOTTE	0	0	6
GREENSBORO	0	1	33
RALEIGH	0	0	21
WILMINGTON	0	0	0
NORTH DAKOTA			
BISMARCK	238	354	284
FARGO	201	298	284
WILLISTON	225	341	335
OHIO			
AKRON	48	76	105
CINCINNATI OBS	31	38	54
CLEVELAND	93	153	116
COLUMBUS	57	83	90
DAYTON	56	76	84
MANSFIELD	48	74	145
TOLEDO	71	96	133
YOUNGSTOWN	73	144	145
OKLAHOMA			
OKLAHOMA CITY	0	0	15
TULSA	1	1	18
OREGON			
ASTORIA	216	491	486
BURNS U	234	407	259
EUGENE	100	148	197
MEACHAM	299	613	496
MEDFORD	56	87	78
PENDLETON	73	88	111
PORTLAND	123	183	167
SALEM	142	238	179
SEXTON SUMMIT R	184	463	333
PENNSYLVANIA			
ALLENTOWN	33	40	90
ERIE	55	101	127
HARRISBURG	18	21	63
PHILADELPHIA	14	14	60
PITTSBURGH	54	93	114
PITTSBURGH U	25	35	80
READING U	9	9	54
SCRANTON	55	83	151
WILLIAMSPORT	46	72	120
RHODE ISLAND			
BLOCK ISLAND	40	57	94
PROVIDENCE	59	77	112
SOUTH CAROLINA			
CHARLESTON	0	0	0
CHARLESTON U	0	0	0
COLUMBIA	0	0	0
GNVLE-SPARTANBURG	1	2	9
SOUTH DAKOTA			
ABERDEEN	207	288	239
HURON	190	238	186
RAPID CITY	176	248	199
SIOUX FALLS	152	180	212
TENNESSEE			
BRISTOL	19	23	51
CHATTANOOGA	1	1	18
KNOXVILLE	5	5	30
MEMPHIS	1	1	18
NASHVILLE	4	4	30
OAK RIDGE R	11	11	39
TEXAS			
ABILENE	0	0	0
AMARILLO	6	6	18
AUSTIN	0	0	0
BROWNSVILLE	0	0	0
CORPUS CHRISTI	0	0	0
DALLAS	0	0	0
DEL RIO	0	0	0
EL PASO	0	0	0
FORT WORTH	0	0	0
GALVESTON U	0	0	0
HOUSTON	0	0	0
LUBBOCK	31	32	18
MIDLAND	0	0	0
PORT ARTHUR	0	0	0
SAN ANGELO	0	0	0
SAN ANTONIO	0	0	0
VICTORIA	0	0	0
WACO	0	0	0
WICHITA FALLS	0	0	0
UTAH			
MILFORD	179	215	99
SALT LAKE CITY	166	218	81
WENDOVER	122	160	48
VERMONT			
BURLINGTON	127	263	300
VIRGINIA			
LYNCHBURG	7	9	51
NORFOLK	0	0	0
RICHMOND	0	0	36
ROANOKE	11	23	51
WALLOPS ISLAND	0	0	
WASHINGTON			
OLYMPIA	214	391	337
QUILLAYUTE	261	603	568
SEATTLE TACOMA	179	282	280
SPOKANE	199	307	202
STAMPEDE PASS R	424	995	957
WALLA WALLA U	67	79	87
YAKIMA	132	216	156
WEST VIRGINIA			
BECKLEY	124	187	155
CHARLESTON	35	48	63
ELKINS	122	184	169
HUNTINGTON	26	37	63
PARKERSBURG U	31	34	60
WISCONSIN			
GREEN BAY	130	251	252
LA CROSSE	120	142	184
MADISON	159	259	239
MILWAUKEE	82	136	264
WYOMING			
CASPER	251	362	214
CHEYENNE	221	343	260
LANDER	251	358	229
SHERIDAN	267	377	275

Data from airport unless otherwise specified.
U indicates Urban, R indicates Rural, sites.

STORM SUMMARY

SEPTEMBER 1968

STATE	TORNADOES					HAILSTORMS				WINDSTORMS				LIGHTNING				‡ HEAVY SNOWSTORMS AND BLIZZARDS				# ICE STORMS				∅ ALL OTHER			
	NUMBER	DAYS	DEATHS	INJURIES	†DAMAGE	DEATHS	INJURIES	†DAMAGE PROPERTY	†DAMAGE CROPS	DEATHS	INJURIES	†DAMAGE PROPERTY	†DAMAGE CROPS	DEATHS	INJURIES	†DAMAGE PROPERTY	†DAMAGE CROPS	DEATHS	INJURIES	†DAMAGE PROPERTY	†DAMAGE CROPS	DEATHS	INJURIES	†DAMAGE PROPERTY	†DAMAGE CROPS	DEATHS	INJURIES	†DAMAGE PROPERTY	†DAMAGE CROPS
Alabama																										0	0	4	3
Alaska										0	0	5	0																
Arizona *																													
Arkansas										0	0	0	5													0	0	3	0
California *																													
Colorado *																													
Connecticut										0	0	4	0													0	0	3	0
Delaware *																													
Florida	5	4	0	1	4									3	0	0	0									0	0	2	0
Georgia						0	0	3	0	0	0	3	0	1	3	2	0												
Hawaii *																													
Idaho	1	1	0	0	?																								
Illinois *																													
Indiana										0	0	4	0																
Iowa	3	1	0	0	6									0	1	4	0									0	0	5	0
Kansas						0	0	5	7	0	3	5	6	0	0	4	0									0	0	4	0
Kentucky						0	0	3	5			?	?	2	0	4	0												
Louisiana	2	2	0	0	3					0	3	4	0																
Maine										0	0	4	0													0	0	3	0
Maryland										0	0	3	0													2	1	5	0
Massachusetts										0	0	4	0													0	0	6	0
Michigan	3	2	0	1	4					0	0	5	0	0	2	4	0									0	0	4	0
Minnesota						0	0	0	5					2	0	5	0												
Mississippi	1	1	0	0	4																								
Missouri	1	1	0	1	4					0	0	5	0	0	0	5	0												
Montana														0	0	3	0	0	0	4	5								
Nebraska										0	1	5	0	0	0	3	0												
Nevada *																													
New Hampshire										0	0	4	0													0	0	3	0
New Jersey *																													
New Mexico						0	1	4	0	0	0	3	0	0	0	4	0												
New York												4				4												5	
North Carolina *																													
North Dakota						0	0	2	4																				
Ohio *																													
Oklahoma						0	0	4	3	0	0	3	3	0	2	5	4									0	0	3	0
Oregon *																													
Pacific Area *																													
Pennsylvania	1	1	0	0	4					3	1	5	0	0	0	4	0									0	0	3	0
Puerto Rico *																													
Rhode Island										0	0	4	0													0	0	3	0
South Carolina										1	0	2	0	0	0	3	0									0	0	4	0
South Dakota	1	1	0	0	4																								
Tennessee	1	1	0	0	3					0	0	5	0	0	0	3	0												
Texas	5	5	0	0	5	0	0	2	0	0	0	4	3	5	3	3	0									0	0	3	0
Utah *																													
Vermont										0	0	3	0	0	0	2	0									0	0	4	0
U.S. Virgin Is. *																													
Virginia *																													
Washington N																													
West Virginia *																													
Wisconsin										0	0	4	0	0	0	4	0												
Wyoming	1	1	0	0	1	0	0	°5	C					0	3	0	0												

° Includes crop damage
C Crop damage
N No report received by printing deadline

* No occurrence of storms or unusual weather phenomena.
‡ Includes heavy sleet storm.
# Freezing drizzle and freezing rain, commonly known as glaze.
ø For breakdown of "All Others", and for detailed listing of other storms, see the Environmental Data Service, ESSA, monthly publication STORM DATA.

† Storm damages are placed in categories varying from 1 to 9 as follows:
1 Less than $50
2 $50 to $500
3 $500 to $5,000
4 $5,000 to $50,000
5 $50,000 to $500,000
6 $500,000 to $5,000,000
7 $5,000,000 to $50,000,000
8 $50,000,000 to $500,000,000
9 $500,000,000 to $5,000,000,000

GENERAL SUMMARY OF RIVER AND FLOOD CONDITIONS
SEPTEMBER 1968

Elmer R. Nelson, Office of Hydrology

The North Fork of the Solomon River at Lenora, Kans., reached its highest stage during September in 11 years. Flooding reported elsewhere in continental United States was minor.

ATLANTIC SLOPE DRAINAGE

According to the U. S. Geological Survey, streamflow records indicate that the drought conditions during September in the eastern portion of the Piedmont and the western portion of the Coastal Plain in North Carolina were the most severe since 1932. Streamflow in the Cape Fear River near William O. Huske Lock and Dam (near Tarheel, N. C.) was near the 50-year low during September. A record low stage of 0.30 foot for September was recorded at Fort Bragg, N. C., during the month. The previous low was 1.2 feet in 1966. In the Tar River Basin streamflow conditions were the lowest in 20 to 40 years.

MISSISSIPPI SYSTEM

Upper Mississippi Basin.--Locally heavy rain over the lower half of the Cottonwood Drainage on the 22d produced light flooding on the Cottonwood River near New Ulm, Minn., on the 23d-25th. The crest on the 24th was 0.8 foot above flood stage. The damage reported, if any, was light.

The Maquoketa River at Maquoketa, Iowa, rose to flood stage on the 23d. It remained at this level for a few hours before receding. No damage was reported.

Missouri Basin.--Locally heavy rains of up to 4.6 inches in northwest Iowa during the late afternoon and evening of the 22d caused the Little Sioux River to rise to within 1 foot of bankfull stage at Spencer, Iowa, on the 23d. Lesser rises occurred in the lower reaches.

Moderate flooding occurred on Buffalo Creek at Jamestown, Kans., on the 7th. A similar rise occurred during August so little additional damage was reported. The North Fork of the Solomon River at Lenora, Kans., exceeded flood stage by 5 feet on the 7th. The crest of 15.0 feet was the highest stage at Lenora since June 1957 when a stage of 16.5 feet was reported. There was some overflow on Bow Creek below Lenora, Kans., on the 7th.

White Basin.--The Cache River at Patterson, Ark., exceeded flood stage on the 21st and continued in flood into October. The crest on the 23d and 24th was 0.6 foot above flood stage. This minor flooding was due to 3 to 6 inches of rain on the 15-17th. No damages occurred from this overflow during September.

Red Basin.--There were three periods of minor flooding on the Sulphur River at Hagansport, Tex., during the month. The first overflow occurred on the 9-11th, the 2d on the 18-20th, and the 3d overflow on the 25-27th. The highest crest occurred on the 18th and was 6.4 feet above flood stage. The other crests on the 10th and 25th ranged from 3 to 5 feet above flood stage.

WEST GULF OF MEXICO DRAINAGE

Minor flooding occurred on the Sabine River at Logansport, La., on the 15-20th. The crest on the 17th was 0.7 foot above flood stage.

The San Jacinto River at Lake Houston, Tex., exceeded the spillway elevation on the 18-26th. The crest on the 20th was 0.23 foot above flood stage. Damage from this slight overflow is believed to be negligible.

Locally heavy rainfall (5 to 9 inches) on the 14th and 15th caused brief minor flooding on the upper San Antonio River at Falls City, Tex. The crest on the 15th was 2.7 feet above flood stage. No property damage was reported from this overflow.

Heavy flow from the Conchos River in Mexico caused flooding on the Rio Grande River at Presidio, Tex., on the 15-26th. The crest on the 20th was 5.9 feet above flood stage.

PACIFIC SLOPE DRAINAGE

Columbia Basin.--A heavy thunderstorm caused a flash flood on Sullivan Creek, northwest of Flathead Lake, in Montana on the 11th. Damage was negligible and localized.

FLOOD STAGE DATA

(All dates in September unless otherwise specified) SEPTEMBER 1968

River and station	Flood stage	Above flood stages -dates		Crest *	
		From–	To–	Stage	Date
MISSISSIPPI SYSTEM	Ft.			Ft.	
Upper Mississippi Basin					
Cottonwood: New Ulm(nr), Minn.	11	23	25	11.8	24
Maquoketa: Maquoketa, Iowa	13	23	23	13.0	23
Missouri Basin					
Buffalo Creek: Jamestown, Kans.	16	7	7	17.6	7
North Fork Solomon: Lenora, Kans.	10	7	7	15.0	7
White Basin					
Cache: Patterson, Ark.	7	21	1/	7.6	23,24
MISSISSIPPI SYSTEM	Ft.			Ft.	
Red Basin					
Sulphur: Hagansport, Tex.	38	9	11	41.2	10
		18	20	44.4	18
		25	27	42.1	25
WEST GULF OF MEXICO DRAINAGE					
Sabine: Logansport, La.	25	15	20	25.7	17
San Jacinto: Lake Houston, Tex.	44.5	18	26	44.7	20
San Antonio: Falls City, Tex.	12	15	15	14.7	15
Rio Grande: Presidio, Tex.	13	15	26	18.9	20

* Provisional
1/ Continued at end of month

RAWINSONDE DATA

Average monthly values

ALBANY, N. Y. — 1010 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	86	12.1	11.0	22	.6
1000	30	166	13.0	11.0	22	.9
950	30	601	14.5	9.0	28	2.3
900	30	1,057	12.1	5.8	29	3.5
850	30	1,534	9.7	2.1	30	4.0
800	30	2,036	7.3	-3.7	30	4.5
750	30	2,566	5.1	-8.1	28	5.3
700	30	3,127	2.4	-11.5	28	6.1
650	30	3,719	-.6	-14.4	28	7.9
600	30	4,359	-3.8	-19.0	27	8.8
550	30	5,036	-7.8	-23.7	27	9.2
500	30	5,777	-12.3	-28.5	27	9.4
450	30	6,572	-17.7	-33.1	27	10.7
400	30	7,446	-24.0	-39.0	27	12.0
350	30	8,406	-31.1	-44.3	27	11.9
300	30	9,480	-39.5	-49.1	27	14.0
250	30	10,704	-48.4		27	15.0
200	30	12,146	-55.6		27	14.4
175	30	12,994	-57.0		27	14.8
150	30	13,969	-57.7		27	14.2
125	30	15,115	-59.2		27	10.1
100	30	16,509	-59.7		27	7.8
80	30	17,907	-58.1		27	4.9
70	30	18,747	-57.7		28	2.9
60	30	19,722	-57.0		29	2.1
50	30	20,880	-55.5		32	1.0
40	30	22,306	-53.8		33	1.2
30	29	24,164	-51.3		30	2.2
25	28	25,357	-49.4		29	2.6
20	27	26,824	-46.8		28	4.2
15	25	28,735	-43.8		28	5.3
10	14	31,462	-41.5			
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ALBUQUERQUE, N. MEX. — 840 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	1,619	13.6	3.0	09	1.6
1000	29	117				
950	29	558				
900	29	1,027				
850	29	1,518				
800	29	2,032	15.1	.4	22	2.6
750	29	2,570	12.2	-3.4	25	3.9
700	29	3,152	8.3	-6.2	27	4.5
650	29	3,752	3.7	-9.1	27	4.3
600	29	4,405	-1.4	-13.7	27	5.1
550	29	5,082	-6.1	-19.6	28	6.1
500	29	5,832	-10.[illegible]	-27.2	28	7.4
450	29	6,629	-15.9	-33.5	28	9.0
400	29	7,514	-22.2	-39.6	28	9.8
350	29	8,482	-30.[illegible]	-45.7	27	11.4
300	28	9,559	-38.6	-52.3	28	13.6
250	28	10,788	-47.7		27	16.2
200	28	12,235	-55.6		26	19.6
175	28	13,080	-58.[illegible]		27	20.7
150	28	14,041	-61.7		27	19.5
125	28	15,162	-64.7		27	14.3
100	28	16,520	-65.4		28	8.4
80	28	17,886	-62.5		27	3.7
70	28	18,714	-60.2		25	1.7
60	28	19,679	-58.6		30	.3
50	28	20,828	-57.2		10	1.8
40	28	22,244	-55.4		08	2.2
30	28	24,093	-52.1		08	4.1
25	28	25,276	-50.7		09	4.4
20	28	26,736	-48.6		08	4.5
15	25	28,644	-45.8		08	4.9
10	24	31,371	-41.1		08	6.0
7	13	33,804	-38.0		08	6.4
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AMARILLO, TEXAS — 892 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	1,095	13.6	8.4	21	3.2
1000	30	121				
950	30	561				
900	30	1,029				
850	30	1,508	16.3	6.1	23	8.1
800	30	2,024	14.9	2.0	25	4.8
750	30	2,563	11.6	-1.2	27	3.7
700	30	3,141	7.5	-3.9	28	3.6
650	30	3,744	3.0	-7.8	27	3.0
600	30	4,391	-1.2	-14.1	27	3.5
550	30	5,076	-5.5	-20.1	26	5.1
500	30	5,822	-10.7	-26.3	27	6.1
450	30	6,620	-16.3	-32.1	27	7.1
400	30	7,501	-22.7	-37.9	27	9.0
350	30	8,467	-30.2	-43.8	27	11.0
300	30	9,547	-38.3	-50.0	26	13.9
250	30	10,779	-46.9		26	17.5
200	30	12,230	-55.3		26	21.7
175	30	13,076	-58.6		27	21.5
150	30	14,037	-62.1		27	20.0
125	30	15,157	-64.4		27	16.2
100	29	16,515	-64.9		27	8.7
80	29	17,881	-62.5		27	4.6
70	29	18,708	-60.8		27	2.3
60	29	19,671	-59.2		22	.3
50	29	20,818	-57.5		09	1.7
40	29	22,233	-55.5		07	2.3
30	29	24,080	-52.3		08	4.2
25	29	25,265	-50.3		08	4.3
20	29	26,729	-48.1		09	3.5
15	27	28,633	-45.7		08	4.2
10	24	31,360	-41.4		08	6.4
7	10	33,780	-38.7			
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* ANCHORAGE, ALASKA — 1001 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	45	6.7	1.5	04	1.4
1000	30	56			02	3.1
950	30	480	6.5	-.6	01	2.8
900	30	920	4.0	-2.6	05	2.3
850	30	1,382	.8	-4.8	08	1.7
800	30	1,866	-2.6	-7.0	11	1.8
750	30	2,376	-5.9	-10.8	13	2.1
700	30	2,913	-9.0	-15.7	14	1.6
650	30	3,483	-12.5	-20.6	17	1.8
600	30	4,090	-16.6	-24.5	18	2.2
550	30	4,737	-21.2	-29.8	18	2.6
500	30	5,435	-26.1	-34.7	20	2.8
450	30	6,185	-31.6	-40.2	21	3.7
400	30	7,013	-38.0	-45.2	22	4.7
350	30	7,920	-44.5	-50.9	23	6.3
300	30	8,937	-50.9		24	8.2
250	30	10,115	-53.1		24	9.0
200	30	11,569	-48.9		25	10.4
175	30	12,447	-48.5		25	10.2
150	30	13,462	-48.3		25	10.7
125	30	14,662	-48.6		25	10.4
100	30	16,129	-48.9		25	9.6
80	29	17,594	-49.8		25	9.0
70	29	18,466	-50.3		25	8.7
60	29	19,470	-50.8		25	8.6
50	28	20,656	-51.4		25	9.1
40	28	22,104	-51.7		25	8.0
30	28	23,969	-51.6		25	7.7
25	28	25,152	-51.1		25	8.2
20	27	26,603	-50.4		26	7.5
15	26	28,490	-49.2		26	6.7
10	19	31,201	-46.4		26	7.4
7	9	33,620	-42.7			
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* ANNETTE, ALASKA — 1010 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	37	10.3	8.4	14	2.8
1000	30	118	9.9	7.4	16	3.4
950	30	540	7.6	5.4	17	6.3
900	30	987	4.8	2.8	18	7.1
850	30	1,452	2.2	.1	19	7.1
800	30	1,940	-.6	-5.0	21	7.7
750	30	2,451	-2.9	-7.4	22	8.7
700	30	3,000	-5.5	-11.2	22	9.9
650	30	3,572	-8.7	-14.3	23	11.5
600	30	4,196	-12.3	-18.0	23	12.1
550	30	4,851	-16.4	-23.3	24	12.9
500	30	5,568	-20.8	-27.2	24	14.2
450	30	6,335	-26.0	-32.8	25	15.4
400	30	7,184	-31.8	-38.6	25	16.5
350	30	8,115	-38.2	-42.9	25	17.4
300	30	9,159	-45.6		25	19.2
250	30	10,356	-52.1		26	21.4
200	30	11,794	-53.3		27	20.3
175	30	12,656	-52.3		27	19.3
150	29	13,651	-52.6		27	17.1
125	29	14,826	-53.3		27	13.3
100	29	16,261	-53.5		27	10.7
80	29	17,696	-53.7		26	7.7
70	29	18,554	-53.8		26	6.1
60	29	19,544	-53.7		26	6.2
50	29	20,715	-53.7		26	4.3
40	29	22,149	-53.4		27	3.3
30	29	24,003	-52.6		26	2.9
25	27	25,182	-52.1		28	2.4
20	27	26,627	-51.4		26	3.2
15	23	28,526	-49.8		28	4.8
10	19	31,200	-46.7		27	6.7
7	13	33,593	-43.4		27	5.1
5	9	35,904	-38.8			

ATHENS, GEORGIA — 990 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	246	16.0	14.[illegible]	02	1.8
1000	30	157				
950	30	596	19.3	13.4	11	3.4
900	30	1,061	16.9	10.4	13	3.0
850	30	1,547	13.7	7.6	16	1.6
800	30	2,056	11.0	1.[illegible]	20	1.2
750	30	2,589	8.6	-3.4	23	1.9
700	30	3,161	5.8	-8.1	23	2.6
650	30	3,762	2.9	-13.2	25	3.8
600	30	4,409	-.3	-19.[illegible]	26	4.8
550	30	5,094	-4.4	-22.[illegible]	26	5.9
500	30	5,845	-9.3	-27.[illegible]	26	7.6
450	30	6,647	-14.9	-31.5	26	7.8
400	30	7,533	-21.3	-36.7	26	9.1
350	30	8,504	-28.5	-42.3	27	10.4
300	30	9,591	-36.7	-49.8	27	12.6
250	30	10,828	-46.0		27	14.8
200	30	12,280	-55.3		28	18.4
175	30	13,123	-59.2		28	19.0
150	30	14,080	-63.1		27	17.6
125	30	15,192	-66.2		27	12.8
100	30	16,544	-65.3		27	7.7
80	29	17,909	-63.0		30	2.9
70	29	18,734	-61.0		31	1.6
60	29	19,695	-59.1		04	1.8
50	27	20,844	-56.8		07	3.2
40	24	22,266	-54.0		09	4.8
30	22	24,122	-50.8		09	5.9
25	22	25,314	-49.1		09	6.6
20	22	26,784	-46.9		10	6.8
15	18	28,691	-44.7		09	7.5
10	15	31,425	-41.4		08	8.4
7	14	33,875	-36.9		10	7.2
5	6	36,177	-34.4			

* BARROW, ALASKA — 1012 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	8	.3	-1.5	08	.4
1000	30	104	-.2	-2.9	12	.3
950	30	513	-2.8	-6.4	29	1.2
900	30	940	-4.9	-10.5	30	1.6
850	30	1,388	-6.9	-13.2	28	2.2
800	30	1,859	-9.1	-16.2	27	2.7
750	30	2,357	-11.7	-19.7	27	3.2
700	30	2,882	-14.5	-24.5	26	3.8
650	30	3,438	-17.7	-27.6	26	4.2
600	30	4,035	-21.5	-32.0	26	4.4
550	30	4,667	-26.0	-35.6	26	4.6
500	30	5,354	-31.1	-38.7	25	4.7
450	30	6,089	-36.7	-44.3	25	5.5
400	30	6,900	-42.2	-49.2	27	5.1
350	30	7,793	-47.6		26	5.9
300	30	8,800	-52.6		26	6.[illegible]
250	30	[illegible],971	-54.0		27	7.1
200	30	11,418	-49.8		26	5.7
175	30	12,294	-48.7		26	5.1
150	29	13,313	-48.6		25	5.2
125	29	14,512	-48.8		25	4.7
100	26	15,986	-49.1		24	5.0
80	26	17,447	-49.7		24	4.7
70	26	18,319	-50.3		24	4.4
60	26	19,323	-50.9		25	4.9
50	26	20,507	-51.6		24	5.5
40	25	21,963	-52.1		24	5.7
30	21	23,804	-52.5		24	6.1
25	20	24,995	-52.1		23	5.8
20	15	26,419	-51.8		23	7.[illegible]
15	7	28,354	-50.3			
10						
7						
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BARTER IS., ALASKA — 1013 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	22	15	-.4	-1.9	19	1.2
1000	22	120	.2	-2.3	21	1.5
950	22	528	-1.9	-5.3	20	.9
900	22	959	-3.8	-7.2	22	2.0
850	22	1,409	-5.8	-9.4	24	3.2
800	22	1,883	-8.4	-13.5	24	4.1
750	22	2,380	-11.5	-16.5	24	4.6
700	22	2,907	-14.7	-20.9	23	4.4
650	22	3,465	-18.1	-24.6	23	5.4
600	22	4,059	-21.7	-29.4	24	7.3
550	22	4,692	-25.8	-35.3	23	8.4
500	22	5,380	-30.4	-39.1	23	9.9
450	22	6,113	-35.6	-43.4	23	11.2
400	22	6,931	-41.5	-47.6	23	12.5
350	22	7,826	-47.5		23	13.3
300	22	8,833	-52.9		23	13.3
250	22	10,003	-54.2		23	11.[illegible]
200	22	11,452	-49.3		23	9.3
175	22	12,329	-48.7		23	[illegible].3
150	22	13,343	-48.5		23	7.6
125	22	14,542	-48.5		23	7.5
100	22	16,009	-48.8		24	7.4
80	21	17,479	-49.6		23	6.6
70	21	18,351	-50.2		23	6.9
60	21	19,356	-50.8		23	6.9
50	20	20,549	-51.4		23	7.1
40	20	21,996	-52.0		23	6.8
30	18	23,869	-52.2		23	7.0
25	16	25,060	-51.8		24	6.5
20	15	26,527	-50.7		24	6.8
15	12	28,400	-49.8		24	6.7
10	8	31,178	-46.5			
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BETHEL, ALASKA — 1003 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	25	39	2.9	1.5	35	1.9
1000	25	61			01	3.2
950	25	479	3.6	-2.2	03	5.1
900	25	915	.9	-3.8	03	3.6
850	25	1,372	-2.1	-7.6	03	3.0
800	25	1,852	-4.[illegible]	-10.8	03	2.4
750	25	2,355	-7.8	-14.4	02	2.1
700	25	2,891	-10.8	-19.1	35	1.4
650	25	3,455	-14.[illegible]	-22.8	33	1.7
600	25	4,062	-17.7	-26.7	31	1.0
550	25	4,704	-22.[illegible]	-31.4	32	1.3
500	25	5,403	-26.8	-36.4	28	1.0
450	24	6,153	-32.2	-41.3	27	1.5
400	24	6,982	-38.3	-45.1	25	2.7
350	24	7,888	-44.7		29	4.3
300	24	8,903	-51.6		29	5.3
250	24	10,071	-55.5		29	6.3
200	24	11,514	-50.0		28	7.8
175	24	12,388	-49.0		27	8.3
150	24	13,400	-49.0		27	8.8
125	24	14,595	-49.1		27	8.3
100	24	16,058	-49.1		27	8.1
80	23	17,519	-49.8		26	8.4
70	23	18,391	-50.4		26	8.4
60	23	19,395	-50.[illegible]		27	7.9
50	23	20,580	-51.6		26	7.5
40	23	22,026	-52.1		26	7.7
30	22	23,895	-52.0		26	7.2
25	20	25,081	-51.4		26	7.0
20	19	26,532	-50.7		27	8.1
15	17	28,410	-49.4		27	8.0
10						
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* BISMARCK, N. DAK. — 954 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	505	8.6	5.5	33	.2
1000	30	112				
950	30	540			21	.6
900	30	993	12.2	4.0	26	3.2
850	30	1,471	10.5	.9	28	4.6
800	30	1,974	7.6	-1.6	29	5.2
750	30	2,498	4.9	-5.8	29	5.8
700	30	3,063	1.7	-8.5	30	7.2
650	30	3,651	-1.6	-11.4	30	7.9
600	30	4,291	-5.5	-15.8	29	9.5
550	30	4,961	-9.[illegible]	-20.1	29	9.8
500	30	5,698	-14.8	-24.8	29	9.5
450	30	6,482	-20.0	-30.9	29	9.3
400	30	7,351	-26.4	-36.5	29	8.8
350	30	8,303	-33.6	-42.7	29	11.2
300	30	9,368	-41.6	-48.8	28	11.9
250	30	10,582	-50.3		28	12.0
200	29	12,026	-55.[illegible]		28	12.5
175	29	12,875	-55.9		27	12.8
150	29	13,855	-56.2		28	11.3
125	29	15,011	-57.4		28	9.0
100	29	16,417	-58.[illegible]		27	6.3
80	29	17,826	-56.9		27	4.5
70	29	18,672	-56.1		27	3.7
60	29	19,654	-55.6		29	2.6
50	29	20,818	-54.6		27	1.3
40	29	22,249	-54.0		26	.7
30	29	24,101	-52.4		33	.8
25	29	25,282	-51.5		32	1.1
20	29	26,734	-49.8		32	2.0
15	28	28,620	-47.2		30	2.8
10	27	31,339	-42.3		29	5.5
7	22	33,788	-37.6		28	5.7
5	13	36,171	-33.1			

BOISE, IDAHO — 917 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	867	11.7	5.6	12	.9
1000	30	131				
950	30	565				
900	30	1,023	14.7	4.6	35	.4
850	30	1,506	13.6	1.3	32	3.2
800	30	2,014	10.4	-1.3	32	4.2
750	30	2,546	6.9	-3.7	31	4.6
700	30	3,112	3.1	-7.0	30	4.9
650	30	3,705	-.9	-11.1	29	5.7
600	30	4,343	-4.9	-16.3	28	6.2
550	30	5,017	-9.2	-21.3	29	8.0
500	30	5,754	-13.6	-26.7	29	8.5
450	30	6,541	-18.9	-31.3	29	8.8
400	30	7,416	-25.1	-37.7	30	9.0
350	30	8,371	-32.6	-43.5	30	8.9
300	30	9,439	-40.6	-50.5	30	10.9
250	30	10,658	-48.9		31	11.2
200	30	12,098	-56.2		31	13.5
175	30	12,941	-58.1		31	13.6
150	30	13,909	-59.3		30	13.2
125	30	15,049	-60.1		29	10.7
100	30	16,437	-61.2		29	9.0
80	30	17,823	-60.1		29	5.0
70	30	18,658	-58.8		30	3.5
60	29	19,626	-57.4		29	2.4
50	28	20,786	-56.1		30	1.2
40	28	22,209	-54.6		31	1.0
30	28	24,058	-52.8		34	.9
25	28	25,238	-51.5		31	.6
20	26	26,691	-49.7		30	1.9
15	22	28,569	-47.0		28	2.9
10	[illegible]	31,310	-43.4			
7						

BOOTHVILLE, LA. — 1015 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	1	24.2	21.9	06	1.8
1000	30	130	24.[illegible]	21.3	08	2.3
950	30	579	21.7	18.0	11	3.0
900	30	1,047	18.9	14.5	15	2.8
850	30	1,537	16.1	10.7	19	3.0
800	30	2,050	13.4	5.8	20	2.9
750	30	2,591	10.7	.5	23	2.3
700	30	3,164	7.7	-4.3	26	2.6
650	30	3,769	4.4	-8.4	27	3.6
600	30	4,419	.8	-13.0	28	4.1
550	30	5,112	-3.3	-18.5	28	5.5
500	30	5,861	-7.8	-23.7	28	6.1
450	30	6,674	-13.0	-28.8	28	7.[illegible]
400	30	7,561	-19.2	-32.8	28	10.4
350	30	8,541	-25.9	-37.4	28	13.4
300	30	9,641	-33.8	-45.5	28	16.6
250	30	10,894	-43.4		28	19.1
200	30	12,359	-54.4		29	21.3
175	30	13,203	-60.5		29	21.0
150	30	14,150	-66.2		28	17.8
125	30	15,241	-70.7		29	12.5
100	30	16,563	-69.7		28	5.1
80	30	17,908	-65.2		01	2.3
70	30	18,724	-63.3		07	3.6
60	30	19,676	-60.[illegible]		09	5.9
50	30	20,819	-57.[illegible]		09	6.1
40	30	22,236	-55.1		09	6.1
30	29	24,083	-52.1		09	10.1
25	28	25,272	-49.6		10	11.3
20	27	26,738	-47.9		09	10.6
15	27	28,649	-45.1		08	12.6
10	22	31,379	-40.5		09	16.9
7	11	33,825	-36.2			

* BROWNSVILLE, TEXAS — 1013 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	7	23.[illegible]	22.2	35	.5
1000	30	117	24.9	22.6	08	.8
950	30	566	22.3	19.9	14	3.6
900	30	1,038	19.9	15.4	15	3.7
850	30	1,530	17.3	10.2	15	3.7
800	30	2,046	14.4	6.4	15	[illegible].8
750	30	2,590	11.6	2.8	15	2.0
700	30	3,165	8.6	-.9	16	1.3
650	30	3,772	5.0	-4.5	21	.8
600	30	4,425	1.2	-9.7	21	1.4
550	30	5,114	-2.7	-15.2	24	2.3
500	30	5,871	-7.1	-19.1	25	4.1
450	30	6,679	-11.9	-24.7	25	5.1
400	30	7,579	-17.7	-30.6	25	7.2
350	30	8,567	-24.5	-36.6	25	8.4
300	30	9,672	-32.9	-44.0	26	10.4
250	30	10,929	-42.[illegible]		27	11.5
200	30	12,397	-54.6		27	13.8
175	30	13,239	-61.1		27	13.0
150	30	14,182	-67.7		28	11.3
125	30	15,261	-73.4		28	7.6
100	28	16,560	-74.1		29	2.7
80	26	17,830	-67.7		07	3.9
70	25	18,688	-65.0		09	6.3
60	25	19,635	-62.5		10	8.5
50	24	20,767	-59.3		09	8.7
40	24	22,175	-56.4		08	10.7
30	23	24,015	-53.4		09	13.3
25	23	25,194	-51.2		09	14.0
20	22	26,650	-49.[illegible]		09	14.5
15	21	28,540	-47.1		06	16.1
10	20	31,253	-42.5		09	15.9
7	11	33,702	-38.6		10	17.7

BUFFALO, N. Y. — 993 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	218	15.2	11.8	19	1.9
1000	30	156				
950	30	593	15.8	9.0	24	5.4
900	30	1,050	13.6	6.2	26	6.1
850	30	1,530	10.7	3.4	26	6.0
800	30	2,033	7.8	-1.7	26	6.5
750	30	2,561	5.5	-5.6	27	6.6
700	30	3,125	2.3	-9.1	27	6.9
650	30	3,724	-.9	-12.5	27	7.1
600	30	4,356	-4.4	-16.5	27	7.7
550	30	5,035	-8.5	-21.2	27	8.4
500	30	5,771	-13.0	-27.7	27	9.9
450	30	6,565	-18.3	-32.7	27	10.4
400	30	7,436	-24.6	-38.0	27	10.7
350	30	8,395	-31.5	-44.1	27	12.3
300	30	9,469	-39.4	-50.2	27	14.6
250	30	10,694	-48.4		27	16.6
200	30	12,137	-55.6		28	15.5
175	30	12,985	-57.3		27	14.8
150	30	13,958	-58.1		27	12.0
125	30	15,102	-59.5		26	10.1
100	30	16,496	-59.4		27	6.6
80	30	17,897	-58.3		28	3.9
70	30	18,737	-57.7		28	2.9
60	30	19,711	-56.5		28	1.5
50	30	20,871	-55.5		32	1.3
40	29	22,296	-54.1		36	1.2
30	28	24,148	-51.5		32	1.8
25	28	25,336	-50.0		31	1.9
20	28	26,802	-47.3		28	3.7
15	26	28,708	-44.3		27	5.5
10	17	31,447	-39.9			
7						

CAPE HATTERAS, N. C. — 1018 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	4	21.0	18.7	03	2.4
1000	30	154	21.9	16.8	04	3.4
950	30	596	19.3	13.6	06	2.5
900	30	1,062	16.6	8.8	06	1.4
850	30	1,547	13.8	4.7	05	1.4
800	30	2,056	11.0	.6	03	1.0
750	30	2,594	8.7	-5.4	29	.9
700	30	3,162	6.0	-9.3	27	2.3
650	30	3,765	2.9	-13.4	28	3.1
600	30	4,410	-.6	-17.0	28	3.4
550	30	5,095	-4.5	-21.1	27	4.1
500	30	5,847	-9.1	-26.1	28	5.4
450	30	6,654	-14.4	-29.0	27	6.8
400	30	7,539	-20.7	-36.2	27	7.5
350	30	8,512	-28.0	-41.5	27	9.6
300	30	9,602	-36.1	-48.5	26	11.6
250	29	10,842	-45.4		26	13.4
200	29	12,297	-55.3		26	15.8
175	29	13,141	-59.3		26	16.1
150	29	14,099	-62.1		27	14.4
125	29	15,219	-64.4		27	11.1
100	29	16,582	-64.[illegible]		27	6.6
80	29	17,956	-61.5		27	2.8
70	29	18,785	-60.[illegible]		31	1.8
60	29	19,750	-58.2		02	1.5
50	29	20,905	-55.7		07	2.8
40	28	22,335	-52.8		08	2.4
30	26	24,198	-49.8		09	2.9
25	23	25,397	-47.9		09	4.2
20	22	26,878	-46.1		09	5.5
15	20	28,806	-43.[illegible]		08	5.9
10	17	31,561	-39.[illegible]		09	9.9
7	6	34,019	-35.8			

See reference note at end of table

RAWINSONDE DATA

Average monthly values

* CARIBOU, MAINE — 996 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	191	10.4	9.2	22	.8
1000	30	154			04	.6
950	30	589	12.4	7.7	26	2.6
900	30	1,037	10.3	4.8	26	3.5
850	30	1,512	7.8	1.1	27	3.9
800	30	2,010	5.5	-3.4	27	4.0
750	30	2,538	2.9	-6.5	27	4.6
700	30	3,092	.4	-11.5	27	5.0
650	30	3,683	-2.3	-16.9	26	5.8
600	30	4,317	-5.6	-21.6	26	6.4
550	30	4,989	-9.8	-25.9	26	7.1
500	30	5,724	-14.5	-30.2	26	7.2
450	30	6,509	-19.9	-34.8	26	8.5
400	30	7,379	-26.3	-40.7	26	8.4
350	30	8,330	-33.6	-47.0	26	9.0
300	30	9,394	-41.6	-50.7	26	10.1
250	30	10,609	-49.5		26	12.3
200	30	12,051	-54.5		27	14.4
175	30	12,903	-55.4		27	13.3
150	30	13,883	-56.5		27	12.1
125	30	15,037	-57.2		27	9.5
100	30	16,445	-57.9		27	7.6
80	30	17,855	-56.9		29	4.9
70	30	18,701	-56.3		28	3.8
60	30	19,682	-55.8		29	3.6
50	30	20,844	-55.1		32	2.9
40	30	22,272	-54.0		34	2.2
30	30	24,125	-52.1		30	3.2
25	30	25,309	-50.5		29	3.7
20	29	26,772	-48.2		29	3.9
15	28	28,683	-44.6		27	6.6
10	21	31,439	-40.1		26	9.1
7	10	33,822	-37.8			
5						
4						

CHARLESTON, S. C. — 1016 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	13	19.4	18.1	02	2.5
1000	30	149	21.0	19.2	04	3.4
950	30	594	20.3	14.5	07	3.7
900	30	1,060	17.6	11.8	07	2.5
850	30	1,547	14.7	7.9	08	1.5
800	30	2,059	12.3	1.2	08	.4
750	30	2,595	9.8	-3.7	22	.2
700	30	3,169	6.8	-6.4	23	1.4
650	30	3,771	3.3	-11.6	25	2.1
600	30	4,420	.2	-18.0	26	2.7
550	30	5,112	-3.9	-22.5	20	3.8
500	30	5,861	-8.5	-26.6	27	4.4
450	30	6,667	-14.0	-31.5	26	5.5
400	30	7,557	-20.4	-36.6	26	7.5
350	29	8,529	-27.4	-42.2	27	9.8
300	29	9,620	-35.6	-50.3	26	11.0
250	29	10,865	-44.9		27	14.0
200	29	12,325	-54.8		27	15.8
175	29	13,170	-59.0		27	16.1
150	29	14,127	-63.2		28	14.4
125	29	15,239	-66.2		27	10.8
100	29	16,591	-65.4		28	5.3
80	29	17,955	-62.8		28	1.2
70	29	18,780	-61.1		35	1.2
60	29	19,741	-58.8		04	2.5
50	29	20,892	-56.3		08	3.9
40	29	22,318	-53.4		08	5.0
30	29	24,182	-50.7		08	6.4
25	29	25,374	-48.7		09	7.3
20	29	26,846	-46.8		09	7.4
15	27	28,758	-44.0		07	8.6
10	18	31,506	-39.6		08	9.2
7	8	33,924	-37.3			
5						
4						

CHIHUAHUA, MEXICO — 858 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	1,428	14.4	12.1	26	.6
1000	30	112				
950	30	549				
900	30	1,014				
850	30	1,509	15.0	11.1	24	.7
800	30	2,024	15.1	7.6	18	.7
750	30	2,562	12.1	4.3	13	1.4
700	30	3,144	8.3	.4	12	2.4
650	30	3,745	4.2	-4.2	11	2.5
600	30	4,400	.3	-9.8	12	1.8
550	30	5,085	-3.4	-18.4	17	1.2
500	30	5,842	-7.6	-24.5	25	2.3
450	30	6,649	-13.0	-30.7	27	3.6
400	30	7,542	-19.2	-35.9	25	6.5
350	30	8,521	-26.1	-40.5	26	9.6
300	29	9,619	-34.0	-48.1	25	13.9
250	25	10,877	-42.7		25	19.4
200	24	12,345	-53.2		25	24.3
175	22	13,200	-59.1		25	24.3
150	22	14,152	-65.3		26	22.6
125	21	15,243	-70.9		26	17.3
100	19	16,551	-71.7		27	9.1
80	17	17,886	-66.9		30	3.3
70	17	18,699	-63.4		02	1.0
60	17	19,654	-61.2		09	4.4
50	17	20,794	-58.0		09	5.8
40	16	22,206	-55.8		09	6.2
30	15	24,045	-54.0		09	7.3
25	13	25,223	-51.2		10	9.8
20	7	26,678	-49.9			
15						
10						
7						
5						
4						

* COLD BAY, ALASKA — 1006 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	30	7.1	4.3	29	3.5
1000	30	82			31	4.0
950	30	496	4.0	1.0	31	5.7
900	30	939	1.5	-1.9	31	5.9
850	30	1,398	-.9	-5.2	30	5.4
800	30	1,880	-3.4	-9.1	31	6.3
750	30	2,388	-6.0	-13.9	31	6.5
700	30	2,925	-8.9	-17.2	30	6.2
650	30	3,493	-11.6	-20.4	30	6.8
600	30	4,105	-15.3	-25.1	29	7.2
550	30	4,748	-19.5	-29.2	28	7.4
500	30	5,459	-24.1	-34.3	28	8.4
450	30	6,210	-29.5	-39.1	27	9.1
400	30	7,050	-35.4	-44.1	28	10.8
350	30	7,967	-41.7	-45.0	28	12.4
300	30	8,999	-47.7		28	14.4
250	30	10,193	-50.7		28	16.9
200	30	11,650	-49.5		27	15.8
175	30	12,526	-48.9		26	15.4
150	30	13,538	-49.5		27	15.3
125	30	14,731	-50.3		26	14.0
100	30	16,185	-50.9		27	13.0
80	29	17,641	-51.4		27	10.9
70	28	18,498	-51.8		26	9.6
60	28	19,496	-52.2		27	8.7
50	28	20,676	-52.3		27	7.1
40	28	22,120	-52.0		26	6.5
30	27	23,989	-51.5		26	7.9
25	27	25,173	-51.1		26	7.0
20	26	26,633	-50.1		27	6.3
15	22	28,521	-48.8		28	6.3
10	20	31,206	-46.0		27	6.1
7	11	33,637	-41.6			
5	8	35,900	-39.2			
4	5	37,355	-41.3			

COLUMBIA, MO. — 988 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	238	14.9	12.4	18	1.9
1000	30	132				
950	30	573	17.9	10.2	23	5.7
900	30	1,031	15.5	7.3	25	6.6
850	30	1,514	12.9	3.7	26	6.5
800	30	2,022	10.3	-.1	26	5.8
750	30	2,555	7.2	-2.8	26	5.7
700	30	3,122	4.1	-8.1	26	5.4
650	30	3,719	.8	-12.8	27	6.2
600	30	4,360	-2.8	-18.4	27	7.5
550	30	5,036	-7.0	-22.0	27	8.1
500	30	5,783	-11.6	-27.8	27	8.6
450	30	6,575	-17.4	-33.0	27	10.2
400	30	7,454	-23.8	-38.7	27	11.1
350	30	8,416	-30.9	-42.9	26	12.1
300	30	9,492	-39.1	-48.7	26	13.1
250	30	10,719	-47.9		26	14.8
200	29	12,168	-55.9		27	17.7
175	29	13,012	-58.4		27	17.9
150	29	13,978	-59.7		27	16.0
125	29	15,112	-61.8		27	12.6
100	28	16,488	-62.3		27	8.4
80	28	17,869	-61.0		27	5.5
70	28	18,701	-59.7		28	3.9
60	28	19,666	-58.2		30	2.2
50	28	20,818	-56.8		01	1.0
40	28	22,237	-55.0		06	.9
30	28	24,086	-51.9		36	.6
25	27	25,278	-49.8		32	.7
20	27	26,744	-47.5		32	.4
15	26	28,661	-45.0		29	1.4
10	15	31,415	-41.4		28	.9
7	7	33,875	-37.5			
5						
4						

DAYTON, OHIO — 983 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	297	14.1	12.8	18	.8
1000	30	154				
950	30	592	16.8	11.0	22	4.3
900	30	1,051	14.8	7.6	24	5.8
850	30	1,533	11.9	3.2	24	5.8
800	30	2,038	9.1	-.9	25	5.9
750	30	2,570	6.2	-4.7	25	6.0
700	30	3,134	3.3	-8.8	25	6.4
650	30	3,730	.0	-12.6	25	6.7
600	30	4,370	-3.4	-16.8	26	7.6
550	30	5,048	-7.4	-21.1	26	8.7
500	30	5,790	-11.9	-25.6	25	9.9
450	30	6,582	-17.3	-32.0	26	10.6
400	30	7,462	-23.6	-38.1	25	11.2
350	30	8,424	-30.8	-43.8	26	12.7
300	30	9,499	-39.1	-49.0	26	13.4
250	30	10,723	-48.2		26	16.0
200	30	12,166	-55.6		27	17.6
175	29	13,018	-58.0		27	16.0
150	29	13,985	-60.1		27	13.6
125	29	15,119	-61.4		27	11.9
100	29	16,501	-61.8		26	8.5
80	29	17,888	-60.0		28	4.5
70	29	18,723	-58.9		30	2.7
60	29	19,692	-57.7		32	1.6
50	29	20,847	-56.3		34	1.1
40	29	22,270	-54.5		02	.9
30	28	24,128	-51.3		29	.5
25	28	25,319	-49.0		30	.8
20	27	26,790	-46.6		29	2.2
15	26	28,710	-44.1		27	1.6
10	18	31,444	-40.3		19	.9
7						

DEL RIO, TEXAS — 978 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	314	20.9	17.9	11	3.1
1000	29	123				
950	29	569	21.1	16.9	14	6.0
900	29	1,037	19.3	14.3	16	7.1
850	29	1,527	16.5	11.2	17	5.6
800	29	2,041	14.1	5.6	18	3.1
750	29	2,583	11.5	-.2	19	1.8
700	29	3,158	8.5	-6.5	22	1.0
650	29	3,762	4.8	-10.4	25	2.0
600	29	4,415	.7	-13.8	25	2.7
550	29	5,103	-3.2	-18.7	24	3.3
500	29	5,859	-7.6	-23.6	25	4.5
450	29	6,665	-13.1	-27.7	25	5.9
400	29	7,560	-19.3	-33.8	25	8.6
350	29	8,540	-26.2	-39.4	26	12.6
300	29	9,637	-34.2	-46.0	26	17.4
250	29	10,889	-43.4		26	22.6
200	29	12,356	-54.1		26	26.7
175	29	13,201	-60.1		26	24.9
150	29	14,149	-66.1		27	21.6
125	28	15,242	-71.2		27	15.7
100	27	16,559	-70.7		27	7.1
80	25	17,900	-65.6		34	2.1
70	25	18,715	-63.0		07	3.1
60	25	19,668	-60.8		10	5.7
50	25	20,809	-58.3		09	6.4
40	24	22,220	-55.4		09	8.2
30	24	24,067	-52.5		09	10.4
25	23	25,250	-50.7		09	11.0
20	23	26,710	-48.4		09	11.1
15	22	28,616	-45.8		08	13.7
10	21	31,344	-41.0		09	15.6
7	11	33,792	-36.9			

DENVER, COLO. — 839 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	1,611	9.0	3.8	19	2.4
1000	30	127				
950	30	559				
900	30	1,019				
850	30	1,502				
800	30	2,010	13.3	.6	25	2.7
750	30	2,548	10.3	-2.4	29	2.3
700	30	3,121	6.4	-5.9	29	3.5
650	30	3,721	1.9	-10.0	29	5.5
600	30	4,364	-2.7	-14.9	29	6.9
550	30	5,042	-7.4	-19.7	28	8.3
500	30	5,785	-12.3	-26.1	28	8.5
450	30	6,571	-18.1	-31.8	27	9.7
400	30	7,451	-24.6	-38.0	27	10.6
350	30	8,408	-32.0	-44.3	27	11.7
300	30	9,479	-40.2	-50.3	27	13.7
250	30	10,698	-49.0		27	15.5
200	30	12,135	-56.4		27	16.2
175	30	12,979	-58.2		28	16.0
150	30	13,946	-59.4		28	14.8
125	30	15,083	-60.8		28	11.2
100	30	16,465	-61.9		28	6.9
80	29	17,852	-60.4		28	3.8
70	29	18,686	-59.0		27	1.7
60	29	19,637	-57.3		28	1.0
50	29	20,812	-56.2		33	.7
40	29	22,234	-54.8		03	1.2
30	29	24,084	-52.1		02	.9
25	28	25,272	-50.1		04	.8
20	28	26,736	-48.1		29	1.4
15	26	28,651	-45.3		31	2.3
10	22	31,361	-41.9		27	3.8
7	14	33,780	-38.1			

DODGE CITY, KANS. — 924 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	791	14.0	9.2	19	2.1
1000	30	119				
950	30	554				
900	30	1,017	16.8	7.5	22	5.7
850	30	1,505	16.6	3.6	24	7.4
800	30	2,019	14.0	-.3	26	6.6
750	30	2,558	10.6	-4.1	27	5.2
700	30	3,132	6.5	-7.8	27	4.3
650	30	3,732	2.3	-11.4	28	3.8
600	30	4,378	-2.1	-16.1	28	4.5
550	30	5,060	-6.7	-22.1	27	6.0
500	30	5,803	-11.5	-28.2	27	6.8
450	30	6,598	-17.2	-34.1	27	9.2
400	30	7,476	-23.7	-39.4	27	11.7
350	30	8,439	-31.1	-45.1	27	12.8
300	30	9,515	-39.4	-51.8	27	13.8
250	30	10,741	-48.3		26	16.4
200	30	12,185	-56.0		27	18.6
175	30	13,030	-58.3		27	18.8
150	30	13,995	-60.3		27	17.5
125	30	15,127	-62.3		27	13.1
100	30	16,500	-63.2		27	8.8
80	29	17,879	-60.8		26	4.5
70	29	18,712	-59.2		26	3.0
60	29	19,682	-57.7		31	.7
50	29	20,835	-56.5		06	.4
40	28	22,260	-54.5		06	2.1
30	28	24,114	-51.6		08	1.5
25	27	25,303	-49.6		09	1.7
20	24	26,780	-47.0		10	1.0
15	23	28,699	-44.2		07	2.1
10	18	31,409	-41.1		07	2.5
7	9	33,827	-37.7			

EL PASO, TEXAS — 883 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	1,193	16.5	7.5	30	.6
1000	30	116				
950	30	561				
900	30	1,031				
850	30	1,518	18.3	5.9	21	.6
800	30	2,037	15.9	3.1	23	1.6
750	30	2,576	12.6	-.7	25	1.2
700	30	3,157	8.2	-4.1	26	.7
650	30	3,759	3.8	-8.3	16	1.1
600	30	4,411	-.5	-14.7	20	.7
550	30	5,091	-4.7	-21.9	27	2.2
500	30	5,846	-9.0	-27.8	29	4.1
450	30	6,651	-14.6	-32.7	28	6.2
400	30	7,537	-21.1	-38.8	28	7.5
350	30	8,510	-28.4	-43.5	27	9.3
300	30	9,598	-36.5	-50.4	27	13.0
250	30	10,839	-45.2		26	18.3
200	30	12,297	-54.8		26	22.7
175	30	13,143	-59.4		26	23.1
150	30	14,097	-63.8		26	20.9
125	30	15,204	-67.5		27	16.2
100	30	16,543	-67.9		28	8.9
80	30	17,891	-64.8		27	3.3
70	30	18,712	-61.9		32	.4
60	30	19,668	-59.9		10	2.9
50	29	20,812	-58.0		10	4.3
40	28	22,224	-55.6		09	5.3
30	28	24,069	-52.6		09	7.2
25	28	25,251	-50.6		09	8.1
20	27	26,712	-48.1		09	8.3
15	27	28,619	-45.4		08	9.4
10	26	31,346	-41.0		09	11.2
7	11	33,731	-38.1			

ELY, NEV. — 811 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	1,908	4.3	-6.1	20	3.2
1000	30	162				
950	30	587				
900	30	1,043				
850	30	1,521				
800	30	2,021	9.7	-2.0	20	2.2
750	30	2,555	10.0	-3.9	25	.8
700	30	3,129	6.2	-7.3	28	3.5
650	30	3,729	5.8	-7.7	28	5.5
600	30	4,373	-2.6	-14.8	27	7.1
550	30	5,051	-7.3	-19.8	27	8.1
500	30	5,795	-11.6	-26.8	28	8.8
450	30	6,588	-17.0	-31.5	28	9.1
400	30	7,469	-23.5	-36.6	29	10.4
350	30	8,432	-31.1	-42.9	29	11.5
300	30	9,506	-39.6	-48.1	29	11.4
250	30	10,730	-48.5		29	12.9
200	30	12,172	-56.0		29	15.5
175	30	13,017	-58.2		29	15.9
150	30	13,984	-60.2		29	13.9
125	30	15,118	-61.8		29	11.2
100	30	16,494	-63.3		29	6.9
80	30	17,867	-62.0		30	3.7
70	30	18,696	-59.5		31	2.2
60	30	19,665	-57.5		29	.8
50	30	20,818	-56.3		04	.7
40	30	22,240	-54.9		06	1.0
30	30	24,087	-52.6		06	1.1
25	29	25,271	-50.8		02	.8
20	26	26,728	-49.0		01	.6
15	25	28,629	-46.2		32	1.1
10	25	31,343	-42.8		31	1.0
7	14	33,817	-38.5			

* FAIRBANKS, ALASKA — 993 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	135	2.6	-1.4	36	1.7
1000	30	74			01	1.4
950	30	492	4.0	-3.3	06	2.4
900	30	929	1.8	-5.0	10	1.9
850	30	1,388	-1.2	-7.2	13	1.3
800	30	1,870	-4.6	-9.5	16	1.9
750	30	2,375	-7.5	-13.4	18	1.8
700	30	2,910	-10.6	-17.2	20	2.4
650	30	3,476	-14.0	-21.7	21	2.3
600	30	4,081	-18.1	-26.2	22	3.0
550	30	4,723	-22.6	-30.4	22	3.9
500	30	5,419	-27.5	-36.7	22	4.2
450	30	6,164	-33.2	-42.4	22	4.8
400	30	6,989	-39.2	-46.3	22	5.1
350	30	7,891	-46.0		22	5.8
300	30	8,900	-53.0		22	6.4
250	30	10,065	-55.7		23	7.5
200	30	11,503	-50.0		24	8.2
175	30	12,377	-49.3		24	8.8
150	30	13,389	-48.8		25	8.7
125	30	14,587	-48.8		25	9.0
100	30	16,052	-49.0		25	9.0
80	30	17,514	-49.8		24	8.4
70	30	18,386	-50.2		24	8.3
60	29	19,392	-50.8		24	9.3
50	29	20,578	-51.3		24	7.5
40	28	22,031	-51.9		25	8.2
30	29	23,895	-51.5		24	7.3
25	28	25,079	-50.9		25	7.7
20	26	26,534	-50.2		24	7.3
15	24	28,413	-49.4		24	7.9
10	20	31,080	-45.9		25	10.2
7	7	33,406	-45.1			

FLINT, MICH. — 989 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	234	13.0	11.3	20	1.7
1000	30	141				
950	30	578	15.3	9.6	23	5.0
900	30	1,033	12.9	7.3	25	6.3
850	30	1,512	9.9	3.9	25	7.3
800	30	2,014	7.3	-1.4	25	8.1
750	30	2,546	4.9	-6.9	25	8.0
700	30	3,103	2.1	-10.6	25	9.1
650	30	3,696	-1.1	-14.6	25	9.1
600	30	4,334	-4.7	-18.4	25	9.7
550	30	5,007	-9.0	-21.1	26	10.3
500	30	5,745	-13.8	-26.1	26	11.2
450	30	6,532	-19.0	-31.9	26	11.8
400	30	7,406	-25.0	-37.7	26	11.6
350	30	8,363	-32.1	-44.0	26	12.6
300	30	9,434	-39.8	-50.0	26	15.0
250	29	10,657	-48.1		26	16.2
200	29	12,103	-55.2		26	17.2
175	29	12,952	-56.3		26	13.8
150	29	13,928	-58.0		26	13.2
125	29	15,073	-59.2		26	9.9
100	29	16,471	-59.2		26	6.0
80	29	17,872	-58.1		26	4.0
70	29	18,713	-57.5		27	3.1
60	28	19,693	-56.7		27	1.5
50	28	20,852	-55.6		27	.3
40	28	22,278	-53.9		06	1.5
30	27	24,137	-51.1		04	1.5
25	22	25,334	-49.3		33	2.0
20	19	26,801	-46.9		30	2.4
15	16	28,749	-43.4			
10	11	31,500	-38.5			
7						

FORT WORTH, TEXAS — 995 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	180	18.9	16.2	19	.7
1000	30	136				
950	30	579	19.9	13.3	19	4.2
900	30	1,044	17.7	9.2	21	3.6
850	30	1,531	15.4	5.2	23	2.2
800	30	2,043	12.7	1.0	26	1.9
750	30	2,584	9.8	-1.7	27	2.3
700	30	3,153	6.8	-7.6	27	2.6
650	30	3,759	3.5	-11.3	26	3.3
600	30	4,404	-.3	-15.8	26	4.1
550	30	5,088	-4.4	-20.4	27	4.1
500	30	5,841	-8.9	-26.0	26	5.7
450	30	6,647	-14.3	-30.5	27	7.7
400	30	7,532	-20.8	-36.0	27	10.1
350	30	8,505	-28.2	-41.9	27	12.4
300	30	9,593	-36.3	-49.1	27	16.3
250	30	10,834	-45.4		27	20.7
200	28	12,289	-54.9		27	26.3
175	28	13,133	-59.5		27	26.2
150	27	14,089	-63.9		27	23.1
125	27	15,195	-67.6		27	17.4
100	26	16,531	-67.7		27	9.6
80	24	17,886	-64.3		27	3.5
70	24	18,707	-62.2		25	.7
60	24	19,665	-60.0		13	.8
50	24	20,809	-58.0		08	2.2
40	24	22,220	-55.8		08	4.3
30	22	24,065	-52.4		09	6.2
25	22	25,249	-50.2		09	6.5
20	22	26,713	-47.7		09	6.4
15	17	28,623	-45.4		08	8.6
10	13	31,344	-41.1		09	12.1
7						

GLASGOW, MONT. — 932 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	696	8.3	5.4	12	.9
1000	30	104				
950	30	535				
900	30	984	12.8	4.7	27	3.2
850	30	1,464	11.8	1.7	28	5.2
800	30	1,969	8.8	-1.1	29	5.9
750	30	2,500	5.5	-3.8	29	6.5
700	30	3,061	2.0	-8.8	28	7.6
650	30	3,651	-1.5	-13.0	28	8.4
600	30	4,289	-5.6	-17.8	28	9.7
550	30	4,958	-10.1	-21.5	28	10.1
500	30	5,694	-14.9	-26.3	29	10.5
450	30	6,477	-20.4	-32.1	29	11.8
400	30	7,345	-26.7	-37.8	29	12.1
350	30	8,296	-33.8	-43.1	29	12.6
300	30	9,359	-41.8	-50.0	29	13.5
250	30	10,573	-49.7		29	13.9
200	30	12,011	-55.3		29	14.2
175	30	12,861	-56.0		29	13.3
150	29	13,839	-55.5		28	12.3
125	29	14,998	-56.7		27	10.2
100	29	16,409	-57.7		28	8.4
80	29	17,819	-57.0		28	5.0
70	29	18,664	-56.6		27	3.8
60	29	19,643	-55.5		28	2.6
50	29	20,807	-54.7		28	1.6
40	29	22,238	-53.7		26	2.0
30	28	24,088	-52.7		30	1.9
25	27	25,271	-51.8		32	1.7
20	26	26,723	-50.0		31	2.0
15	24	28,600	-47.6		31	2.6
10	18	31,321	-42.4		28	4.4
7	14	33,776	-37.4			

See reference note at end of table

RAWINSONDE DATA

Average monthly values

GRAND JUNCTION, COLO. 853 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	1,474	11.8	-.9	13	3.6
1000	30	120				
950	30	560				
900	30	1,023				
850	30	1,507			13	3.4
800	30	2,019	13.7	-2.9	14	3.9
750	30	2,558	10.8	-5.3	20	1.8
700	30	3,131	6.7	-7.5	25	3.7
650	30	3,733	2.2	-10.1	25	4.6
600	30	4,376	-2.7	-14.0	26	7.0
550	30	5,054	-7.5	-19.9	27	8.6
500	30	5,796	-12.4	-25.4	27	10.0
450	30	6,588	-17.6	-31.0	27	9.9
400	30	7,466	-23.7	-37.4	27	10.9
350	30	8,427	-31.2	-43.2	27	11.8
300	30	9,500	-40.0	-50.0	27	12.8
250	30	10,721	-48.8		28	14.1
200	30	12,161	-56.6		28	14.9
175	30	13,003	-58.5		28	15.2
150	30	13,969	-60.0		28	14.0
125	30	15,103	-61.8		28	10.8
100	30	16,478	-62.8		28	7.5
80	29	17,859	-61.4		29	3.6
70	29	18,690	-59.9		29	2.2
60	29	19,657	-58.1		27	1.1
50	29	20,810	-56.8		25	.5
40	29	22,229	-55.2		05	1.0
30	29	24,074	-52.8		06	1.3
25	28	25,256	-51.0		06	.8
20	24	26,712	-49.0		30	.6
15	21	28,617	-46.4		30	2.2
10	16	31,327	-42.9		08	1.9
7	6	33,802	-38.7			
5						
4						

*** GREAT FALLS, MONT. 886 MB**

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	1,123	10.0	3.9	24	3.0
1000	30	102				
950	30	538				
900	30	997				
850	30	1,471	11.8	.6	25	6.4
800	30	1,976	8.8	-1.7	28	6.3
750	30	2,509	5.5	-4.6	28	7.2
700	30	3,067	2.1	-8.1	26	7.7
650	30	[illegible],661	-1.4	-10.9	29	8.4
600	30	4,296	-5.3	-14.4	28	9.4
550	30	4,968	-9.9	-19.6	28	11.3
500	30	5,702	-14.9	-24.5	28	12.2
450	30	6,488	-20.5	-31.0	28	12.9
400	30	7,353	-26.8	-37.2	28	12.7
350	29	8,300	-33.9	-43.0	28	12.6
300	29	9,361	-42.1	-48.9	28	13.3
250	29	10,571	-50.7		28	14.3
200	29	12,005	-55.8		29	13.7
175	29	12,853	-56.4		29	13.8
150	29	13,831	-56.5		29	13.1
125	28	14,981	-57.4		28	10.1
100	28	16,389	-57.8		28	7.5
80	28	17,796	-57.5		28	5.6
70	28	18,640	-56.9		28	4.3
60	28	19,618	-55.8		28	3.3
50	28	20,780	-55.2		28	1.9
40	27	22,210	-53.9		29	1.2
30	25	24,066	-52.9		30	2.1
25	24	25,250	-51.9		30	2.1
20	23	26,703	-49.9		32	2.4
15	19	28,603	-47.6		34	2.0
10	17	31,297	-43.2		29	2.6
7	13	33,711	-38.5		26	5.1
5	8	36,069	-33.2			
4						

GREEN BAY, WIS. 990 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	210	12.1	10.0	23	1.1
1000	30	123				
950	30	555	14.4	8.6	25	3.7
900	30	1,011	12.1	5.2	25	4.6
850	30	1,488	9.2	3.2	25	5.4
800	30	1,989	6.6	-1.2	25	6.1
750	30	2,518	4.3	-5.7	25	6.8
700	30	3,076	1.4	-10.8	25	7.4
650	30	3,666	-2.0	-13.9	25	8.3
600	30	4,303	-5.7	-18.1	27	9.2
550	30	4,975	-9.7	-24.0	26	8.8
500	30	5,711	-14.1	-29.3	27	9.0
450	30	6,499	-19.3	-34.4	27	9.8
400	30	7,371	-25.5	-37.8	27	9.9
350	30	8,327	-32.8	-44.6	27	11.6
300	30	9,396	-40.7	-49.1	27	12.7
250	30	10,616	-48.6		27	14.2
200	30	12,063	-54.5		27	15.5
175	30	12,917	-55.6		27	14.1
150	30	13,896	-56.4		27	12.1
125	30	15,050	-57.9		26	9.6
100	30	16,454	-58.3		27	7.3
80	29	17,862	-57.1		26	5.1
70	29	18,706	-56.7		26	3.2
60	29	19,686	-56.2		27	1.4
50	29	20,848	-55.1		34	1.4
40	29	22,277	-53.6		35	1.3
30	29	24,135	-51.5		34	1.0
25	26	25,319	-50.3		30	1.1
20	25	26,782	-48.2		29	3.4
15	25	28,691	-44.8		28	6.2
10	20	31,442	-39.4		26	7.8
7	12	33,920	-35.1			
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4						

GREENSBORO, N. C. 988 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	273	14.2	11.7	03	1.0
1000	30	169				
950	30	608	17.9	10.8	05	1.8
900	30	1,068	15.7	7.6	06	1.4
850	30	1,551	12.9	4.0	22	.1
800	30	2,059	10.1	.3	26	1.0
750	30	2,592	7.6	-4.6	26	2.0
700	30	3,160	5.1	-9.1	26	3.0
650	30	3,760	2.5	-14.0	27	3.8
600	30	4,406	-.9	-18.8	26	4.8
550	30	5,093	-4.9	-22.6	27	6.1
500	30	5,839	-9.6	-26.5	27	7.8
450	30	[illegible],642	-15.2	-32.6	27	9.1
400	30	7,524	-21.8	-37.1	27	9.9
350	30	8,494	-29.0	-43.8	27	11.3
300	30	9,578	-37.3	-50.8	27	11.9
250	30	10,812	-46.8		27	12.5
200	29	12,266	-55.3		28	13.9
175	29	13,111	-58.8		28	14.7
150	29	14,071	-61.9		27	12.7
125	29	15,192	-64.2		27	10.5
100	29	16,558	-63.5		28	6.5
80	29	17,934	-61.6		29	2.9
70	29	18,764	-60.1		32	1.[illegible]
60	29	19,729	-58.3		02	1.7
50	28	20,684	-56.0		06	2.0
40	28	22,311	-53.4		08	2.0
30	28	24,174	-50.5		09	[illegible].8
25	28	25,367	-48.3		10	3.[illegible]
20	27	26,846	-46.2		10	3.7
15	23	28,762	-44.1		09	5.7
10	17	31,502	-40.4		10	6.8
7	6	33,908	-38.3			
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4						

*** GUAM, MARIANA IS. [illegible]97 MB**

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	111	24.7	23.6	21	1.0
1000	30	84				
950	30	534	23.3	21.3	22	3.9
900	30	1,006	20.8	17.3	23	5.2
850	30	1,500	18.3	13.1	24	5.3
800	29	2,018	15.6	8.9	24	5.4
750	29	2,561	13.0	4.9	24	4.3
700	29	3,142	9.8	2.0	24	3.3
650	29	3,750	6.0	-1.0	24	3.2
600	29	4,405	2.2	-5.2	23	2.6
550	29	5,104	-1.4	-10.2	20	2.1
500	28	5,858	-5.8	-14.6	17	.8
450	28	6,675	-10.8	-19.6	11	.9
400	28	7,573	-16.3	-24.9	10	1.4
350	27	8,565	-22.9	-32.7	09	1.8
300	27	9,677	-31.1	-41.8	08	3.1
250	27	10,943	-41.1		07	5.8
200	27	12,418	-53.6		07	7.9
175	27	13,262	-60.9		06	8.6
150	27	14,201	-68.8		06	10.3
125	27	15,270	-76.3		06	10.8
100	26	16,543	-79.0		07	11.7
80	24	17,827	-73.6		09	13.8
70	22	18,612	-70.5		09	15.4
60	21	19,540	-66.2		09	17.8
50	20	20,658	-62.3		09	20.1
40	20	22,051	-58.1		09	22.9
30	20	23,879	-54.6		09	26.4
25	20	25,051	-52.7		09	25.5
20	19	26,502	-50.0		09	22.1
15	17	28,397	-47.9		08	16.4
10	16	31,092	-43.4		08	14.4
7	14	33,510	-40.2		09	12.7
5	9	35,851	-34.8			
4	7	37,400	-32.9			

HILO, HAWAII 1014 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	11	22.0	20.4	24	2.1
1000	30	132	23.3	20.3	24	1.9
950	30	579	20.4	17.9	12	1.2
900	30	1,065	17.4	15.1	10	2.8
850	30	1,532	14.6	12.0	10	3.5
800	30	2,044	12.4	7.6	10	4.1
750	30	2,588	10.3	2.3	10	4.1
700	30	3,157	7.3	-1.1	09	3.5
650	30	3,765	4.6	-8.6	09	3.6
600	30	4,414	1.1	-13.2	09	3.6
550	30	5,109	-2.8	-17.8	09	2.3
500	30	5,859	-7.1	-24.7	31	.5
450	30	6,675	-12.3	-29.1	28	2.7
400	30	7,565	-18.3	-34.8	27	5.5
350	30	8,549	-25.6	-40.6	27	7.2
300	30	9,648	-33.9	-46.7	27	10.1
250	30	10,901	-43.7		27	15.6
200	30	12,363	-55.4		27	19.0
175	30	13,202	-61.6		27	18.7
150	30	14,143	-67.7		27	15.7
125	30	15,232	-70.5		26	8.4
100	30	16,554	-70.6		15	.5
80	30	17,883	-68.5		10	8.1
70	29	18,685	-66.4		09	10.6
60	29	19,623	-63.8		09	13.0
50	29	20,748	-60.9		09	14.8
40	29	22,148	-57.2		09	16.3
30	28	23,979	-54.1		09	18.0
25	28	25,153	-52.7		09	18.1
20	26	26,606	-50.7		09	18.7
15	21	28,491	-47.9		09	18.0
10	14	31,204	-41.5		09	15.9
7	7	33,611	-40.7			
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HUNTINGTON W. VA. 990 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	246	14.3	13.4	16	.9
1000	30	163				
950	30	600	17.9	11.0	20	2.9
900	30	1,062	15.6	8.5	23	3.9
850	30	1,545	12.6	5.9	26	4.4
800	30	2,052	9.8	.7	25	4.6
750	30	2,582	6.9	-4.5	25	4.5
700	30	3,151	4.0	-8.7	24	5.0
650	30	3,745	.7	-13.3	25	5.3
600	30	4,389	-2.7	-18.1	25	7.2
550	30	5,067	-6.4	-20.2	26	8.4
500	30	5,814	-11.2	-24.5	26	9.0
450	30	6,611	-16.5	-30.2	26	10.0
400	30	7,492	-22.5	-37.0	26	11.3
350	30	8,457	-30.1	-43.7	26	12.1
300	30	9,536	-38.3	-48.8	27	13.3
250	30	10,766	-47.3		27	14.7
200	30	12,213	-55.4		27	16.8
175	30	13,059	-58.1		27	15.7
150	30	14,024	-60.3		27	13.9
125	30	15,156	-62.2		27	10.7
100	30	16,532	-62.1		27	7.5
80	30	17,917	-60.3		28	3.6
70	30	18,752	-59.0		28	2.0
60	29	19,723	-57.4		33	.8
50	29	20,879	-55.8		04	1.1
40	29	22,307	-53.5		05	1.0
30	28	24,174	-50.1		07	.7
25	28	25,372	-47.5		12	.1
20	24	26,846	-46.0		11	.1
15	21	28,766	-43.6		07	.7
10	14	31,499	-40.2		15	.4
7	5	33,989	-36.3			
5						

*** INTERNATIONAL FALLS, MINN. 971 MB**

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	360	9.3	7.4	18	.8
1000	30	112				
950	30	540	11.1	8.3	22	2.2
900	30	991	9.9	5.5	25	3.9
850	30	1,465	7.2	2.9	26	3.8
800	30	1,962	5.0	-2.0	26	4.7
750	30	2,482	2.6	-6.6	26	5.7
700	30	[illegible],043	-.3	-10.4	26	6.0
650	30	3,625	-3.4	-13.7	26	6.1
600	30	4,262	-6.9	-17.7	26	6.0
550	30	4,928	-10.9	-22.2	27	6.6
500	30	5,663	-15.3	-26.8	27	7.1
450	30	6,442	-20.8	-32.6	27	8.0
400	30	7,313	-26.8	-38.5	27	9.8
350	30	8,262	-33.8	-43.6	27	10.4
300	30	[illegible],326	-41.7	-48.1	27	11.4
250	30	10,540	-49.5		27	12.7
200	30	11,983	-54.5		26	13.1
175	30	12,837	-55.1		27	12.1
150	30	13,820	-55.6		27	9.6
125	30	14,979	-56.7		26	7.1
100	30	16,391	-57.0		27	6.1
80	30	17,808	-56.0		27	4.1
70	30	18,656	-55.6		27	3.6
60	30	19,641	-55.1		28	2.4
50	30	20,808	-54.1		28	1.6
40	29	22,238	-53.4		32	1.7
30	29	24,094	-51.9		35	1.8
25	27	25,271	-51.1		32	2.7
20	27	26,725	-49.8		32	2.8
15	27	28,618	-46.8		30	3.8
10	22	31,329	-42.3		29	6.1
7	19	33,746	-37.8		28	5.8
5	5	36,071	-32.4			

JACKSON, MISS. 1005 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	94	17.6	16.1	10	.6
1000	30	140	18.9	15.7	08	.9
950	30	583	19.7	12.5	15	2.0
900	30	1,049	17.0	9.0	18	2.3
850	30	1,535	14.5	3.9	20	2.4
800	30	2,046	11.9	-.4	23	2.5
750	30	2,583	9.3	-5.5	24	2.[illegible]
700	30	3,153	6.5	-9.0	25	2.8
650	30	3,756	3.7	-13.8	26	3.5
600	30	4,405	.3	-17.5	26	4.8
550	30	5,091	-3.9	-21.6	26	5.7
500	30	5,844	-8.9	-26.1	27	7.4
450	30	6,648	-14.7	-31.9	27	8.7
400	30	7,534	-20.9	-36.4	28	11.0
350	30	[illegible],508	-27.9	-42.1	28	13.8
300	30	9,597	-36.2	-47.7	28	15.9
250	30	10,837	-45.4		28	19.5
200	30	12,293	-55.3		28	25.2
175	30	13,135	-60.2		28	24.3
150	30	14,087	-64.5		28	20.6
125	30	15,191	-67.7		28	13.8
100	30	16,530	-67.4		27	7.7
80	30	17,885	-64.2		33	2.6
70	30	18,705	-62.2		04	.8
60	30	19,664	-59.8		08	[illegible].6
50	30	20,808	-57.6		06	3.5
40	30	22,225	-55.1		08	4.6
30	30	24,075	-51.8		09	7.0
25	29	25,261	-49.7		10	7.7
20	29	26,727	-47.8		10	7.2
15	28	28,630	-45.4		08	8.4
10	13	31,324	-42.6		08	9.0
7	5	33,700	-39.9			
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JACKSONVILLE, FLA. 1016 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	[illegible]	21.1	20.4	32	1.4
1000	30	145	22.5	20.3	35	1.9
950	30	593	21.4	17.4	06	2.9
900	30	1,060	18.4	13.8	07	2.4
850	30	1,549	15.7	8.9	08	2.0
800	30	2,062	13.2	3.7	09	.8
750	30	2,599	10.5	.2	29	.7
700	30	3,175	7.4	-3.7	26	1.0
650	30	3,778	4.0	-9.5	26	1.8
600	30	4,429	.5	-15.1	28	2.4
550	30	5,111	-3.6	-19.9	28	3.5
500	30	5,870	-8.0	-24.7	28	4.5
450	30	6,674	-13.2	-28.7	28	6.4
400	30	7,569	-19.3	-33.2	27	7.6
350	30	8,548	-26.2	-40.3	27	10.0
300	30	9,644	-34.4	-48.4	27	12.0
250	30	10,894	-43.7		28	13.0
200	30	12,358	-54.3		28	14.7
175	30	13,202	-60.0		28	15.5
150	30	14,153	-65.1		29	13.8
125	30	15,253	-68.6		28	10.5
100	30	16,589	-67.3		29	5.3
80	30	17,942	-64.3		35	1.1
70	30	18,764	-61.9		05	1.5
60	30	19,721	-59.7		08	4.4
50	30	20,867	-56.9		09	6.3
40	30	22,290	-54.1		09	7.6
30	29	24,148	-51.3		09	8.9
25	28	25,333	-49.6		09	10.0
20	28	26,799	-47.5		09	10.1
15	27	28,712	-44.6		08	11.2
10	20	31,448	-41.5		08	16.7
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JOHN F. KENNEDY INT. AP NY 1019 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	5	17.2	12.4	34	1.8
1000	30	166	17.6	12.2	35	2.4
950	30	608	16.4	8.9	33	2.7
900	30	1,063	14.0	6.4	33	2.7
850	30	1,544	11.2	2.5	32	3.8
800	30	2,048	8.7	-2.0	29	4.6
750	30	2,579	6.6	-6.5	29	5.4
700	30	3,144	3.8	-10.1	29	6.1
650	30	3,740	.8	-14.2	28	7.1
600	30	4,382	-2.9	-19.7	28	7.3
550	30	5,062	-6.6	-23.1	28	8.1
500	30	5,806	-11.2	-27.8	28	9.2
450	30	6,604	-16.7	-32.1	27	10.5
400	30	7,482	-23.0	-38.6	27	10.2
350	30	8,446	-30.3	-44.2	27	11.1
300	30	9,524	-38.7	-50.8	27	12.3
250	30	10,751	-47.8		27	14.7
200	30	12,195	-55.5		27	16.6
175	30	13,041	-57.8		27	15.2
150	30	14,009	-59.5		26	14.9
125	30	15,145	-60.8		27	11.0
100	28	16,529	-61.4		27	8.9
80	28	17,919	-59.4		28	4.9
70	28	18,756	-58.2		28	3.5
60	28	19,730	-57.0		31	2.0
50	28	20,888	-55.3		35	.9
40	27	22,316	-53.1		31	1.1
30	25	24,186	-50.4		29	1.0
25	24	25,376	-48.6		31	.8
20	24	26,852	-46.0		28	1.3
15	21	28,787	-42.8		28	1.7
10	16	31,533	-38.8		24	2.4
7						
[illegible]						

JOHNSTON IS., PACIFIC AREA 1012 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	[illegible]	26.9	23.1	10	4.8
1000	30	108	26.1	22.6	09	5.8
950	30	561	22.8	20.2	10	6.6
900	30	1,030	20.0	15.9	10	7.3
850	30	1,522	17.3	12.2	09	6.7
800	30	2,039	14.6	7.7	09	5.6
750	30	2,587	12.0	3.4	08	4.7
700	30	3,159	8.9	-.7	09	3.8
650	30	3,771	5.5	-5.6	09	3.0
600	30	4,421	1.9	-9.6	09	2.8
550	30	5,110	-2.0	-14.7	11	1.7
500	30	5,871	-6.4	-20.3	10	1.1
450	30	6,681	-11.4	-24.0	22	.8
400	30	7,581	-17.2	-29.7	24	2.6
350	30	8,570	-24.1	-36.7	25	4.2
300	30	9,676	-32.7	-44.4	26	7.0
250	30	10,934	-42.7		25	8.8
200	30	12,401	-54.9		26	11.1
175	30	13,242	-61.6		26	12.2
150	29	14,180	-68.8		26	11.3
125	27	15,255	-74.3		25	7.8
100	27	16,554	-73.9		10	1.6
80	25	17,868	-70.7		09	8.6
70	24	18,665	-67.8		09	12.0
60	23	19,599	-65.0		09	14.7
50	23	20,719	-61.7		09	17.8
40	23	22,115	-57.6		09	20.4
30	22	23,948	-54.1		09	20.1
25	22	25,122	-52.5		09	21.0
20	22	26,569	-50.8		09	21.2
15	18	28,461	-46.5		09	19.2
10	15	31,176	-41.1		09	13.4
7						
[illegible]						

KEY WEST, FLA. 1013 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	26	3	26.9	23.0	11	1.1
1000	26	115	26.0	22.5	10	2.2
950	26	564	22.4	20.0	12	3.3
900	26	1,036	19.8	15.6	14	2.8
850	26	1,528	17.0	12.2	15	2.3
800	26	2,044	13.8	9.1	17	2.0
750	26	2,577	11.0	5.3	18	1.3
700	26	3,160	8.0	1.7	19	1.1
650	26	3,763	4.6	-2.7	20	.8
600	26	4,418	.8	-7.2	22	1.0
550	26	5,106	-3.0	-11.0	28	.6
500	26	5,863	-7.3	-16.2	32	1.5
450	26	6,666	-12.3	-21.3	32	2.4
400	26	7,568	-18.3	-27.1	32	2.6
350	26	8,551	-25.4	-34.8	31	4.2
300	26	9,651	-33.9	-43.7	31	4.8
250	26	10,902	-43.9		30	5.7
200	26	12,362	-55.7		31	7.4
175	26	13,200	-61.9		32	8.0
150	26	14,140	-67.8		33	7.9
125	26	15,224	-72.0		34	6.0
100	26	16,539	-70.5		02	3.4
80	25	17,872	-67.7		08	5.4
70	25	18,677	-65.8		08	7.7
60	25	19,620	-62.2		08	10.2
50	25	20,756	-59.3		09	11.3
40	25	22,164	-56.3		09	12.3
30	25	24,006	-52.9		09	13.5
25	25	25,187	-51.4		09	13.3
20	25	26,641	-49.8		09	14.6
15	23	28,533	-46.4		09	16.9
10	18	31,244	-42.2		09	17.2
7	13	33,630	-38.0			
[illegible]						

KING SALMON, ALASKA 1005 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	15	3.4	.4	03	.8
1000	30	52			01	3.5
950	30	470	5.3	-.8	02	3.[illegible]
900	30	912	2.7	-3.0	01	2.[illegible]
850	30	1,372	-.4	-6.0	36	2.1
800	30	1,856	-3.1	-9.3	33	1.8
750	30	2,364	-5.7	-13.5	32	1.7
700	30	[illegible],904	-8.7	-17.1	32	1.9
650	30	3,473	-12.1	-21.3	31	1.[illegible]
600	30	4,084	-16.0	-26.2	30	2.3
550	30	4,730	-20.3	-29.1	29	3.3
500	30	5,435	-24.8	-35.2	28	4.4
450	30	6,188	-30.0	-40.4	29	[illegible].7
400	30	7,024	-36.1	-43.9	28	7.4
350	30	7,939	-42.8	-46.4	27	9.3
300	30	8,964	-49.4		27	11.0
250	30	10,147	-52.8		26	11.3
200	30	11,600	-49.2		26	11.7
175	30	12,477	-48.6		26	11.9
150	30	13,490	-48.7		26	12.[illegible]
125	30	14,688	-48.7		26	11.4
100	30	16,154	-49.0		26	9.6
80	30	17,616	-49.9		26	9.5
70	30	18,488	-50.2		26	8.8
60	30	19,493	-50.7		26	8.0
50	30	20,679	-51.2		26	7.8
40	30	22,129	-51.3		26	6.7
30	28	24,000	-51.2		26	7.1
25	28	25,185	-50.8		26	6.7
20	26	26,636	-50.4		26	7.4
15	26	28,518	-49.0		26	6.7
10	11	31,264	-44.5			
7						
[illegible]						

+ KOROR, CAROLINE IS. 1007 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	30	28.4	24.5	23	1.8
1000	30	91	27.8	23.7	23	1.8
950	30	542	24.1	19.2	23	4.4
900	30	1,017	21.3	15.4	24	5.3
850	30	1,511	18.5	12.0	25	4.9
800	30	2,029	15.5	8.6	26	4.1
750	30	2,570	12.7	5.1	27	3.6
700	30	3,152	9.7	1.3	26	2.6
650	30	3,762	6.3	-2.5	25	1.9
600	30	4,417	2.6	-6.0	23	1.0
550	30	5,113	-1.3	-10.9	20	1.3
500	30	[illegible],872	-5.3	-16.0	17	1.5
450	30	6,690	-9.9	-22.1	13	2.9
400	29	7,594	-15.4	-28.6	11	3.4
350	29	8,588	-22.3	-35.2	11	5.2
300	29	[illegible],703	-30.4	-43.3	08	8.2
250	29	10,972	-40.5	-49.7	08	11.2
200	29	12,452	-52.9		07	14.9
175	29	13,300	-59.7		07	17.4
150	29	14,247	-66.9		07	19.3
125	29	15,327	-74.5		07	18.8
100	29	16,609	-77.4		08	15.5
80	29	17,907	-71.3		08	12.3
70	29	18,702	-68.0		08	12.8
60	29	19,634	-65.2		09	14.3
50	29	20,751	-62.3		09	18.6
40	29	22,142	-58.3		09	27.4
30	28	23,974	-53.2		09	33.0
25	28	25,156	-49.9		09	28.1
20	27	26,630	-45.9		09	13.2
15	26	28,554	-44.1		11	2.8
10	23	31,298	-40.0		10	4.5
7	17	33,757	-36.2		09	10.9
[illegible]	6	36,069	-34.3			

See reference note at end of table

RAWINSONDE DATA

Average monthly values

SEPTEMBER 1968

KOTZEBUE, ALASKA 1011 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	5	3.3	-.4	36	3.5
1000	30	97			34	3.4
950	30	509	1.6	-5.0	35	2.4
900	30	946	-1.2	-7.3	33	2.5
850	30	1,399	-3.9	-10.5	32	2.8
800	30	1,875	-6.5	-14.1	31	2.2
750	30	2,374	-9.4	-17.9	31	2.0
700	30	2,907	-12.6	-21.4	31	2.1
650	30	3,466	-15.7	-25.4	33	2.7
600	30	4,069	-19.6	-30.2	31	3.5
550	30	4,704	-24.1	-33.5	31	3.0
500	30	5,399	-28.8	-38.3	31	3.5
450	30	6,141	-34.3	-42.9	29	3.8
400	30	6,960	-40.0	-46.7	28	5.1
350	30	7,859	-46.2		28	5.6
300	30	8,869	-52.2		27	7.2
250	29	10,033	-54.6		27	7.0
200	29	11,474	-50.1		27	6.8
175	29	12,349	-49.1		27	7.0
150	29	13,360	-49.0		27	6.4
125	29	14,557	-48.8		26	6.1
100	29	16,022	-49.0		27	6.9
80	29	17,485	-49.6		27	5.9
70	29	18,357	-50.1		26	6.0
60	29	19,363	-50.8		26	6.1
50	29	20,550	-51.2		26	5.8
40	29	21,998	-51.8		25	6.3
30	28	23,868	-51.6		25	5.6
25	28	25,051	-51.4		25	6.2
20	28	26,501	-50.7		25	6.4
15	25	28,351	-49.5		24	6.9
10	16	30,917	-48.6		23	9.8
7						
5						
4						

KWAJALEIN, MARSHALL IS. 1010 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	28	4	28.1	23.9	14	1.3
1000	28	97	27.4	23.1	14	1.4
950	28	550	23.9	20.5	14	1.4
900	28	1,022	21.1	16.8	14	1.9
850	28	1,516	18.2	13.7	12	1.9
800	28	2,035	15.7	10.7	11	2.4
750	28	2,581	12.8	6.7	10	3.2
700	28	3,159	9.7	2.2	11	3.4
650	28	3,771	5.9	-2.7	10	3.5
600	28	4,423	2.1	-5.3	10	4.5
550	28	5,122	-1.5	-10.4	11	4.6
500	28	5,875	-5.8	-15.9	10	4.8
450	28	6,694	-10.7	-21.6	10	5.3
400	28	7,590	-16.5	-28.5	09	4.9
350	28	8,581	-23.3	-35.9	09	4.6
300	28	9,690	-31.8	-43.5	09	4.0
250	28	10,953	-41.5	-51.0	07	4.5
200	28	12,426	-54.0	-62.2	06	5.4
175	28	13,269	-61.3	-70.9	05	5.0
150	28	14,208	-68.8		03	4.2
125	27	15,281	-75.6		06	3.3
100	25	16,561	-76.8		09	4.6
80	23	17,857	-73.5		09	9.4
70	23	18,643	-70.6		09	11.3
60	23	19,568	-66.4		09	13.7
50	23	20,679	-63.7		09	18.2
40	23	22,060	-59.5		09	25.9
30	23	23,880	-55.1		09	31.1
25	22	25,053	-52.6		09	29.6
20	22	26,508	-48.2		09	16.0
15	21	28,416	-46.1		09	7.7
10	21	31,142	-41.3		09	5.9
7	14	33,598	-37.2		11	9.7
5						
4						

LAKE CHARLES, LA. 1015 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	5	19.6	18.9	06	1.5
1000	30	132	21.7	18.5	08	3.1
950	30	578	20.5	14.9	14	2.8
900	30	1,045	16.0	10.5	18	2.6
850	30	1,532	15.2	6.6	20	2.0
800	30	2,044	12.4	.5	23	1.8
750	30	2,582	10.2	-4.3	26	2.3
700	30	3,155	7.6	-9.4	27	3.0
650	30	3,762	4.5	-13.6	28	3.5
600	30	4,411	.9	-16.7	26	3.9
550	30	5,101	-3.5	-18.4	26	5.6
500	30	5,852	-8.1	-22.1	26	7.0
450	30	6,660	-13.6	-26.7	26	8.9
400	30	7,550	-19.7	-32.0	27	10.7
350	30	8,527	-26.6	-37.5	27	14.0
300	30	9,623	-34.5	-45.4	27	18.2
250	30	10,873	-43.7		27	22.5
200	30	12,337	-54.6		28	25.9
175	30	13,180	-60.2		28	25.1
150	30	14,128	-65.4		28	20.1
125	30	15,226	-69.5		28	14.0
100	30	16,553	-69.5		27	7.0
80	30	17,903	-64.7		36	2.0
70	30	18,720	-62.9		09	3.2
60	30	19,676	-60.0		10	4.1
50	30	20,621	-57.6		09	5.1
40	30	22,236	-55.4		08	6.3
30	30	24,083	-52.2		09	9.5
25	29	25,267	-49.8		09	10.7
20	27	26,730	-48.1		09	10.1
15	26	26,634	-45.7		08	11.6
10	26	31,361	-40.8		09	14.6
7	17	33,781	-37.7			
5						
4						

LANDER, WYO. 830 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	1,696	8.2	.1	24	1.7
1000	30	126				
950	30	558				
900	30	1,015				
850	30	1,499				
800	30	2,003	10.8	-2.6	24	1.3
750	30	2,536	8.0	-5.5	27	2.3
700	30	3,105	4.4	-8.5	28	4.3
650	30	3,698	.2	-12.1	27	7.0
600	30	4,341	-4.2	-16.0	28	8.4
550	30	5,015	-6.9	-20.0	28	8.7
500	30	5,754	-13.9	-25.5	28	9.0
450	30	6,539	-19.3	-32.3	28	9.6
400	30	7,414	-25.7	-38.4	28	10.0
350	30	8,368	-33.1	-44.0	27	11.4
300	30	9,433	-41.4	-49.6	27	11.9
250	30	10,649	-49.5		28	11.7
200	30	12,084	-56.9		28	12.9
175	30	12,927	-58.1		28	13.3
150	30	13,897	-58.7		28	12.2
125	30	15,038	-60.1		28	10.7
100	30	16,428	-60.4		28	7.7
80	30	17,819	-60.0		28	4.5
70	30	18,654	-59.0		27	3.0
60	30	19,624	-57.9		27	1.5
50	30	20,777	-56.5		01	.3
40	30	22,198	-55.0		03	.1
30	29	24,044	-53.1		05	.9
25	28	25,225	-51.4		35	.8
20	27	26,680	-49.3		30	1.1
15	27	28,576	-46.5		29	2.3
10	24	31,298	-42.1		28	4.3
7	13	33,677	-39.4		27	7.6
5	8	36,055	-33.7			
4						

* LIHUE KAUAI, HAWAII 1012 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	36	24.4	19.9	06	3.2
1000	30	137	24.4	20.4	07	4.7
950	30	583	21.6	19.5	08	6.4
900	30	1,054	18.3	15.4	08	6.4
850	30	1,543	15.4	11.6	08	6.5
800	30	2,056	12.8	7.3	09	5.8
750	30	2,596	11.0	-.2	09	5.7
700	30	3,170	8.2	-6.4	08	4.2
650	30	3,775	5.1	-11.5	08	3.9
600	30	4,428	1.1	-16.0	07	3.2
550	30	5,117	-2.9	-19.7	06	2.4
500	30	5,873	-7.3	-25.2	02	2.2
450	30	6,684	-12.7	-29.5	34	2.3
400	30	7,575	-19.0	-36.3	32	3.0
350	30	8,555	-26.4	-41.7	31	4.0
300	30	9,652	-34.8	-49.1	32	5.9
250	30	10,898	-44.7		30	9.6
200	29	12,353	-55.4		29	13.0
175	29	13,194	-61.1		29	13.2
150	29	14,139	-66.5		29	10.4
125	29	15,232	-69.4		29	5.5
100	29	16,561	-69.9		03	1.2
80	29	17,897	-67.7		08	6.4
70	29	18,702	-66.1		09	8.9
60	29	19,642	-63.4		09	11.5
50	29	20,770	-60.3		09	13.0
40	29	22,172	-57.1		09	14.7
30	28	24,001	-54.6		09	16.7
25	27	25,172	-53.0		09	16.8
20	27	26,617	-51.1		09	18.3
15	25	28,501	-48.0		09	19.5
10	22	31,202	-43.9		08	18.7
7	17	33,608	-40.2		09	19.3
5	10	35,897	-36.4			
4	5	37,436	-34.5			

LITTLE ROCK, ARK. 1007 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	79	15.9	13.5	27	.9
1000	30	140	17.2	13.5	27	1.0
950	30	581	18.9	11.0	20	2.6
900	30	1,045	16.2	8.2	21	3.0
850	30	1,529	13.7	3.5	23	2.3
800	30	2,038	11.3	.0	25	2.7
750	30	2,572	8.8	-4.6	26	2.9
700	30	3,145	6.2	-9.1	27	3.0
650	30	3,744	2.8	-12.7	27	4.7
600	30	4,393	-.9	-17.1	27	5.4
550	30	5,075	-5.0	-20.1	27	6.3
500	30	5,826	-9.9	-25.4	27	7.0
450	30	6,623	-15.6	-29.6	27	8.7
400	30	7,511	-21.9	-35.8	27	10.8
350	30	8,480	-28.9	-41.1	27	12.5
300	30	9,565	-37.1	-45.5	27	14.1
250	30	10,803	-46.1		27	18.1
200	30	12,255	-55.3		28	22.2
175	30	13,101	-58.5		27	23.0
150	30	14,062	-61.9		27	20.5
125	29	15,182	-64.8		27	14.6
100	29	16,539	-64.9		27	8.7
80	28	17,911	-62.0		28	3.4
70	28	18,739	-60.6		25	1.4
60	28	19,704	-58.6		08	.4
50	27	20,855	-57.2		08	2.1
40	26	22,278	-54.8		09	1.9
30	26	24,132	-51.3		09	4.5
25	25	25,321	-49.2		10	5.2
20	24	26,792	-47.1		10	4.6
15	23	28,700	-45.2		09	5.3
10	16	31,413	-42.8			
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MCGRATH, ALASKA 1000 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	10	103	2.2	-1.4	31	2.2
1000	10	102				
950	10	523	4.9	-2.2		
900	10	960	2.2	-4.2		
850	10	1,420	-.4	-8.4	05	3.0
800	10	1,903	-2.7	-12.4		
750	10	2,411	-5.7	-14.9		
700	10	2,951	-8.5	-20.5		
650	10	3,518	-11.9	-23.9		
600	10	4,130	-16.1	-27.0	05	.8
550	10	4,777	-20.7	-31.5	02	1.9
500	10	5,478	-25.7	-36.2	02	3.0
450	10	6,233	-31.3	-42.0	35	3.4
400	10	7,057	-37.2	-46.8	35	4.0
350	10	7,966	-44.1		34	5.2
300	10	8,983	-51.1		33	5.6
250	10	10,157	-54.0		29	6.6
200	10	11,606	-49.0		28	8.5
175	10	12,483	-48.5		27	8.2
150	10	13,497	-48.3		26	9.2
125	10	14,697	-48.3		26	8.3
100	10	16,165	-48.7		26	8.6
80	10	17,629	-49.6		26	6.9
70	10	18,502	-50.1		25	7.0
60	10	19,508	-50.5		25	7.3
50	10	20,696	-50.7		26	6.1
40	10	22,149	-51.0		26	6.5
30	9	23,999	-50.6			
25	7	25,118	-51.2			
20	7	26,569	-50.6			
15	7	28,448	-49.2			
10						
7						
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+ MAJURO, MARSHALL IS. 1011 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	3	29.2	24.6	12	1.0
1000	30	100	27.5	21.5	13	1.3
950	30	547	23.3	18.0	15	2.5
900	30	1,024	20.6	14.2	14	3.2
850	30	1,516	17.9	10.2	13	3.3
800	30	2,034	15.3	6.6	11	3.8
750	30	2,575	12.7	2.4	10	4.2
700	30	3,156	9.6	-2.1	10	5.0
650	30	3,760	6.1	-6.6	10	6.0
600	30	4,419	2.4	-9.1	09	6.6
550	30	5,104	-1.3	-13.1	09	6.2
500	30	5,873	-5.4	-18.8	09	6.5
450	30	6,686	-9.9	-24.4	09	6.2
400	30	7,595	-15.4	-29.4	09	6.3
350	30	8,590	-22.3	-36.5	09	4.9
300	30	9,705	-30.5	-44.4	09	4.6
250	30	10,976	-40.5	-52.4	08	3.1
200	30	12,458	-52.7		05	3.7
175	30	13,307	-59.7		05	2.5
150	30	14,254	-67.1		04	2.4
125	30	15,335	-73.8		06	2.1
100	30	16,625	-75.6		10	3.6
80	30	17,930	-71.1		09	7.6
70	30	18,724	-68.4		09	8.4
60	30	19,655	-65.1		09	11.5
50	30	20,773	-62.4		09	18.3
40	30	22,162	-58.6		09	27.9
30	30	23,996	-52.1		09	32.2
25	29	25,186	-48.1		09	24.9
20	29	26,670	-44.9		10	7.9
15	25	28,606	-42.2		12	3.1
10	22	31,369	-38.5		05	1.2
7	17	33,799	-36.1			
5						
4						
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* MEDFORD, OREG. 970 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	401	12.9	7.6	25	.2
1000	30	145				
950	30	586	14.5	8.0	28	.5
900	30	1,037	14.6	5.8	30	.4
850	30	1,520	13.1	1.6	11	.7
800	30	2,028	10.8	-3.1	01	.3
750	30	2,562	8.1	-8.0	30	2.0
700	30	3,130	5.2	-13.3	31	3.7
650	30	3,731	1.8	-17.5	32	5.9
600	30	4,373	-1.9	-21.3	31	7.5
550	30	5,053	-6.0	-25.0	31	8.6
500	30	5,801	-10.8	-29.1	31	10.4
450	30	6,596	-16.4	-32.3	30	11.3
400	30	7,480	-22.7	-38.8	30	12.0
350	30	8,445	-30.3	-43.5	30	12.7
300	30	9,522	-38.8	-49.6	30	11.9
250	30	10,749	-47.9		31	13.6
200	30	12,190	-57.2		31	13.9
175	30	13,028	-59.8		31	14.5
150	30	13,988	-61.2		30	13.4
125	30	15,116	-62.6		29	11.3
100	29	16,490	-62.6		30	8.6
80	29	17,870	-60.8		30	5.3
70	29	18,704	-59.2		30	3.4
60	29	19,681	-58.0		31	2.4
50	29	20,833	-56.6		32	1.4
40	29	22,254	-54.7		30	1.3
30	28	24,102	-52.7		34	.7
25	28	25,283	-51.2		35	1.4
20	27	26,734	-49.3		33	1.2
15	27	28,628	-47.5		29	1.8
10	25	31,325	-44.3		28	3.5
7	23	33,736	-40.3		27	4.1
5	20	36,069	-35.7		28	3.4
4	11	37,620	-32.8		25	3.7
3	6	39,615	-31.2			

MERIDA, MEXICO 1013 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	11	22.1	21.8	09	2.3
1000	30	122	24.0	23.3	10	4.0
950	30	572	23.1	19.8	11	6.2
900	30	1,045	20.7	15.0	11	5.9
850	30	1,538	17.9	10.8	11	5.1
800	30	2,055	15.3	6.2	10	4.7
750	30	2,598	12.4	3.2	10	4.7
700	30	3,177	9.3	-.6	09	4.5
650	30	3,784	5.9	-5.1	09	4.5
600	30	4,440	2.3	-11.0	07	4.2
550	30	5,129	-1.6	-15.4	06	5.3
500	30	5,892	-5.9	-21.2	05	6.0
450	30	6,705	-10.9	-28.8	05	6.0
400	30	7,607	-16.5	-35.0	05	5.9
350	30	8,597	-23.5	-41.5	04	5.3
300	30	9,705	-31.8	-48.7	04	6.1
250	30	10,968	-41.7		02	5.5
200	30	12,442	-53.5		36	7.0
175	30	13,286	-60.3		36	7.9
150	30	14,231	-67.0		36	7.8
125	30	15,312	-73.3		01	7.2
100	30	16,612	-73.2		04	6.8
80	30	17,941	-67.2		08	8.4
70	30	18,749	-65.0		09	10.4
60	30	19,698	-61.8		09	11.1
50	30	20,834	-58.7		09	12.8
40	28	22,250	-54.7		09	15.8
30	28	24,101	-52.5		09	17.2
25	25	25,277	-50.9		09	17.3
20	23	26,739	-48.5		09	17.3
15	19	28,643	-44.4		08	16.4
10	6	31,392	-40.3			
7						
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MIAMI, FLA. 1014 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	4	24.8	22.2	35	1.2
1000	30	124	25.6	22.8	04	1.5
950	30	579	22.9	20.2	12	2.3
900	30	1,046	20.2	15.7	14	1.8
850	30	1,538	17.4	12.1	15	1.6
800	30	2,055	14.4	8.6	16	1.4
750	30	2,595	11.4	4.4	20	1.7
700	30	3,173	8.5	.0	22	1.8
650	30	3,779	5.1	-5.8	22	1.5
600	30	4,432	1.5	-10.0	23	1.2
550	30	5,121	-2.4	-14.2	28	1.2
500	30	5,880	-6.6	-18.3	29	1.4
450	30	6,692	-11.8	-23.3	30	2.5
400	30	7,589	-17.8	-29.1	30	3.4
350	30	8,574	-24.8	-36.8	29	4.6
300	30	9,678	-33.0	-45.2	29	5.8
250	30	10,935	-42.9		29	7.2
200	30	12,404	-54.4		30	8.2
175	29	13,247	-60.4		31	9.0
150	29	14,194	-66.2		32	8.7
125	29	15,285	-70.9		33	5.8
100	29	16,609	-69.5		36	2.6
80	29	17,947	-66.5		07	4.0
70	29	18,759	-64.0		08	5.9
60	29	19,709	-61.1		08	9.0
50	28	20,849	-58.3		09	11.6
40	28	22,262	-55.1		09	12.6
30	28	24,113	-51.6		09	13.1
25	27	25,298	-50.2		09	13.0
20	25	26,759	-48.4		09	13.2
15	21	28,657	-45.1		09	16.6
10	17	31,378	-41.6		10	20.4
7						
5						

MIDLAND, TEXAS 917 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	874	16.2	12.1	14	1.6
1000	30	129				
950	30	567				
900	30	1,035	18.3	11.2	16	3.7
850	30	1,525	17.6	7.5	19	4.7
800	30	2,042	15.0	3.6	22	2.6
750	30	2,580	11.7	-.6	27	2.5
700	30	3,160	8.1	-5.1	32	2.1
650	30	3,764	4.2	-9.2	30	1.1
600	30	4,415	.1	-14.4	25	1.6
550	30	5,099	-4.2	-19.7	26	3.2
500	30	5,853	-8.5	-26.4	26	5.3
450	30	6,661	-14.1	-31.4	26	7.4
400	30	7,546	-20.4	-36.2	26	10.0
350	30	8,521	-27.7	-42.5	26	12.7
300	30	9,611	-35.9	-47.6	26	16.5
250	30	10,853	-45.1		26	21.5
200	30	12,311	-54.8		26	27.0
175	30	13,156	-59.6		26	27.7
150	30	14,109	-64.4		27	24.8
125	30	15,213	-68.2		27	17.2
100	29	16,548	-68.4		27	8.7
80	29	17,895	-64.9		27	3.0
70	29	18,714	-62.2		09	.3
60	28	19,066	-60.7		10	2.8
50	28	20,806	-58.8		10	3.4
40	28	22,216	-56.1		09	5.4
30	28	24,057	-52.9		09	8.0
25	27	25,239	-51.1		09	4.3
20	26	26,694	-49.1		09	7.9
15	26	28,591	-46.9		08	8.7
10	17	31,311	-41.7		09	12.5
7	11	33,745	-38.3			
5						

MONTERREY, MEXICO 969 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	423	20.6	19.8	29	.3
1000	30	147				
950	30	591	21.1	18.3	08	.7
900	30	1,059	18.9	15.6	12	2.7
850	30	1,550	16.6	12.4	13	4.5
800	30	2,065	14.4	8.3	14	4.1
750	30	2,602	11.9	4.1	15	2.6
700	30	3,184	8.6	1.8	18	2.1
650	30	3,791	5.3	-2.0	23	2.4
600	30	4,445	1.2	-8.3	22	2.4
550	30	5,131	-3.0	-12.6	21	2.9
500	30	5,891	-7.1	-17.0	22	4.2
450	30	6,699	-12.0	-23.6	23	5.1
400	30	7,600	-17.7	-29.2	24	6.5
350	30	8,586	-24.6	-36.3	24	8.9
300	30	9,691	-33.0	-44.5	25	10.9
250	30	10,948	-42.9		25	12.7
200	30	12,415	-54.8		25	13.0
175	29	13,257	-61.2		26	13.0
150	29	14,199	-67.5		27	11.5
125	29	15,282	-73.0		27	8.5
100	26	16,585	-73.2		26	2.2
80	26	17,915	-66.3		06	3.7
70	26	18,727	-64.1		08	7.4
60	26	19,676	-61.7		09	8.8
50	26	20,815	-58.5		08	9.2
40	26	22,227	-55.4		08	10.2
30	25	24,075	-52.4		08	13.3
25	23	25,254	-50.7		09	14.2
20	22	26,715	-48.3		08	15.6
15	19	28,624	-44.7		08	17.2
10	12	31,359	-40.1			
7						
5						

MONTGOMERY, ALA. 1010 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	61	18.2	16.0	05	.7
1000	30	145	19.4	16.4	09	1.3
950	30	592	20.6	15.1	14	2.7
900	30	1,056	18.0	11.9	16	2.6
850	30	1,543	15.0	7.9	19	2.5
800	30	2,055	12.2	1.5	22	2.8
750	30	2,592	9.2	-2.3	23	2.9
700	30	3,164	6.9	-8.8	24	3.2
650	30	3,767	3.7	-12.8	26	3.5
600	30	4,416	.2	-15.4	27	4.0
550	30	5,101	-3.8	-20.9	27	5.1
500	30	5,855	-8.6	-25.4	27	6.5
450	30	6,661	-14.3	-29.4	27	7.8
400	30	7,547	-20.5	-34.9	27	10.2
350	30	8,521	-27.7	-41.1	27	11.4
300	30	9,612	-35.7	-48.3	28	13.8
250	30	10,856	-44.8		28	17.3
200	30	12,315	-54.8		28	20.5
175	30	13,160	-59.6		28	20.9
150	30	14,113	-64.1		28	19.2
125	30	15,218	-67.8		28	12.7
100	30	16,560	-66.9		28	7.0
80	30	17,920	-63.7		30	2.1
70	30	18,742	-62.0		03	.7
60	30	19,701	-59.6		07	3.1
50	30	20,847	-57.2		08	4.2
40	30	22,266	-54.7		09	4.9
30	28	24,121	-51.3		09	7.1
25	27	25,307	-49.5		09	7.7
20	27	26,775	-47.1		09	7.4
15	27	28,687	-44.8		08	8.1
10	22	31,424	-40.6		09	11.3
7	17	33,859	-38.0		08	10.5
5	6	36,188	-35.8			

* NANTUCKET, MASS. 1019 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	14	15.1	14.5	04	1.1
1000	30	171	16.0	12.9	04	.6
950	30	604	14.7	8.6	33	.7
900	30	1,062	12.5	5.4	27	1.6
850	30	1,540	10.4	1.2	28	2.4
800	30	2,044	8.2	-3.2	29	3.1
750	30	2,570	5.6	-7.7	29	4.3
700	29	3,138	3.0	-11.4	29	5.3
650	29	3,730	.6	-16.2	29	6.5
600	29	4,374	-2.7	-20.5	28	6.9
550	29	5,048	-6.8	-24.8	28	7.5
500	29	5,797	-11.7	-29.2	28	8.8
450	29	6,592	-17.3	-33.9	28	10.0
400	29	7,470	-23.6	-39.8	27	11.0
350	29	8,433	-30.8	-45.9	27	11.0
300	29	9,510	-39.2	-51.1	27	11.9
250	29	10,737	-48.0		26	14.1
200	28	12,183	-55.7		27	17.6
175	28	13,029	-58.0		27	15.5
150	28	13,997	-59.7		27	14.2
125	28	15,134	-60.6		27	11.5
100	28	16,521	-60.8		28	7.1
80	28	17,912	-59.5		28	4.2
70	28	18,749	-58.6		29	2.6
60	27	19,721	-57.3		30	1.8
50	27	20,878	-55.8		30	2.2
40	26	22,302	-53.8		30	1.3
30	25	24,162	-50.8		29	2.5
25	24	25,352	-49.2		28	3.1
20	21	26,827	-46.7		27	4.0
15	19	28,752	-43.5		25	3.9
10	16	31,511	-39.6		25	2.1
7	10	33,992	-36.0			
5						

See reference note at end of table

RAWINSONDE DATA

Average monthly values

NASHVILLE, TENN. 997 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	180	16.0	15.2	09	.8
1000	30	158				
950	30	598	18.2	11.6	17	2.8
900	30	1,059	15.7	8.6	20	3.2
850	30	1,542	12.6	5.7	22	4.0
800	30	2,049	10.0	.6	23	4.0
750	30	2,584	7.5	-4.3	24	3.8
700	30	3,150	4.6	-9.3	25	3.9
650	30	3,751	1.6	-13.0	26	4.9
600	30	4,393	-1.6	-16.8	25	5.5
550	30	5,074	-5.6	-21.2	26	7.3
500	30	5,822	-10.4	-25.3	27	8.2
450	30	6,623	-16.1	-30.4	27	9.4
400	30	7,502	-22.5	-36.4	27	10.5
350	30	8,470	-29.6	-42.5	26	11.7
300	30	9,551	-37.9	-48.8	27	12.9
250	30	10,783	-47.2		27	16.4
200	30	12,229	-55.7		27	19.7
175	30	13,073	-58.8		27	18.4
150	30	14,034	-61.7		27	17.9
125	30	15,155	-64.3		27	13.2
100	30	16,519	-63.9		27	8.9
80	30	17,893	-61.5		28	3.7
70	30	18,722	-60.4		31	1.9
60	30	19,685	-58.8		04	.9
50	30	20,834	-56.6		07	1.8
40	30	22,256	-54.3		07	1.5
30	30	24,113	-51.0		08	1.8
25	28	25,304	-49.1		09	2.2
20	28	26,775	-47.0		09	2.7
15	27	28,694	-44.9		09	4.4
10	25	31,415	-41.6		09	6.5
7	14	33,866	-37.9			
5	5	36,213	-35.0			

* NOME, ALASKA 1012 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	5	2.0	-4.1	35	2.7
1000	30	97			35	3.4
950	30	514	2.3	-4.5	02	3.5
900	30	948	-.7	-6.9	02	2.8
850	30	1,403	-3.6	-9.7	02	2.5
800	30	1,880	-6.4	-14.2	02	2.9
750	30	2,384	-8.9	-19.2	01	3.5
700	30	2,915	-11.7	-22.9	35	3.7
650	30	3,480	-14.9	-26.4	34	3.7
600	30	4,082	-18.4	-30.2	34	4.2
550	30	4,722	-22.9	-33.7	33	4.1
500	30	5,420	-27.6	-38.6	32	4.6
450	30	6,166	-32.8	-42.6	31	5.1
400	30	6,991	-38.9	-45.1	30	5.5
350	30	7,895	-45.5		30	5.8
300	30	8,908	-52.1		29	6.5
250	30	10,076	-55.4		28	6.5
200	30	11,516	-50.2		28	7.5
175	30	12,390	-49.4		28	7.4
150	30	13,401	-49.1		28	6.9
125	30	14,598	-49.0		28	6.9
100	30	16,063	-49.0		27	7.4
80	30	17,525	-49.8		27	7.2
70	30	18,397	-50.1		27	6.7
60	30	19,402	-50.6		27	6.9
50	30	20,589	-51.2		27	6.0
40	30	22,037	-51.7		27	6.9
30	30	23,902	-51.8		26	6.7
25	30	25,083	-51.5		26	6.8
20	30	26,535	-50.5		27	6.6
15	27	28,422	-48.9		26	7.1
10	24	31,101	-46.5		27	8.4
7	16	33,518	-43.7		28	7.0
5	7	35,648	-43.2			

NORTH PLATTE, NEBR. 917 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	848	9.6	5.4	02	.5
1000	30	119				
950	30	552				
900	30	1,004	13.5	5.9	22	1.4
850	30	1,488	14.5	3.2	26	4.7
800	30	1,998	12.4	-.7	28	5.4
750	30	2,534	9.4	-4.7	28	6.7
700	30	3,105	5.6	-8.2	29	7.5
650	30	3,702	1.1	-10.8	28	8.6
600	30	4,345	-3.5	-14.1	28	9.6
550	30	5,020	-8.1	-18.7	28	10.4
500	30	5,762	-12.9	-25.5	28	11.2
450	30	6,551	-18.6	-31.3	28	11.7
400	30	7,425	-25.1	-37.5	28	12.1
350	30	8,381	-32.7	-43.8	28	14.2
300	30	9,448	-41.1	-52.2	28	15.6
250	30	10,666	-49.1		27	16.4
200	30	12,105	-56.0		27	16.1
175	30	12,951	-57.5		27	16.0
150	30	13,922	-58.8		27	14.1
125	30	15,062	-60.2		27	11.2
100	30	16,450	-60.9		28	7.7
80	30	17,840	-59.7		27	4.0
70	30	18,677	-58.3		27	2.4
60	30	19,651	-56.9		27	.8
50	30	20,808	-55.8		30	.5
40	30	22,233	-54.4		05	1.2
30	30	24,085	-52.0		06	1.6
25	30	25,270	-50.4		02	1.4
20	28	26,726	-47.8		31	1.6
15	28	28,636	-44.9		29	3.0
10	22	31,399	-40.8		30	4.0
7	5	33,871	-37.8			
5						

OAKLAND, CALIF. 1014 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	6	14.8	11.9	28	.9
1000	30	120	15.5	10.9	27	1.4
950	30	560	16.0	6.3	30	2.2
900	30	1,018	18.8	-.3	33	2.5
850	30	1,507	17.7	-3.7	33	2.5
800	30	2,022	14.9	-7.9	32	2.3
750	30	2,558	11.9	-11.7	32	2.5
700	30	3,138	8.6	-14.7	31	2.8
650	30	3,744	5.3	-17.6	32	3.8
600	30	4,396	1.4	-20.9	31	5.3
550	30	5,081	-2.9	-24.4	31	7.4
500	30	5,840	-8.3	-28.6	31	8.4
450	30	6,641	-14.4	-33.0	31	10.0
400	30	7,532	-21.3	-38.6	30	11.7
350	30	8,502	-28.9	-44.5	31	12.5
300	30	9,585	-37.7	-50.7	31	14.1
250	30	10,818	-46.9		31	15.9
200	30	12,263	-56.5		30	17.0
175	30	13,104	-59.6		30	16.7
150	30	14,062	-62.2		30	15.2
125	30	15,182	-64.3		29	12.9
100	30	16,541	-65.4		30	9.4
80	29	17,905	-63.0		31	4.7
70	29	18,730	-61.1		31	3.0
60	29	19,692	-58.5		35	1.0
50	29	20,844	-56.4		34	.8
40	29	22,266	-54.9		04	2.2
30	28	24,114	-52.5		08	3.1
25	26	25,302	-50.8		08	3.2
20	26	26,762	-48.6		09	2.0
15	24	28,658	-46.6		06	1.9
10	21	31,368	-42.6		06	2.4
7	9	33,796	-39.5			
5						

OMAHA, NEBR. 967 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	403	13.4	10.7	18	1.1
1000	30	119				
950	30	553	15.4	9.6	20	2.3
900	30	1,012	14.9	6.8	24	6.0
850	30	1,494	13.0	2.3	25	7.3
800	30	2,002	10.4	-1.1	26	7.9
750	30	2,532	7.3	-4.6	27	7.7
700	30	3,102	3.8	-8.9	27	8.3
650	30	3,695	.0	-12.5	27	8.4
600	30	4,337	-4.2	-16.4	28	9.3
550	30	5,010	-8.5	-19.9	28	10.0
500	30	5,752	-13.0	-27.4	27	10.5
450	30	6,540	-18.3	-32.4	28	11.0
400	30	7,419	-24.4	-38.7	28	11.9
350	30	8,377	-31.9	-44.2	27	12.2
300	30	9,449	-40.1	-49.8	27	12.9
250	30	10,670	-48.9		26	15.1
200	30	12,109	-56.4		26	16.6
175	30	12,953	-57.9		26	17.4
150	30	13,923	-58.6		27	15.1
125	30	15,065	-60.0		27	10.9
100	30	16,455	-60.6		26	8.2
80	30	17,847	-59.3		27	5.2
70	30	18,685	-57.8		27	3.4
60	30	19,658	-57.0		29	1.5
50	30	20,815	-56.0		36	1.0
40	30	22,237	-54.8		02	.9
30	29	24,084	-52.5		35	.7
25	29	25,266	-50.5		32	.7
20	29	26,729	-48.0		29	2.0
15	27	28,637	-45.1		29	3.9
10	20	31,382	-41.8		30	3.9
7						
5						

+ PAGO PAGO, AMERICAN SAMOA 1013 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	5	27.9	23.9	10	4.5
1000	30	116	26.2	21.1	10	5.0
950	30	569	22.1	16.9	08	5.5
900	30	1,035	19.0	13.0	08	4.3
850	30	1,524	16.3	9.2	07	3.8
800	30	2,038	14.4	3.7	05	2.6
750	30	2,578	12.2	-.1	02	2.1
700	30	3,157	9.6	-5.1	36	2.3
650	30	3,763	6.3	-9.9	33	2.1
600	30	4,420	2.3	-14.4	33	3.4
550	30	5,113	-1.7	-18.1	32	3.4
500	30	5,871	-6.1	-22.4	31	4.3
450	30	6,684	-11.0	-27.0	31	4.8
400	30	7,586	-16.5	-32.2	30	6.7
350	30	8,578	-23.0	-39.2	29	7.3
300	30	9,690	-31.6	-46.4	28	8.6
250	30	10,954	-41.9		27	10.1
200	30	12,428	-53.8		26	12.0
175	30	13,273	-60.4		26	11.7
150	30	14,220	-66.9		26	11.0
125	30	15,304	-72.9		27	9.8
100	30	16,602	-75.4		29	5.8
80	30	17,907	-71.3		26	2.6
70	30	18,705	-66.6		09	.7
60	30	19,651	-62.2		09	5.4
50	29	20,787	-58.8		09	9.6
40	28	22,196	-56.2		08	14.5
30	28	24,038	-52.9		09	16.7
25	27	25,220	-50.7		08	13.8
20	26	26,681	-48.1		08	11.7
15	21	28,585	-44.5		08	3.8
10	17	31,324	-39.3		24	1.4
7	5	33,773	-35.3			
5						

* PEORIA, ILL. 993 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	200	13.0	11.3	20	1.5
1000	30	136				
950	30	573	16.0	9.4	23	4.7
900	30	1,029	13.6	5.5	24	5.6
850	30	1,509	11.0	2.7	25	6.0
800	30	2,014	8.8	-1.6	26	6.9
750	30	2,542	6.1	-4.3	26	7.3
700	30	3,108	2.9	-8.6	26	8.0
650	30	3,703	-.3	-13.9	27	8.4
600	30	4,341	-4.1	-16.5	26	8.6
550	30	5,017	-8.0	-21.1	26	9.2
500	30	5,758	-12.4	-27.1	26	9.5
450	30	6,549	-17.9	-33.2	26	9.9
400	30	7,425	-23.9	-39.1	26	10.5
350	30	8,386	-31.4	-45.2	25	11.5
300	30	9,459	-39.8	-50.3	26	13.8
250	30	10,681	-48.9		26	16.8
200	30	12,119	-56.6		27	18.0
175	30	12,962	-58.0		27	16.3
150	30	13,933	-58.9		26	13.6
125	30	15,071	-60.8		26	10.9
100	30	16,455	-61.1		27	7.9
80	30	17,845	-59.3		28	4.4
70	29	18,686	-58.5		29	2.4
60	29	19,658	-57.4		33	.8
50	29	20,813	-56.3		09	.9
40	29	22,235	-54.5		05	1.2
30	29	24,088	-51.9		35	.5
25	29	25,274	-50.0		30	1.3
20	28	26,742	-47.4		27	2.3
15	26	28,651	-44.9		26	2.8
10	24	31,379	-40.5		26	2.7
7	20	33,828	-37.0		24	3.9
5	6	36,099	-33.7			

* PITTSBURGH, PA. 977 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	359	14.1	12.0	19	1.3
1000	30	159				
950	30	599	16.9	10.9	23	3.5
900	30	1,055	14.2	8.2	25	5.2
850	30	1,536	11.4	3.9	25	5.3
800	30	2,040	8.6	-.8	25	5.7
750	30	2,570	5.6	-4.9	26	6.4
700	30	3,133	2.8	-8.9	26	6.2
650	30	3,728	-.6	-12.5	26	7.0
600	30	4,365	-4.3	-16.5	26	7.8
550	30	5,043	-7.8	-22.2	26	8.0
500	30	5,782	-12.2	-26.2	26	8.9
450	30	6,578	-17.6	-31.5	26	10.2
400	30	7,452	-24.1	-36.6	26	11.2
350	30	8,412	-31.2	-43.6	26	12.7
300	30	9,487	-39.3	-48.7	25	12.9
250	30	10,711	-48.3		26	14.1
200	30	12,153	-56.1		27	15.3
175	30	12,997	-58.3		27	15.8
150	30	13,962	-59.9		27	14.6
125	30	15,098	-61.2		27	11.2
100	30	16,482	-61.2		27	6.5
80	30	17,871	-59.3		29	3.3
70	30	18,709	-59.2		30	2.2
60	30	19,680	-57.1		30	1.0
50	30	20,837	-55.7		31	1.1
40	30	22,263	-53.6		33	.6
30	30	24,124	-50.7		31	1.5
25	30	25,316	-48.8		30	1.7
20	30	26,790	-46.6		29	2.1
15	30	28,711	-43.8		27	3.2
10	29	31,450	-41.0		28	3.0
7	18	33,891	-37.5		29	4.8
5	7	36,197	-35.2			

+ PONAPE, CAROLINE IS. 1005 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	39	28.7	24.1	04	.8
1000	30	86	28.0	23.0	04	.7
950	30	534	24.1	17.9	21	.3
900	30	1,012	21.1	14.8	14	.9
850	30	1,506	18.4	11.1	11	1.9
800	30	2,025	15.9	7.1	09	2.8
750	30	2,569	13.1	3.2	09	3.4
700	30	3,149	9.9	-1.1	09	3.8
650	30	3,759	6.5	-4.7	11	4.6
600	30	4,415	2.7	-8.5	10	4.8
550	30	5,112	-1.0	-13.4	10	5.2
500	29	5,870	-5.2	-18.8	10	5.7
450	29	6,692	-10.0	-24.2	09	5.3
400	29	7,592	-15.5	-29.5	09	5.2
350	29	8,588	-22.2	-36.7	08	6.2
300	29	9,703	-30.4	-44.9	07	6.4
250	29	10,973	-40.6	-52.5	07	7.3
200	29	12,453	-53.0		06	8.5
175	29	13,300	-60.0		06	9.7
150	29	14,246	-67.2		06	8.2
125	29	15,325	-74.5		06	6.2
100	28	16,614	-75.2		08	6.2
80	28	17,920	-71.2		08	8.4
70	28	18,714	-68.4		08	9.2
60	28	19,645	-64.8		09	11.7
50	27	20,764	-62.6		09	17.6
40	27	22,152	-58.4		09	26.8
30	25	23,986	-52.7		09	33.3
25	25	25,173	-49.3		09	27.8
20	25	26,650	-45.3		09	11.5
15	24	28,576	-43.4		12	2.6
10	21	31,327	-38.7		02	1.7
7	10	33,767	-35.4			
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PORTLAND, MAINE 1017 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	20	12.7	10.8	29	.8
1000	30	163	14.5	10.5	32	1.1
950	30	598	13.8	7.6	32	1.5
900	30	1,052	11.5	4.6	30	1.8
850	30	1,528	9.1	-1.5	29	2.4
800	30	2,028	6.4	-5.4	28	2.8
750	30	2,553	4.3	-10.5	27	3.8
700	30	3,115	1.6	-12.4	27	5.4
650	30	3,705	-1.3	-16.2	27	7.0
600	30	4,344	-4.5	-20.2	27	8.2
550	30	5,016	-8.5	-24.9	27	9.3
500	30	5,757	-13.3	-29.7	27	10.0
450	30	6,544	-18.7	-34.9	27	11.5
400	30	7,419	-24.9	-40.1	28	12.7
350	30	8,376	-32.2	-46.0	27	13.1
300	30	9,445	-40.4	-50.2	27	14.7
250	30	10,665	-49.0		27	15.6
200	30	12,108	-55.4		27	16.0
175	30	12,956	-56.7		27	15.1
150	30	13,931	-57.7		27	13.6
125	30	15,076	-59.2		27	10.8
100	30	16,472	-59.6		27	7.6
80	30	17,871	-58.3		28	4.3
70	30	18,712	-57.5		29	2.9
60	30	19,688	-56.6		31	1.5
50	30	20,847	-55.5		32	1.4
40	30	22,275	-53.8		32	1.5
30	30	24,134	-51.2		31	2.3
25	29	25,320	-49.2		29	3.4
20	28	26,795	-46.5		27	5.3
15	25	28,695	-43.9		26	6.2
10	19	31,432	-40.2		26	8.7
7	15	33,878	-36.8		26	11.4
5	13	36,240	-32.6			

* QUILLAYUTE, WASH. 1011 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	58	10.5	10.1	06	.8
1000	30	144	11.6	10.1	06	.7
950	30	572	11.9	6.8	29	1.1
900	30	1,026	11.0	1.9	27	2.3
850	30	1,502	8.9	-.7	28	4.4
800	30	2,002	6.5	-4.2	28	5.8
750	30	2,531	4.2	-8.3	28	7.4
700	30	3,088	1.2	-10.4	28	9.0
650	30	3,678	-2.4	-14.1	29	10.5
600	30	4,312	-5.8	-16.9	28	11.9
550	30	4,983	-9.9	-20.6	28	13.2
500	30	5,718	-14.7	-24.4	28	13.9
450	30	6,501	-20.4	-29.5	28	16.0
400	30	7,370	-26.2	-36.1	28	18.4
350	30	8,322	-33.0	-41.6	28	19.9
300	30	9,387	-41.0	-48.5	28	20.7
250	30	10,602	-49.5		28	22.1
200	30	12,037	-56.5		28	20.2
175	30	12,880	-58.4		28	19.3
150	30	13,847	-59.2		28	17.9
125	30	14,969	-59.2		28	15.0
100	30	16,386	-59.2		28	11.3
80	30	17,788	-57.9		27	8.4
70	30	18,631	-57.0		28	6.5
60	30	19,606	-56.5		28	4.8
50	30	20,767	-55.4		27	3.8
40	29	22,191	-54.4		27	3.6
30	29	24,040	-52.9		26	3.3
25	29	25,218	-51.9		28	4.0
20	28	26,664	-50.7		29	4.1
15	28	28,545	-48.8		30	3.8
10	22	31,210	-45.4		28	3.9
7	15	33,643	-41.0		30	3.6
5	6	35,977	-37.5			

RAPID CITY, S. DAK. 904 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	966	9.1	4.6	31	1.2
1000	30	118				
950	30	553				
900	30	1,001			30	2.0
850	30	1,483	13.0	3.7	29	3.0
800	30	1,990	10.3	.6	30	4.7
750	30	2,519	6.9	-2.5	31	7.1
700	30	3,088	3.3	-6.6	30	8.2
650	30	3,678	-.5	-10.9	30	8.2
600	30	4,320	-4.7	-15.7	29	8.7
550	30	4,991	-9.1	-20.4	29	8.7
500	30	5,730	-13.8	-25.1	29	9.8
450	30	6,515	-19.4	-30.2	29	10.3
400	30	7,386	-25.9	-36.5	29	10.9
350	30	8,339	-33.2	-42.5	29	11.2
300	30	9,405	-41.3	-49.1	29	10.9
250	30	10,620	-49.8		29	12.4
200	30	12,056	-55.9		28	11.7
175	30	12,903	-57.2		27	11.8
150	30	13,876	-57.6		27	12.6
125	30	15,022	-59.1		28	10.2
100	30	16,419	-59.6		28	6.2
80	30	17,816	-58.7		29	4.0
70	30	18,656	-57.7		29	2.7
60	30	19,631	-56.9		28	2.1
50	30	20,788	-55.9		29	1.2
40	30	22,212	-54.4		31	.6
30	29	24,060	-52.5		03	.2
25	29	25,242	-51.1		32	.8
20	29	26,699	-49.1		31	2.2
15	27	28,600	-47.0		28	3.2
10	18	31,317	-41.0		24	5.1
7	5	33,608	-40.2			
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ST CLOUD, MINN. 976 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	316	10.5	8.8	20	.7
1000	30	114				
950	30	545	12.7	8.8	24	1.9
900	30	997	11.7	4.9	27	3.6
850	30	1,474	9.5	1.8	28	4.6
800	30	1,976	7.5	-.9	27	5.6
750	30	2,503	4.9	-6.5	27	6.4
700	30	3,066	1.8	-10.7	27	7.3
650	30	3,652	-1.6	-13.9	27	7.6
600	30	4,293	-5.5	-19.0	27	8.2
550	30	4,962	-9.7	-24.4	27	8.9
500	30	5,701	-14.1	-29.3	26	9.0
450	30	6,483	-19.4	-33.5	27	10.6
400	30	7,360	-25.6	-37.8	27	10.7
350	30	8,316	-32.4	-43.4	27	10.7
300	30	9,385	-40.7	-49.0	28	11.7
250	30	10,604	-49.2		27	12.9
200	29	12,043	-55.8		26	14.9
175	29	12,891	-56.9		27	13.4
150	29	13,867	-56.6		27	10.5
125	29	15,022	-57.6		27	9.0
100	29	16,428	-58.3		27	7.0
80	29	17,837	-57.0		28	4.9
70	29	18,683	-56.3		29	3.3
60	29	19,665	-55.3		29	2.1
50	29	20,829	-54.7		30	1.4
40	26	22,262	-53.7		35	.8
30	26	24,116	-52.0		35	1.1
25	25	25,301	-50.5		32	1.1
20	24	26,764	-48.6		32	2.0
15	23	28,661	-45.9		29	4.1
10	20	31,382	-41.6		26	6.3
7	9	33,800	-37.6			
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* ST PAUL IS., ALASKA 1012 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	10	5.6	3.9	34	3.6
1000	30	106			34	4.6
950	30	523	3.3	.2	35	5.7
900	30	961	.2	-2.5	35	5.3
850	30	1,418	-2.4	-6.6	35	4.6
800	30	1,898	-3.9	-12.2	35	4.2
750	30	2,405	-6.1	-18.1	34	4.2
700	30	2,943	-8.6	-20.2	33	5.0
650	30	3,514	-12.0	-23.4	33	5.6
600	30	4,122	-15.9	-26.9	32	6.3
550	30	4,768	-20.5	-30.5	31	6.5
500	30	5,471	-25.3	-33.6	32	7.0
450	30	6,225	-30.3	-38.7	31	8.2
400	30	7,057	-35.9	-43.3	31	6.6
350	30	7,972	-42.1	-44.6	30	8.8
300	30	9,001	-48.4		30	11.9
250	30	10,188	-52.6		30	13.9
200	30	11,636	-50.5		29	14.5
175	30	12,509	-49.7		29	13.5
150	29	13,527	-49.4		28	12.6
125	29	14,721	-49.7		28	12.2
100	29	16,179	-50.3		28	10.6
80	29	17,633	-50.8		28	9.5
70	29	18,500	-51.3		28	8.2
60	29	19,499	-51.7		28	7.3
50	29	20,680	-52.2		28	6.1
40	29	22,125	-52.1		27	5.9
30	29	23,986	-51.8		27	7.0
25	28	25,174	-51.1		27	7.2
20	28	26,628	-49.9		27	5.9
15	27	28,523	-48.5		27	7.8
10	23	31,234	-44.4		26	6.4
7	21	33,622	-41.1		27	8.9
5	14	36,041	-36.2			

SALEM, OREG. 1010 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	61	10.8	9.3	29	.2
1000	30	146	12.5	10.6	36	.8
950	30	576	13.5	7.8	01	2.1
900	30	1,034	12.7	2.9	34	1.7
850	30	1,512	10.7	-.8	30	2.9
800	30	2,016	9.2	-4.6	30	5.0
750	30	2,541	6.6	-9.1	29	5.7
700	30	3,112	3.7	-11.8	29	6.1
650	30	3,703	.2	-14.7	30	7.4
600	29	4,351	-3.5	-19.2	30	8.5
550	29	5,024	-7.8	-23.7	30	9.3
500	29	5,769	-12.5	-28.0	30	10.5
450	29	6,558	-18.1	-30.7	30	13.0
400	29	7,436	-24.1	-35.7	29	14.6
350	29	8,397	-31.0	-41.1	30	15.6
300	29	9,472	-39.2	-48.4	30	16.7
250	29	10,696	-48.1		30	18.1
200	29	12,137	-56.8		30	17.3
175	29	12,977	-59.4		30	16.4
150	28	13,948	-60.7		29	16.1
125	28	15,082	-61.3		29	13.3
100	28	16,466	-61.2		29	8.9
80	28	17,655	-60.0		29	6.1
70	28	18,691	-58.4		30	4.8
60	27	19,659	-57.6		30	2.9
50	27	20,815	-55.9		29	2.0
40	27	22,239	-54.4		29	1.7
30	27	24,090	-52.5		32	1.5
25	27	25,270	-51.3		30	1.6
20	27	26,725	-49.5		32	2.0
15	25	28,615	-47.5		31	2.9
10	21	31,313	-44.1		29	4.6
7	7	33,680	-41.4			
5						

See reference note at end of table

RAWINSONDE DATA

Average monthly values

SEPTEMBER 1968

Columns: Standard pressure surface (mb.) | No. of observations | Dynamic height | Temperature | Dew Point | Resultant Wind: Direction | Resultant Wind: Speed M.p.s.

SALT LAKE CITY, UTAH — 872 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Direction	Speed M.p.s.
SURFACE	29	1,288	10.5	2.0	17	2.9
1000	29	131				
950	29	566				
900	29	1,026				
850	29	1,507	15.3	.9	16	3.7
800	29	2,018	12.7	-2.1	19	3.0
750	29	2,549	9.1	-4.9	24	3.6
700	29	3,123	5.3	-9.0	26	4.7
650	29	3,717	1.1	-13.0	27	6.1
600	29	4,361	-3.5	-16.0	27	7.3
550	29	5,033	-8.0	-20.6	28	8.7
500	29	5,774	-13.1	-25.8	28	9.8
450	28	6,569	-18.6	-31.6	28	10.8
400	28	7,441	-24.7	-37.4	28	12.4
350	28	8,399	-31.8	-43.5	28	13.2
300	28	9,469	-40.4	-49.7	28	13.9
250	28	10,689	-48.8		28	14.9
200	28	12,127	-56.4		28	14.1
175	28	12,972	-58.1		28	14.2
150	28	13,939	-59.5		28	13.2
125	28	15,075	-60.9		28	10.3
100	28	16,456	-62.1		23	7.4
80	28	17,839	-60.8		29	4.3
70	28	18,672	-59.1		29	3.1
60	28	19,641	-57.6		29	1.9
50	28	20,794	-56.6		27	.5
40	28	22,213	-55.2		06	.6
30	28	24,058	-52.9		02	1.2
25	28	25,238	-51.5		36	1.1
20	28	26,692	-49.6		32	1.6
15	27	28,584	-46.9		28	1.9
10	20	31,291	-43.4		28	3.6
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SAN DIEGO, CALIF. — 997 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Direction	Speed M.p.s.
SURFACE	30	124	17.3	14.0	22	.3
1000	30	101				
950	30	541	18.5	10.5	34	.5
900	30	1,007	20.0	3.5	33	1.2
850	30	1,499	20.7	-1.8	31	2.0
800	30	2,019	17.2	-4.9	28	1.3
750	30	2,561	13.8	-7.0	23	1.4
700	30	3,144	9.9	-9.9	22	1.7
650	30	3,750	6.0	-12.6	24	2.1
600	30	4,406	1.8	-17.6	28	2.7
550	30	5,094	-2.4	-23.9	29	3.6
500	30	5,854	-7.5	-27.9	30	5.1
450	30	6,663	-13.5	-32.7	30	6.5
400	30	7,553	-20.1	-38.2	30	8.1
350	30	8,528	-27.9	-44.1	30	8.9
300	30	9,616	-36.6	-50.5	30	11.1
250	30	10,856	-45.8		30	13.5
200	30	12,311	-54.9		29	15.8
175	30	13,157	-58.7		28	16.0
150	30	14,115	-63.2		28	15.2
125	30	15,225	-66.8		28	13.0
100	30	16,568	-68.1		29	7.6
80	30	17,915	-65.2		31	3.2
70	30	18,734	-61.7		35	1.5
60	30	19,693	-59.3		08	2.1
50	30	20,841	-57.5		09	3.3
40	30	22,257	-55.5		09	5.0
30	30	24,102	-52.8		08	6.6
25	29	25,279	-51.2		08	6.5
20	29	26,737	-48.9		09	7.8
15	29	28,635	-46.7		08	8.7
10	27	31,346	-43.2		08	11.3
7	23	33,759	-39.8		10	10.2

SAN JUAN, P. R. — 1014 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Direction	Speed M.p.s.
SURFACE	30	6	25.6	24.0	14	1.5
1000	30	132	25.5	22.3	12	4.0
950	30	581	23.0	18.5	10	6.7
900	30	1,054	20.4	13.9	11	7.9
850	30	1,546	17.7	8.7	10	8.4
800	30	2,063	15.2	3.5	10	8.0
750	30	2,604	12.4	-.7	11	7.3
700	30	3,183	9.4	-5.1	11	6.5
650	30	3,791	5.9	-10.3	11	5.8
600	30	4,445	2.0	-14.1	11	5.9
550	30	5,134	-2.1	-19.6	11	5.2
500	30	5,892	-6.8	-24.2	11	5.1
450	30	6,698	-12.1	-28.6	11	4.8
400	30	7,597	-18.3	-33.6	11	4.1
350	30	8,580	-25.5	-39.1	12	2.2
300	30	9,680	-34.0	-46.8	13	2.2
250	30	10,930	-43.8		14	1.4
200	30	12,392	-55.1		30	.7
175	30	13,232	-61.0		33	1.7
150	30	14,177	-66.2		33	3.0
125	30	15,271	-69.5		04	2.6
100	30	16,596	-70.9		08	5.0
80	30	17,919	-68.9		08	8.6
70	30	18,724	-65.4		09	11.7
60	30	19,668	-62.4		09	13.9
50	30	20,800	-59.5		08	16.8
40	30	22,208	-56.0		09	19.3
30	29	24,054	-52.4		09	19.9
25	29	25,236	-50.8		09	19.8
20	29	26,695	-48.6		09	19.1
15	27	28,602	-44.4		09	18.8
10	16	31,345	-37.7		10	15.7

* SAULT STE MARIE, MICH. — 989 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Direction	Speed M.p.s.
SURFACE	30	221	12.3	11.2	13	.7
1000	30	130				
950	30	557	13.0	10.3	21	2.0
900	30	1,016	11.5	7.0	24	3.5
850	30	1,492	8.6	3.8	24	4.9
800	30	1,992	5.8	-.7	24	5.3
750	30	2,516	3.5	-6.5	24	6.5
700	30	3,075	.6	-10.4	24	7.3
650	30	3,666	-2.6	-15.2	24	7.7
600	30	4,298	-6.0	-19.2	25	8.4
550	30	4,970	-10.1	-22.5	25	8.5
500	30	5,703	-14.7	-26.9	25	8.7
450	30	6,489	-20.1	-33.6	25	8.5
400	29	7,351	-26.3	-40.7	26	8.8
350	29	8,302	-32.8	-45.8	26	9.5
300	29	9,367	-41.3	-51.2	27	9.2
250	28	10,581	-48.8		28	11.6
200	28	12,028	-53.8		28	12.3
175	28	12,885	-54.1		28	12.2
150	28	13,871	-55.6		28	10.1
125	28	15,029	-56.7		27	8.5
100	28	16,441	-57.1		27	6.4
80	28	17,855	-56.2		28	4.0
70	28	18,704	-55.3		28	2.8
60	28	19,690	-55.0		26	2.0
50	28	20,856	-54.5		29	1.8
40	28	22,288	-53.4		32	1.5
30	27	24,149	-51.6		33	1.4
25	26	25,337	-50.0		31	2.1
20	26	26,801	-48.1		30	2.5
15	26	28,709	-45.6		29	4.2
10	26	31,439	-40.8		27	6.8
7	16	33,902	-36.2		26	7.9

* SHEMYA, ALASKA — 1014 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Direction	Speed M.p.s.
SURFACE	29	38	7.6	6.0	02	.2
1000	29	155	7.1	4.7	28	1.6
950	29	576	4.9	1.7	34	1.1
900	29	1,015	2.4	-1.5	32	1.6
850	29	1,476	.7	-6.5	30	2.5
800	29	1,962	-.6	-11.2	29	2.7
750	29	2,477	-3.1	-14.3	30	2.7
700	29	3,020	-5.7	-16.6	30	3.5
650	29	3,598	-8.1	-18.8	30	5.1
600	29	4,216	-11.5	-24.1	30	6.3
550	29	4,874	-15.8	-28.8	30	7.5
500	28	5,589	-20.5	-32.3	30	8.7
450	28	6,359	-25.7	-36.7	30	10.7
400	28	7,206	-31.3	-41.9	31	11.7
350	28	8,139	-37.8	-45.4	30	13.6
300	28	9,185	-44.9		29	15.1
250	28	10,388	-50.6		29	19.1
200	28	11,831	-53.6		29	20.7
175	28	12,689	-53.9		29	20.3
150	28	13,680	-53.7		29	19.3
125	28	14,851	-53.8		28	15.9
100	28	16,283	-54.2		28	13.2
80	28	17,712	-54.5		29	10.9
70	28	18,567	-54.1		29	8.9
60	27	19,566	-53.8		29	7.6
50	27	20,737	-53.8		29	6.7
40	26	22,169	-53.7		28	5.2
30	26	24,020	-52.9		29	5.0
25	26	25,198	-52.0		28	5.2
20	26	26,647	-50.8		28	6.4
15	26	28,529	-48.6		28	7.1
10	23	31,193	-45.5		28	8.1
7	20	33,594	-41.9		27	9.5
5	16	35,839	-39.4		28	11.3

* SHREVEPORT, LA. — 1007 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Direction	Speed M.p.s.
SURFACE	30	79	18.1	16.1	09	.7
1000	30	136	19.3	16.0	09	1.2
950	30	586	19.8	12.8	17	3.0
900	30	1,047	17.4	8.4	18	2.5
850	30	1,534	14.7	3.7	20	1.4
800	30	2,045	12.2	-1.3	26	1.5
750	30	2,583	9.6	-5.4	30	2.3
700	30	3,154	6.8	-10.3	28	2.6
650	30	3,758	3.6	-14.2	28	3.6
600	30	4,407	.0	-17.2	27	4.8
550	30	5,094	-4.1	-19.4	26	5.9
500	30	5,846	-9.1	-24.7	26	6.5
450	30	6,653	-14.5	-29.8	27	7.8
400	30	7,538	-20.6	-34.1	27	10.5
350	30	8,513	-27.8	-39.9	27	12.9
300	30	9,603	-36.0	-47.5	27	15.4
250	30	10,846	-45.1		27	21.1
200	30	12,307	-54.6		27	27.8
175	30	13,152	-59.4		27	26.8
150	30	14,108	-63.7		27	23.0
125	30	15,216	-67.0		27	15.8
100	30	16,561	-66.8		27	8.3
80	30	17,922	-63.1		31	2.8
70	30	18,746	-61.5		08	.6
60	30	19,706	-59.2		08	2.5
50	30	20,854	-57.4		09	2.9
40	30	22,273	-55.0		08	4.1
30	30	24,123	-52.1		08	6.6
25	29	25,313	-49.4		09	7.2
20	27	26,785	-47.4		09	6.9
15	27	28,696	-45.4		08	8.1
10	22	31,435	-41.3		08	9.8
7	11	33,853	-37.6		10	9.2

SPOKANE, WASH. — 932 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Direction	Speed M.p.s.
SURFACE	30	717	10.1	5.8	17	2.0
1000	30	124				
950	30	555				
900	30	1,010	13.2	4.1	24	2.9
850	30	1,489	11.1	.6	28	4.2
800	30	1,993	7.9	-2.7	28	5.2
750	30	2,515	4.6	-5.6	27	6.4
700	30	3,081	1.1	-8.4	28	7.5
650	30	3,669	-2.3	-14.3	28	8.6
600	30	4,305	-5.9	-19.5	28	10.3
550	30	4,975	-10.1	-22.8	28	11.7
500	30	5,710	-14.8	-26.9	28	12.8
450	30	6,493	-20.0	-31.8	28	14.3
400	30	7,364	-26.1	-36.8	28	15.2
350	30	8,317	-33.0	-43.3	29	14.3
300	30	9,383	-41.0	-48.4	29	15.2
250	30	10,600	-49.1		30	17.4
200	30	12,041	-55.3		30	18.1
175	30	12,889	-57.1		29	16.2
150	30	13,863	-57.4		29	15.5
125	30	15,014	-58.2		29	12.3
100	30	16,417	-58.4		28	9.7
80	30	17,823	-57.5		28	6.4
70	30	18,667	-56.8		27	5.3
60	30	19,645	-56.0		27	3.3
50	30	20,807	-54.9		26	1.6
40	30	22,237	-53.9		27	1.7
30	30	24,091	-52.4		29	1.3
25	29	25,273	-51.4		31	1.8
20	29	26,727	-50.1		30	2.3
15	25	28,606	-48.1		32	2.4
10	24	31,290	-44.3		29	4.3
7	14	33,701	-40.4			

* SWAN ISLAND, W. I. — 1011 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Direction	Speed M.p.s.
SURFACE	30	10	26.9	23.8	09	3.0
1000	30	104	26.1	23.2	09	3.8
950	30	564	23.0	20.3	11	6.1
900	30	1,027	20.1	16.7	11	6.2
850	30	1,519	17.4	13.4	12	6.5
800	30	2,036	14.5	10.3	12	6.4
750	30	2,584	11.8	5.1	12	6.3
700	30	3,156	9.0	.7	12	5.4
650	30	3,768	5.5	-2.6	13	5.1
600	30	4,417	1.7	-6.0	12	4.7
550	30	5,110	-2.0	-11.5	12	4.2
500	29	5,867	-6.2	-16.8	10	3.6
450	29	6,687	-11.2	-22.0	08	3.4
400	29	7,579	-16.7	-28.3	06	3.9
350	29	8,569	-23.5	-35.7	06	4.1
300	29	9,677	-32.0	-44.9	05	4.0
250	29	10,937	-42.5		03	3.6
200	29	12,404	-55.1		03	4.0
175	28	13,243	-62.0		02	4.2
150	26	14,179	-69.0		02	6.2
125	26	15,255	-73.6		04	6.6
100	26	16,558	-72.2		06	6.2
80	25	17,880	-69.8		09	10.2
70	25	16,679	-67.5		10	12.3
60	25	19,618	-63.6		09	14.6
50	25	20,746	-60.0		09	17.2
40	25	22,151	-56.5		09	20.1
30	25	23,987	-53.8		10	22.2
25	25	25,161	-52.6		10	21.4
20	24	26,607	-50.4		09	20.2
15	23	28,505	-45.9		08	19.6
10	21	31,248	-40.2		09	17.3
7	12	33,700	-37.7			

TAMPA, FLA. — 1015 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Direction	Speed M.p.s.
SURFACE	30	8	22.9	21.4	07	1.8
1000	30	135	23.3	21.0	08	2.8
950	30	587	22.0	17.8	10	3.3
900	30	1,053	19.3	13.6	09	2.5
850	30	1,543	16.6	9.6	10	1.6
800	30	2,058	13.8	6.1	08	1.0
750	30	2,601	10.9	2.8	04	.5
700	30	3,174	8.0	-3.2	34	.7
650	30	3,779	4.8	-8.7	29	1.4
600	30	4,432	1.3	-13.9	31	2.5
550	30	5,122	-2.6	-18.0	29	3.3
500	30	5,878	-7.2	-22.5	29	3.8
450	30	6,686	-12.4	-27.3	29	5.2
400	30	7,583	-18.4	-32.2	29	7.1
350	30	8,566	-25.2	-39.8	29	8.0
300	30	9,667	-33.5	-47.4	30	9.6
250	30	10,922	-42.9		30	9.9
200	30	12,390	-54.4		30	10.7
175	30	13,233	-60.5		30	11.1
150	30	14,179	-66.5		30	10.9
125	30	15,270	-70.8		30	9.0
100	30	16,592	-69.7		31	3.4
80	29	17,934	-65.7		05	2.1
70	29	18,748	-63.7		08	3.8
60	29	19,699	-61.3		08	7.0
50	28	20,841	-57.5		09	9.2
40	28	22,259	-55.1		09	9.7
30	27	24,110	-52.0		09	10.8
25	27	25,295	-50.2		09	11.3
20	26	26,754	-48.2		09	12.2
15	23	28,677	-44.5		09	14.3
10	20	31,406	-41.0		09	18.6
7	11	33,857	-38.5			

TOPEKA, KANS. — 984 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Direction	Speed M.p.s.
SURFACE	30	269	14.3	11.8	20	1.6
1000	30	130				
950	30	566	17.6	9.9	21	4.3
900	30	1,028	16.0	7.1	23	6.5
850	30	1,513	13.7	2.9	25	6.2
800	30	2,022	11.0	-.4	26	6.1
750	30	2,556	7.9	-5.5	26	5.5
700	30	3,124	4.7	-9.3	28	6.0
650	30	3,719	1.0	-13.4	28	6.4
600	30	4,364	-3.0	-16.8	28	7.5
550	30	5,039	-7.2	-21.9	28	8.4
500	30	5,785	-12.0	-27.5	27	9.7
450	30	6,579	-17.6	-32.5	27	9.8
400	30	7,455	-23.8	-37.5	28	11.9
350	30	8,416	-31.3	-43.4	27	13.5
300	30	9,491	-39.2	-49.3	27	15.6
250	30	10,718	-48.2		27	15.9
200	30	12,160	-56.0		27	17.6
175	29	13,007	-58.4		27	17.5
150	29	13,973	-59.6		26	16.8
125	29	15,108	-61.5		27	12.6
100	29	16,487	-62.0		26	8.3
80	29	17,872	-59.9		27	4.3
70	29	18,707	-58.6		27	3.3
60	29	19,679	-57.4		30	1.8
50	29	20,834	-56.2		34	.4
40	28	22,258	-54.5		09	1.1
30	26	24,114	-51.3		08	.5
25	25	25,302	-49.3		02	.4
20	23	26,767	-47.0		26	.9
15	22	28,677	-44.4		27	1.1
10	20	31,404	-41.0		28	.8

+ TRUK, CAROLINE IS. — 1010 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Direction	Speed M.p.s.
SURFACE	30	2	28.9	24.4	25	.9
1000	30	94	27.8	22.7	24	.8
950	30	541	23.7	18.4	23	1.1
900	30	1,019	20.6	14.0	20	1.7
850	30	1,512	18.4	9.5	18	1.4
800	30	2,030	15.6	5.9	14	1.2
750	30	2,575	12.7	2.4	11	1.8
700	30	3,153	9.7	-1.2	09	2.5
650	30	3,764	6.1	-4.4	09	3.7
600	30	4,417	2.3	-8.9	10	4.8
550	30	5,110	-1.2	-14.3	10	5.0
500	30	5,871	-5.4	-19.0	09	5.3
450	30	6,689	-10.1	-23.8	10	5.4
400	30	7,593	-15.6	-30.0	10	5.6
350	30	8,588	-22.1	-36.4	09	6.3
300	30	9,705	-30.3	-44.6	08	7.6
250	30	10,975	-40.6	-51.9	07	9.7
200	30	12,457	-53.0		07	10.6
175	30	13,305	-60.1		06	10.6
150	30	14,250	-67.7		06	10.4
125	30	15,327	-75.0		07	9.6
100	30	16,612	-76.2		07	8.6
80	30	17,914	-71.6		08	9.8
70	30	18,707	-68.8		09	11.0
60	30	19,639	-65.2		09	13.5
50	29	20,755	-62.1		09	18.9
40	29	22,146	-58.0		09	27.5
30	28	23,983	-52.1		09	31.0
25	26	25,173	-48.6		09	22.2
20	24	26,647	-45.1		09	11.1
15	22	28,569	-43.7		13	1.2
10	16	31,306	-39.5		08	4.9
7	11	33,765	-36.4			
5	5	36,164	-31.7			

* TUCSON, ARIZ. — 923 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Direction	Speed M.p.s.
SURFACE	30	789	20.8	8.1	14	3.1
1000	30	87				
950	30	532				
900	30	1,009	23.7	6.6	14	5.1
850	30	1,506	21.2	4.2	15	3.8
800	30	2,027	17.6	1.4	17	3.0
750	30	2,571	13.5	-2.4	19	2.5
700	30	3,151	8.9	-5.4	20	2.9
650	30	3,754	4.6	-10.9	22	2.7
600	30	4,408	.6	-15.5	24	1.5
550	30	5,092	-4.1	-21.7	28	1.8
500	30	5,847	-8.7	-27.0	28	4.1
450	30	6,654	-14.3	-33.5	28	6.8
400	30	7,539	-20.8	-39.2	28	8.5
350	30	8,511	-28.3	-44.8	28	9.5
300	30	9,597	-36.7	-51.5	28	11.8
250	30	10,835	-45.7		28	15.0
200	29	12,291	-54.6		27	19.9
175	29	13,137	-59.1		27	19.5
150	29	14,093	-63.5		27	17.9
125	29	15,201	-67.2		27	14.4
100	29	16,543	-68.1		28	8.3
80	29	17,894	-64.7		29	2.1
70	29	18,715	-61.3		01	1.1
60	29	19,676	-59.4		08	1.7
50	29	20,823	-57.8		09	3.4
40	29	22,239	-55.7		09	4.6
30	26	24,080	-53.1		09	6.4
25	26	25,260	-51.1		09	7.2
20	26	26,716	-49.2		09	8.1
15	23	28,608	-46.7		09	9.6
10	22	31,318	-42.3		09	11.7
7	17	33,759	-37.8		11	9.9

* VANDENBERG AFB, CALIF. — 1002 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Direction	Speed M.p.s.
SURFACE	30	100	12.6	10.0	01	.4
1000	30	114			01	.7
950	30	555	17.3	5.6	01	3.8
900	30	1,014	20.0	-1.5	02	3.2
850	30	1,506	19.0	-5.6	36	2.4
800	30	2,023	16.4	-9.9	33	1.6
750	30	2,560	13.3	-12.3	29	1.9
700	30	3,144	9.6	-15.5	29	2.3
650	30	3,750	6.2	-19.0	31	3.5
600	30	4,406	2.5	-22.1	31	4.5
550	30	5,095	-2.3	-26.1	31	5.3
500	30	5,853	-7.6	-30.1	31	6.3
450	30	6,659	-13.9	-34.6	31	7.6
400	30	7,548	-20.8	-39.7	31	9.0
350	30	8,520	-28.7	-46.5	31	10.3
300	30	9,603	-37.7	-53.7	31	12.5
250	30	10,834	-47.4		31	14.3
200	30	12,277	-56.9		30	15.8
175	30	13,114	-60.6		30	15.0
150	30	14,065	-64.2		29	14.2
125	29	15,171	-67.2		29	12.3
100	29	16,515	-67.9		30	7.8
80	29	17,865	-65.1		32	4.0
70	29	18,683	-62.5		34	2.6
60	29	19,639	-59.8		04	1.3
50	29	20,784	-57.8		09	2.0
40	29	22,198	-55.7		08	3.2
30	28	24,039	-53.1		08	4.4
25	27	25,212	-51.9		08	5.0
20	27	26,664	-49.8		09	4.9
15	26	28,551	-47.4		09	5.5
10	26	31,253	-43.8		08	7.0
7	23	33,666	-40.1		10	7.8
5	15	35,972	-35.6		10	5.5
4	5	37,556	-33.6			

VICTORIA, TEXAS — 1011 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Direction	Speed M.p.s.
SURFACE	30	33	21.1	19.7	04	1.5
1000	30	127	22.5	19.9	07	2.3
950	30	572	21.3	17.2	14	3.9
900	30	1,042	18.8	12.9	16	3.5
850	30	1,532	16.6	7.2	18	2.0
800	30	2,047	14.0	3.3	21	1.5
750	30	2,585	11.1	-.9	25	1.5
700	30	3,162	8.1	-4.2	25	2.2
650	30	3,769	4.8	-7.4	25	2.1
600	30	4,419	1.0	-12.4	26	4.2
550	30	5,111	-2.9	-17.1	26	5.3
500	30	5,863	-7.3	-23.3	26	6.0
450	30	6,673	-12.6	-27.5	27	7.0
400	30	7,565	-18.7	-32.4	27	9.7
350	30	8,548	-25.6	-36.6	26	13.0
300	30	9,648	-33.6	-44.1	26	17.0
250	30	10,903	-43.0		27	21.6
200	30	12,371	-54.1		27	23.6
175	30	13,215	-60.4		27	22.6
150	30	14,162	-66.5		28	19.4
125	30	15,251	-71.2		28	14.2
100	30	16,568	-71.0		27	6.8
80	29	17,904	-66.6		36	1.8
70	29	18,716	-63.9		08	4.4
60	29	19,667	-61.0		10	6.1
50	29	20,806	-58.8		10	6.2
40	29	22,217	-55.8		09	8.1
30	27	24,064	-52.5		09	11.2
25	27	25,246	-50.8		09	11.2
20	27	26,706	-48.7		09	10.7
15	25	28,604	-46.4		09	12.5
10	21	31,316	-41.9		09	16.5
7	11	33,728	-38.7			

* WAKE IS., PACIFIC AREA — 1011 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Direction	Speed M.p.s.
SURFACE	30	5	27.6	24.6	10	3.8
1000	30	104	26.7	24.0	11	3.9
950	30	550	23.0	20.9	11	4.3
900	30	1,028	20.4	17.3	12	4.2
850	30	1,521	17.8	13.9	12	4.3
800	30	2,039	15.1	10.2	13	3.8
750	30	2,594	12.6	5.7	13	3.4
700	30	3,162	9.6	1.0	14	3.1
650	30	3,772	6.0	-3.3	16	2.7
600	30	4,427	2.0	-7.2	15	2.3
550	30	5,123	-2.1	-12.7	15	2.4
500	30	5,877	-6.5	-16.7	15	1.7
450	30	6,691	-11.5	-23.7	15	1.5
400	30	7,588	-17.2	-28.7	14	1.7
350	30	8,575	-24.3	-35.7	16	1.5
300	30	9,681	-32.6	-44.0	20	1.1
250	30	10,938	-42.9		25	1.6
200	30	12,403	-55.2		26	2.1
175	30	13,243	-61.7		27	2.1
150	30	14,184	-67.8		35	1.2
125	30	15,264	-73.3		06	2.9
100	29	16,567	-73.7		07	6.4
80	26	17,877	-70.4		08	9.7
70	25	18,675	-67.2		09	12.5
60	24	19,611	-64.0		09	14.8
50	24	20,738	-60.5		09	16.4
40	24	22,138	-57.5		09	18.0
30	24	23,971	-54.1		09	19.1
25	24	25,147	-52.0		09	19.6
20	23	26,594	-50.5		09	19.4
15	21	28,482	-47.7		09	19.2
10	20	31,184	-43.6		09	17.0
7	18	33,597	-39.3		09	13.4
5	6	35,879	-35.7			

See reference note at end of table

RAWINSONDE DATA

Average monthly values

Standard pressure surface (mb)	* WALLOPS IS., VA. NASA 1018 MB: No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.	WASHINGTON DULLES INT. AP 1010 MB: No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	3	18.0	15.5	02	.8	30	85	12.4	11.4	25	.8
1000	29	160	19.7	13.4	36	1.4	30	149	16.0	12.9	25	1.0
950	29	601	17.7	9.0	36	1.9	30	609	17.1	8.7	29	2.0
900	29	1,061	15.1	5.3	35	1.8	30	1,067	14.3	5.2	30	1.7
850	29	1,544	12.5	1.4	31	1.5	30	1,548	11.7	1.9	29	2.3
800	29	2,050	9.7	-2.1	28	1.8	30	2,053	9.1	-2.7	26	2.8
750	29	2,583	7.1	-6.3	28	3.1	30	2,587	6.9	-7.4	27	3.3
700	29	3,149	4.4	-11.0	27	4.2	30	3,150	3.9	-11.4	27	4.4
650	29	3,746	1.1	-14.6	27	4.7	30	3,749	.7	-13.8	27	5.2
600	29	4,389	-2.1	-18.7	27	5.8	30	4,387	-2.6	-18.6	27	6.3
550	29	5,068	-5.8	-23.0	27	6.8	30	5,068	-6.4	-22.6	27	6.4
500	29	5,817	-10.4	-27.0	27	7.2	30	5,812	-11.1	-26.7	26	9.0
450	29	6,613	-16.1	-31.7	27	9.1	30	6,613	-16.6	-32.2	26	9.2
400	29	7,498	-22.3	-36.9	27	10.8	30	7,488	-23.1	-37.3	26	10.7
350	29	8,465	-29.4	-42.9	26	11.0	30	8,452	-30.3	-44.3	26	11.5
300	29	9,547	-38.0	-50.2	26	12.9	30	9,530	-38.4	-51.1	27	13.2
250	29	10,779	-47.1		26	14.7	30	10,760	-47.6		27	14.2
200	29	12,224	-56.1		26	15.2	30	12,205	-56.0		27	14.4
175	29	13,068	-59.1		26	15.9	30	13,048	-59.0		27	14.4
150	29	14,027	-61.9		26	13.7	30	14,011	-60.8		27	13.8
125	29	15,151	-63.2		26	11.2	30	15,141	-62.2		27	11.0
100	29	16,523	-63.1		26	7.1	30	16,518	-62.1		27	7.1
80	29	17,901	-61.2		28	3.8	30	17,902	-60.5		27	3.5
70	29	18,732	-59.8		29	2.8	30	18,734	-59.4		29	2.2
60	29	19,698	-58.3		31	1.8	30	19,704	-57.6		32	1.2
50	29	20,851	-56.3		01	1.4	29	20,858	-55.9		36	.5
40	28	22,276	-53.4		05	1.1	29	22,285	-53.6		29	.6
30	25	24,139	-50.6		12	.6	29	24,149	-50.1		19	.0
25	24	25,327	-49.9		35	.5	27	25,345	-48.2		22	.1
20	21	26,794	-46.4		03	.7	25	26,874	-46.1		28	.6
15	17	28,705	-44.1		07	1.9	23	28,751	-43.6		12	.8
10	15	31,430	-41.5		09	4.0	17	31,489	-40.3		07	1.9
7	7	33,860	-37.2				[illegible]	33,976	-35.0			

Standard pressure surface (mb)	WINNEMUCCA, NEV. 870 MB: No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.	WINSLOW, ARIZ. 852 MB: No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	1,312	8.3	-7.1	16	1.0	30	1,492	12.6	-1.2	21	1.8
1000	29	142					30	115				
950	29	578					30	552				
900	29	1,038					30	1,016				
850	29	1,508	13.5	-2.0	07	1.0	30	1,507			20	1.3
800	29	2,018	12.0	-3.7	36	.5	30	2,022	16.3	.6	25	4.5
750	29	2,553	8.2	-6.0	29	2.5	30	2,563	12.7	-2.5	27	5.2
700	29	3,170	4.2	-8.6	28	3.5	30	3,142	8.4	-5.5	26	4.6
650	29	3,715	.0	-12.0	28	4.6	30	3,742	4.0	-8.9	24	4.2
600	29	4,356	-3.9	-17.8	28	5.9	30	4,395	-.8	-12.7	24	4.9
550	29	5,031	-8.1	-23.2	28	7.9	30	5,074	-5.7	-17.9	25	5.0
500	29	5,772	-12.8	-28.0	29	7.[illegible]	30	5,824	-10.4	-24.7	26	6.8
450	29	6,564	-18.1	-33.2	30	9.0	30	6,622	-16.0	-31.7	28	8.4
400	29	7,437	-24.2	-39.0	31	10.7	30	7,505	-22.4	-37.7	28	9.8
350	28	8,395	-31.5	-44.8	31	11.3	30	8,472	-29.9	-43.7	28	11.5
300	28	9,467	-39.7	-49.7	31	13.6	30	9,552	-38.4	-50.9	28	13.2
250	27	10,689	-48.3		31	14.5	30	10,781	-47.3		28	15.4
200	26	12,129	-55.9		31	13.7	30	12,228	-55.9		28	18.5
175	24	12,968	-58.1		31	14.0	30	13,070	-59.3		28	19.7
150	24	13,934	-59.7		30	12.7	30	14,029	-62.4		28	18.2
125	23	15,067	-61.5		30	11.0	30	15,146	-65.0		28	13.1
100	23	16,445	-62.4		29	7.7	30	16,501	-66.3		28	8.1
80	22	17,824	-61.1		29	4.4	30	17,862	-63.0		28	3.9
70	22	18,655	-59.7		29	2.9	30	18,687	-61.2		29	1.1
60	22	19,623	-57.6		30	2.0	30	19,647	-59.3		10	.9
50	21	20,780	-56.4		33	1.0	30	20,792	-57.7		11	1.8
40	21	22,200	-55.0		23	.5	29	22,206	-55.6		09	2.2
30	21	24,046	-52.9		07	.3	29	24,051	-52.8		09	4.3
25	21	25,225	-51.4		04	.7	28	25,231	-50.8		10	4.6
20	20	26,682	-49.2		33	1.2	28	26,690	-48.8		09	4.3
15	17	28,578	-47.2		31	2.0	23	28,582	-46.7		09	4.8
10	14	31,285	-43.9				17	31,273	-43.6		08	4.0
7							8	33,712	-38.3			

Standard pressure surface (mb)	YAKUTAT, ALASKA 1007 MB: No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	12	5.0	4.9	10	2.6
1000	30	66			11	3.5
950	30	486	7.1	3.3	14	5.8
900	30	933	4.3	.9	15	6.4
850	30	1,396	1.3	-1.6	16	6.5
800	30	1,882	-1.7	-4.2	17	5.5
750	30	2,395	-4.8	-7.8	18	5.7
700	30	2,934	-7.9	-12.9	19	6.0
650	30	3,507	-11.5	-18.4	20	6.3
600	30	4,117	-15.4	-22.5	20	6.9
550	30	4,768	-19.7	-28.0	21	8.1
500	30	5,471	-24.5	-32.9	21	8.4
450	30	6,228	-30.0	-38.5	22	8.6
400	30	7,060	-35.9	-41.4	23	9.9
350	30	7,974	-42.7	-43.1	23	10.5
300	30	8,999	-49.0		23	13.7
250	30	10,185	-51.6		24	15.9
200	30	11,639	-49.5		25	16.1
175	30	12,515	-48.9		25	14.9
150	30	13,527	-49.1		25	14.8
125	30	14,722	-49.[illegible]		25	12.8
100	30	16,180	-50.4		25	11.6
80	30	17,635	-50.4		25	10.1
70	30	18,565	-50.5		25	8.7
60	29	19,511	-51.1		25	7.8
50	29	20,694	-51.8		25	6.8
40	28	22,137	-51.8		25	5.9
30	25	24,000	-51.4		25	5.1
25	21	25,181	-50.7		25	4.6
20	20	26,642	-50.1		25	4.6
15	17	28,532	-48.8		25	4.1
10	13	31,192	-46.2			

Standard pressure surface (mb)	+ YAP, CAROLINE IS. 1006 MB: No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.	YUCCA FLAT, NEV. 881 MB: No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.	YUMA, ARIZ. 992 MB: No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	17	28.1	24.6	23	2.1	30	1,196	12.1	-5.3	30	1.3	19	131	22.9	5.4	05	.3
1000	30	83	27.4	23.4	23	2.7	30	112					19	65				
950	30	530	23.5	18.7	23	5.4	30	552					19	516	28.9	5.3	02	1.3
900	30	1,007	20.7	14.9	24	5.4	30	1,014					19	995	26.0	1.6	24	.3
850	30	1,501	18.1	11.8	24	5.2	30	1,499	19.2	-1.5	34	2.0	19	1,495	22.6	-1.4	20	1.4
800	30	2,019	15.4	8.4	24	4.8	30	2,017	16.4	-3.7	22	1.0	19	2,017	18.6	-4.3	18	1.9
750	30	2,559	12.9	4.5	23	4.4	30	2,557	12.5	-6.1	23	1.7	19	2,559	14.4	-6.7	16	2.2
700	30	3,142	9.9	.9	23	3.3	30	3,136	8.3	-8.6	23	2.5	19	3,144	10.2	-9.0	20	1.8
650	30	3,751	6.5	-2.6	22	3.5	30	3,741	3.6	-11.5	22	3.3	19	3,748	6.1	-12.9	21	1.5
600	30	4,409	2.7	-6.5	22	3.5	30	4,388	-1.0	-16.0	25	3.8	19	4,405	1.4	-16.7	24	1.7
550	30	5,102	-1.1	-10.8	20	3.0	30	5,072	-5.4	-21.7	28	5.4	19	5,092	-3.2	-22.0	26	3.0
500	30	5,864	-5.4	-15.1	17	2.7	30	5,819	-10.1	-27.1	28	7.7	19	5,847	-8.3	-28.2	27	4.5
450	30	6,681	-10.1	-20.7	14	3.3	30	6,616	-16.1	-32.4	29	9.3	19	6,646	-14.5	-33.2	28	6.1
400	30	7,586	-15.5	-27.7	13	3.7	30	7,498	-22.7	-38.4	29	10.6	19	7,537	-21.4	-38.8	29	7.5
350	30	8,581	-22.0	-35.2	11	5.1	30	8,463	-30.2	-43.7	29	12.0	19	8,507	-29.4	-44.9	29	10.6
300	30	9,698	-30.1	-43.5	08	6.1	30	9,541	-38.8	-49.5	29	13.9	19	9,589	-37.7	-51.4	29	11.6
250	30	10,970	-40.3	-51.6	07	8.4	30	10,769	-47.5		29	15.8	19	10,823	-46.6		28	14.5
200	29	12,452	-52.5		06	12.5	29	12,217	-55.9		30	16.7	14	12,276	-55.2		28	19.2
175	29	13,302	-59.5		05	14.4	29	13,060	-58.9		30	17.2	13	13,115	-59.5		26	21.0
150	29	14,250	-67.0		06	15.9	29	14,022	-61.2		29	15.9	11	14,069	-64.1			
125	29	15,329	-74.8		06	18.4	29	15,147	-63.7		29	13.0	5	15,203	-67.7			
100	29	16,611	-77.2		08	16.2	29	16,512	-64.9		30	8.6						
80	29	17,906	-72.3		09	13.5	27	17,875	-63.3		29	5.4						
70	29	18,698	-69.1		09	14.8	27	18,700	-60.8		31	2.8						
60	29	19,627	-65.0		09	17.3	27	19,664	-59.1		28	.7						
50	29	20,750	-62.1		09	21.[illegible]	27	20,618	-56.4		07	.7						
40	28	22,135	-58.1		09	27.5	27	22,240	-55.0		06	1.9						
30	27	23,969	-53.5		09	30.9	25	24,089	-52.6		08	2.9						
25	27	25,149	-50.7		09	27.[illegible]	23	25,278	-50.8		08	3.1						
20	25	26,614	-47.1		09	18.2	21	26,743	-48.6		03	3.4						
15	23	28,539	-42.9		10	1[illegible].9	5	28,612	-48.1									
10	16	31,293	-38.5		10	8.1												
7	7	33,732	-37.1															

Note: All observations scheduled at 1200, G.C.T. Pressures shown under station names are the average monthly station pressures for the month of record, corrected to the height of the floors of the instrument shelters used for rawinsonde purposes. "Number of observations" refers to those of dynamic height only. Although the number of temperature observations at any given pressure surface is usually the same as for height, it is possible for temperature to be missing for one or more pressure surfaces of some observations. Dew Point averages are limited to those observations with temperatures warmer than -40°C. Observations of wind speed and direction are sometimes lost due to limiting angles, i.e., elevation angles less than 6° above the horizon, or any obstruction above the horizon.

The temperature and wind values are based on 15 or more observations at the surface or 5 observations at a standard pressure level for temperature and 10 for wind. Dew Point data are not published for standard pressure surfaces for which less than 5 observations are available. Dew Point data are computed and expressed on the basis of vapor pressure over water. Unless otherwise indicated, they are obtained from carbon hygristors.

These average values for standard pressure surfaces were obtained by rawinsondes; dynamic height (geopotential) in units of .98 dynamic meter, temperature and dew point in degrees Celsius, and resultant winds in tens of degrees and meters per second.

* Rawinsondes at this station were equipped with hypsometers to permit more accurate evaluations of pressure, and consequently height, at pressures lower than 50 mb. These rawinsondes were carried aloft by special high altitude balloons, in an effort to consistently reach higher altitudes.

\+ Observations for these stations are scheduled at 0000 G.C.T.

† Dew Point temperatures are based on a minimum of 5 observations. Therefore, due to the lesser number of Dew Point observations at the higher levels comparison with dry-bulb temperatures should be made with care. Dew Point temperatures replaced Relative Humidity January 1967

SOLAR RADIATION DATA

Solar radiation intensities, tabulated in langleys per minute on a surface normal to the direction of the sun. SEPTEMBER 1968

Date	Sun's zenith distance								
	A.M.				*	P.M.			
	78.7°	75.7°	70.7°	60.0°		60.0°	70.7°	75.7°	78.7°

ALBUQUERQUE, N. MEX.

	Air mass								
	4.19	3.35	2.51	1.67	*	1.67	2.51	3.35	4.19
Sep.									
1-----	0.78	0.90	1.03	1.18	1.37	----	----	----	----
2-----	.82	.94	1.06	1.21	1.40	----	----	----	----
3-----	----	----	----	----	----	----	0.93	----	----
4-----	.89	1.01	1.13	1.29	1.48	1.29	1.13	1.00	0.89
5-----	.89	1.00	1.11	1.27	1.46	1.26	1.12	1.01	.88
6-----	----	----	----	----	1.32	----	----	----	----
7-----	.84	.94	1.06	1.12	1.40	----	.99	.85	.75
8-----	.85	.96	1.08	1.24	1.41	----	----	----	----
9-----	.76	.93	.98	1.17	1.37	1.19	.97	----	----
10----	.72	.86	.96	1.11	1.34	1.19	----	----	----
11----	.82	.92	1.04	1.19	1.37	1.16	.97	.86	.74
12----	.78	.89	.99	1.12	1.30	1.23	1.06	.96	.82
13----	.91	1.00	1.13	1.29	1.44	1.27	1.11	.98	.86
14----	.87	.97	1.08	1.24	1.38	----	----	----	----
15----	.84	.98	1.12	1.28	1.44	1.22	1.07	.96	.83
16----	.77	.96	1.07	1.27	1.43	1.30	1.26	.96	.83
17----	1.01	1.08	1.20	1.34	1.39	1.34	1.20	1.09	1.00
18----	1.00	1.08	1.20	1.33	1.44	1.31	1.17	1.04	.92
19----	.93	1.01	1.13	1.23	1.39	1.19	1.09	.96	.82
20----	.80	.89	1.07	1.21	1.45	----	----	.95	.85
21----	.95	1.04	1.16	1.29	1.45	1.26	----	1.09	.85
22----	.94	1.02	1.14	1.31	1.47	----	----	----	.93
23----	.85	.97	1.12	1.27	1.42	1.30	1.12	.97	.87
24----	.85	.93	1.08	1.25	1.43	1.27	1.13	1.02	.89
25----	.85	.95	1.08	1.21	1.41	1.26	1.08	.94	.83
26----	.78	----	----	----	1.36	----	.95	----	----
27----	----	----	----	----	1.30	1.17	1.00	----	----
Averages	0.85	0.97	1.09	1.24	1.40	1.25	1.08	0.98	0.86

OMAHA, NEBR.

	Air mass								
	4.78	3.82	2.87	1.91	*	1.91	2.87	3.82	4.78
Sep.									
1-----	HS0.82	HS0.91	HS1.03	----	----	HS1.02	----	----	----
2-----	----	----	HM .91	HM1.08	HS1.18	----	HS0.84	0.73	0.66
6-----	----	----	----	HS1.16	----	----	----	----	----
7-----	HS .59	HM .70	HM .85	HM1.06	----	----	----	----	----
8-----	----	----	HS1.01	----	----	----	----	----	----
9-----	----	----	----	----	----	HS1.10	HS .99	HS .89	HS .79
10----	----	----	HS1.06	HS1.19	HS1.35	----	----	HS .92	HS .84
11----	.83	.93	1.05	1.19	HS1.30	1.13	.92	.70	.62
12----	.70	.79	.92	1.08	HS1.25	HS1.06	HS .89	HS .77	†
13----	HS .58	HS .84	HS .94	HS1.04	----	----	----	----	----
14----	HS .64	HS .76	HM .94	HM1.06	HM1.19	HM .96	HM .79	HM .63	HM .51
20----	----	HS .82	HS .96	HS1.10	----	----	----	----	----
24----	----	----	1.02	HS1.17	1.35	----	----	----	----
25----	HS .79	HS .90	HS1.03	HS1.25	----	----	----	----	----
26----	HS .78	HS .89	HS1.04	HS1.19	HS1.30	1.13	.97	.91	.83
27----	HS .76	HS .89	HS1.01	HS1.16	HS1.27	1.11	----	----	----
30----	----	----	HI .65	HI .84	----	----	----	----	----
Averages	0.72	0.84	0.96	1.11	1.27	1.07	0.90	0.79	0.71

GUAM, M. I.

	Air mass								
	4.92	3.93	2.95	1.97	*	1.97	2.95	3.93	4.92
			No observations due to cloudiness						

HS Slight haze
HM Moderate haze
HI Intense haze

† Wind mast
* Values corresponding to true solar noon

Date	Sun's zenith distance								
	A.M.				*	P.M.			
	78.7°	75.7°	70.7°	60.0°		60.0°	70.7°	75.7°	78.7°

BLUE HILL OBS., MASS.

	Air mass								
	4.89	3.92	2.94	1.96	*	1.96	2.94	3.92	4.89
Sep.									
1-----	0.55	0.69	0.79	----	---				-
3-----	.66	.77	.84	1.04	1.25	----	----		
4-----	.50	.55	.65	----	----	----	----	----	
12----	.50	.62	.75	.99	----	----	----	----	--
13----	.83	.91	1.03	1.13	1.30	1.15	0.96	0.82	0.72
14----	.89	.96	1.07	1.21	1.33	1.16	1.00	.84	.75
15----	.79	.95	1.05	1.18	1.32	1.07	.90	.78	[illegible]
16----	.65	.76	.89	1.08	1.30	1.15	.99	.87	.82
17----	.87	.95	1.05	1.21	1.33	1.18	1.04	.93	.83
19----	.72	.82	.90	1.05	1.20	1.04	.82	.67	.58
20----	.37	.44	.65	.77	.96	.83	.70	.60	.50
21----	.76	.86	.98	1.13	1.22	1.04	.82	.65	.55
23----	.55	.64	.82	.99	1.23	1.00	.84	.70	.59
24----	.70	.77	.90	1.03	----	----	----	----	----
28----	.60	.67	.81	1.08	1.29	1.08	.95	.81	.71
29----	.78	.87	.98	1.13	1.25	----	----	----	----
Averages	0.67	0.76	0.89	1.07	1.25	1.07	0.90	0.77	0.67

TUCSON, ARIZ.

	Air mass								
	4.56	3.65	2.74	1.83	*	1.83	2.74	3.65	4.56
Sep.									
1-----	----	----	----	----	----	0.97	0.81	0.64	[illegible]
2-----	0.60	0.70	0.83	1.00	1.21	--	--	----	-
3-----	.58	.69	.82	.99	1.25	1.08	.82	.70	----
4-----	.73	.84	.96	1.13	1.33	1.14	1.02	.88	.78
5-----	.72	.79	.91	1.09	1.30	1.04	.86	.72	.60
6-----	----	.64	.78	.97	1.27	----	----	----	----
7-----	.59	.69	.82	1.00	1.22	----	----	----	----
8-----	.62	.74	.87	1.04	1.24	----	----	----	----
9-----	.49	.61	.75	.94	1.16	----	----	----	----
10----	.58	.69	.82	1.02	1.26	1.07	----	----	----
11----	.70	.79	.91	1.08	1.30	1.09	.91	.76	.66
12----	.77	.86	.99	1.16	1.36	1.17	1.01	.88	.79
13----	.77	.87	.99	1.16	1.32	.97	----	----	----
14----	----	----	----	----	----	----	----	.76	.66
15----	.71	.83	.98	1.15	1.35	1.18	1.03	.91	----
16----	.80	.90	1.00	1.14	1.35	1.17	1.00	.89	.78
17----	.72	.82	.93	1.10	1.28	1.00	.90	.76	.65
18----	.62	.74	.84	1.08	1.28	1.03	.86	.71	.60
19----	.78	.88	1.00	1.17	----	1.20	1.02	.91	.80
20----	.80	.89	1.02	1.18	1.36	----	1.00	----	----
21----	.85	.94	1.07	1.21	1.33	1.22	1.07	.94	.81
22----	.78	.88	1.00	1.16	1.31	1.20	1.04	.91	.82
23----	.82	.94	1.03	1.22	1.43	1.22	1.09	.97	.86
24----	.85	.95	1.07	1.21	1.38	1.21	1.02	.88	.75
25----	.88	.94	1.07	1.22	1.37	1.08	.89	.76	.67
26----	.67	----	----	1.08	1.28	----	----	----	----
27----	.70	.82	.96	1.11	1.26	1.01	.87	.77	.66
28----	----	----	----	----	1.27	----	1.01	.88	.76
29----	.90	1.00	1.11	1.26	1.37	1.20	1.03	.92	.82
30----	.82	.91	.99	1.17	----	1.20	1.06	.91	.83
Averages	0.72	0.82	0.91	1.11	1.30	1.12	0.97	0.83	[illegible]

MADISON, WIS.

	Air mass								
	4.69	3.75	2.81	1.88	*	1.88	2.81	3.75	4.69
				Instrument Inoperative					

Langley is the unit used to denote one gram calorie per square centimeter. An explanation of the formula used in computing the air mass values for each station listed above appears in the February 1957 issue, Vol. 8, No. 2, page 63, of this publication.

SOLAR RADIATION DATA

Daily totals and monthly averages of solar radiation (direct and diffuse) received on a horizontal surface, tabulated in langleys.

Station	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
ALBUQUERQUE N.M.	618	519	448	626	612	489	577	573	581	563	573	575	587	526	577	589	554	543	529	516	526	515	525	519	508	501	488	460	426	468		537
AMES IOWA	516	476	352	323	299	502	446	349	323	504	500	486	460	458	452	51	337	158	279	368	301	411	185	442	437	428	421	206	260	366		363
ANNETTE ALASKA	277	183	155	108	68	255	36	218	82	312	256	342	126	279	291	110	321	401	388	341	48	272	36	87	261	183	26	23	227	119		194
APALACHICOLA FLORIDA	508	611	603	---	---	467	571	528	571	493	257	331	549	518	578	34	176	452	523	548	563	581	564	564	562	480	507	494	315	508		480
ARGONNE NAT. LAB.	359	583	513	254	566	509	478	397	252	89	541	496	486	497	478	286	81	139	63	437	460	342	267	241	467	480	396	399	332	421		377
ASTORIA OREGON	231	555	479	537	524	171	453	360	129	448	135	425	75	204	216	167	112	325	363	436	345	468	239	443	414	272	433	411	411	314		330
ATLANTA GEORGIA	241	493	421	390	307	358	561	298	382	424	539	537	---	523	429	402	192	92	204	316	492	493	455	419	405	364	410	346	213	464		385
BARROW ALASKA	130	80	59	101	176	---	160	204	96	60	66	177	103	126	76	187	157	157	107	121	89	90	137	80	82	111	126	67	66	82		113
BETHEL ALASKA	244	416	292	425	395	282	369	318	236	235	260	318	127	300	285	182	126	270	330	---	230	288	---	106	110	173	138	199	234	57		248
BISMARCK N.DAK.	568	224	398	396	400	562	296	213	550	547	481	388	480	450	407	159	516	502	341	477	40	349	414	459	425	465	350	322	431	442		402
BLUE HILL MASS.	465	472	506	205	381	147	403	245	156	396	160	324	487	524	516	502	511	440	468	447	472	395	442	391	377	146	216	429	349	382		378
BOISE IDAHO	387	528	530	518	506	441	503	475	445	460	438	425	455	439	347	477	---	312	228	96	194	454	358	431	412	406	416	411	390	375		409
BOSTON MASSACHUSETTS	459	478	502	181	451	144	397	287	177	415	184	334	512	512	492	487	492	425	448	422	429	397	418	385	363	176	267	424	335	379		379
BROWNSVILLE TEXAS	484	634	557	566	492	300	418	612	478	---	337	287	317	566	576	---	448	446	525	553	591	561	508	539	354	570	567	457	311	402		481
BURLINGTON VERMONT	478	408	238	442	448	54	456	493	469	214	70	330	237	384	425	382	337	399	406	410	401	347	399	340	70	279	157	249	242	116		323
CAPE HATTERAS N.C.	353	487	554	531	545	404	292	552	86	288	540	501	490	576	618	526	572	495	545	532	513	509	526	---	---	363	311	465	442	454		467
CARIBOU MAINE	462	489	101	268	482	449	273	522	506	375	139	249	202	135	525	501	469	462	464	450	447	221	195	162	115	373	103	172	311	153		326
CHARLESTON S.C.	183	425	495	458	482	488	483	303	390	475	559	355	392	545	489	465	308	380	317	547	568	450	476	355	382	422	277	355	411	460		423
CLEVELAND OHIO	135	512	425	543	207	501	561	516	---	177	90	518	512	441	463	442	389	427	243	459	411	---	382	336	401	403	421	432	390	448		399
COLUMBIA MISSOURI	581	595	523	186	593	583	578	103	201	591	582	569	565	532	344	209	105	380	172	510	185	180	210	215	478	501	493	462	450	462		405
DAVIS CALIFORNIA	592	596	601	599	575	566	542	522	512	573	574	554	573	577	582	562	558	554	544	564	565	533	530	510	497	473	458	482	466	450		543
DODGE CITY KANSAS	618	610	219	490	593	538	586	573	593	582	572	567	566	565	417	476	533	522	536	507	511	514	271	492	515	513	498	484	483	450		513
E. LANSING MICHIGAN	167	343	457	503	403	444	544	375	273	127	190	548	549	501	464	420	327	258	97*	278	407	150	362	101	365	197	426	399	346	354		346*
EL CENTRO CALIF. NPF	564	562	585	569	567	545	525	531	534	524	526	524	520	555	555	543	560	540	541	569	547	547	548	541	532	340	340	340	484	484		521
EL PASO TEXAS	490	660	626	642	594	642	629	634	633	521	650	650	542	541	594	622	644	616	558	605	605	599	601	591	536	589	560	548	541	538		593
ELY NEVADA	668	596	682	667	640	---	633	620	589	527	375	556	571	613	608	619	596	591	570	341	606	595	578	574	571	558	475	461	482	287		560
EPPLEY NEWPORT R.I.	445	512	---	380	374	196	358	359	190	439	298	385	501	504	456	483	495	449	464	427	441	409	368	352	332	145	174	408	367	382		382
FAIRBANKS ALASKA	360	417	409	369	235	386	364	367	361	209	148	293	322	338	277	185	136	123	124	199	280	210	230	259	178	161	187	202	104	141		252
FORT WORTH TEXAS	521	410	508	---	391	595	596	597	612	633	618	600	529	202	252	560	381	600	592	372	357	410	399	47	565	568	548	543	486	507		483
GAINESVILLE FLORIDA	---	---	522	525	600	565	391	424	451	344	357	---	---	---	---	---	380	492	---	430	---	---	494	428	447	486	433	---	---	---		---
GLASGOW MONTANA	378	392	501	360	195	404	189	496	510	408	410	447	424	289	463	389	388	410	281	409	166	229	354	448	436	371	277	411	425	413		376
GRAND JUNCTION COLO.	623	376	618	620	619	609	519	541	597	532	552	333	436	315	543	468	571	602	554	410	573	551	544	536	542	534	498	351	274	374		507
GREAT FALLS MONTANA	158	286	389	209	499	318	427	505	487	491	438	315	319	284	346	305	157	224	85	91	209	319	475	475	447	439	110	405	434	409		335
GREENSBORO N.C.	175	466	519	289	420	250	526	469	404	313	475	481	518	495	518	513	503	244	412	457	455	486	477	475	451	311	464	420	394	418		427
INDIANAPOLIS INDIANA	321	539	556	85	218	585	541	514	279	92	351	512	444	509	449	321	65	162	155	468	406	420	321	198	327	466	478	376	404	441		367
ITHACA NEW YORK	379	197	299	537	265	294	533	522	393	124	125	390	515	509	490	490	468	415	456	488	424	394	263	406	121	318	320	341	269	361		370
LAKE CHARLES LA.	508	234	158	71	85	520	445	392	381	394	609	584	514	266	147	560	150	616	601	543	552	539	541	533	469	125	564	541	519	520		423
LAKELAND FLORIDA	615	732	654	563	681	606	536	596	597	446	163	328	167	642	616	464	502	582	508	442	544	553	461	491	437	395	502	525	519	535		513
LANDER WYOMING	595	304	442	521	579	505	526	555	549	538	395	302	300	231	505	385	493	498	465	445	530	514	499	493	489	480	300	108	448	448		448
LARAMIE WYOMING	563	210	140	389	510	539	385	526	525	522	414	322	438	312	215	374	325	474	443	395	342	257	472	445	462	456	367	388	424	428		402
LAS VEGAS NEVADA	624	576	615	633	613	609	615	595	588	507	526	---	577	603	584	605	593	584	465	571	582	586	575	561	556	551	542	484	500	466		568
LITTLE ROCK ARKANSAS	541	395	133	162	190	609	590	563	521	573	581	572	577	492	67	240	157	570	543	534	530	326	377	255	234	531	497	510	502	453		427
LOS ANGELES CALIF.	496	456	351	394	562	584	583	583	597	591	606	555	440	349	242	510	402	358	191	501	532	551	561	562	543	496	431	337	174	199		458
LOS ANGELES CALIF. U	541	541	495	369	552	570	575	573	559	566	577	560	462	327	188	478	545	446	114	468	537	540	544	537	516	466	413	337	146	172		457
MADISON WISCONSIN	403	551	522	288	503	544	445	196	103	141	531	516	515	491	468	282	98	113	73	456	451	294	154	454	488	447	473	304	436	404		372
MANHATTAN KANSAS	487	513	187	365	410	493	456	460	470	508	499	494	484	439	236	83	235	429	455	435	235	252	133	423	440	435	426	423	345	355		387
MATANUSKA ALASKA	420	424	416	38	60	224	339	346	196	270	253	343	354	351	293	148	307	148	70	318	314	162	291	275	79	189	155	156	79	85		237
MEDFORD OREGON	596	627	605	584	576	510	561	531	523	553	467	550	248	355	471	545	527	204	372	320	517	526	502	498	474	427	390	477	472	440		482
MIAMI FLORIDA	515	541	531	582	576	679	640	514	337	433	312	328	---	---	---	---	514	460	284	305	489	416	539	477	126	86*	319	389	477	311		430*
MIDLAND TEXAS	417	504	555	553	348	310	543	543	542	551	406	556	255	184	504	522	548	534	510	492	392	388	407	495	525	502	514	501	470	416		466
NASHVILLE TENNESSEE	315	533	488	377	255	588	550	524	257	272	282	570	572	540	414	125	233	---	554	393	415	459	391	432	223	439	460	494	462	474		417
NEW YORK N.Y. U	262	397	451	435	141	27	561	497	491	188	368	418	561	549	501	440	430	465	469	425	355	---	---	253	387	316	436	431	356	418		394
NORTH OMAHA NEBRASKA	525	541	---	---	400	544	507	361	520	546	530	517	492	501	374	64	250	62	399	440	391	267	294	477	444	455	445	268	381	281		403
OAK RIDGE TENNESSEE	328	522	545	222	164	501	570	545	262	487	283	531	567	532	448	280	230	93	216	334	423	473	448	465	288	154	495	399	462	426		390

Note.--Langley is the unit used to denote one gram calorie per square centimeter.
Values with an asterisk are interpolated.

U Indicates Urban sites

SOLAR RADIATION DATA

Daily totals and monthly averages of solar radiation (direct and diffuse) received on a horizontal surface, tabulated in langleys.

SEPTEMBER 1968

Station	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
OKLAHOMA CITY OKLA.	627	503	375	259	601	607	457	571	595	595	592	588	553	329	96	401	505	557	538	491	422	477	266	88	548	525	522	516	510	464		473
PAGE ARIZONA	664	544	634	653	648	633	624	617	579	532	415	438	583	566	594	625	607	595	600	565	585	581	590	576	575	570	554	416	497	491		572
PHOENIX ARIZONA	608	603	599	613	600	577	588	586	574	558	579	590	583	535	558	568	589	572	566	565	566	572	561	566	544	535	525	504	543	524		568
PORTLAND MAINE	547	496	400	332	286	152	411	531	263	324	63	269	433	521	505	463	453	473	458	445	425	372	426	349	193	133	288	366	331	134		361
PROSSER WASHINGTON	263	578	523	566	541	468	508	502	461	417	406	468	146	308	412	445	192	284	472	406	293	294	424	435	430	363	442	412	415	400		409
RAPID CITY S.DAK.	573	220	565	191	433	475	355	443	536	529	508	338	432	453	387	155	505	470	463	435	307	286	454	460	453	447	396	318	441	428		415
RENO NEVADA	542	558	563	553	535	489	553	484	370	517	500	500	519	520	521	508	495	460	504	365	509	502	496	482	471	461	416	475	416	431		490
RICHLAND 25 NW WASH.	333	572	554	546	536	448	508	494	448	431	373	433	173	454	403	371	221	308	487	390	373	270	439	441	434	393	439	418	407	396		416
RIVERSIDE CALIFORNIA	504	467	289	387	478	475	484	490	493	497	479	410	461	455	247	459	474	407	388	470	448	494	482	481	450	446	428	318	299	206		429
RUSTON LOUISIANA	---	---	76	162	175	556	444	507	375	549	542	541	508	363	63	398	237	534	517	497	488	494	425	407	168	404	479	433	472	301		397
SAINT CLOUD MINN.	303	499	248	470	411	473	286	41	536	529	520	507	379	471	466	46	201	142	193	466	97	75	430	203	375	368	341	313	431	393		341
SALT LAKE CITY	623	522	593	616	611	489	624	556	557	458	244	456	472	517	230	508	569	570	467	61	444	538	540	532	527	513	449	435	347	410		483
SAN ANTONIO TEXAS	323	125	461	389	297	526	532	472	447	573	567	552	150	106	655	534	405	614	565	451	393	457	497	385	379	568	580	505	525	417		448
SANTA MARIA CALIF.	517	528	452	391	578	492	433	463	582	586	503	547	469	539	543	565	534	493	314	559	559	557	550	544	544	503	481	346	276	338		493
SAULT STE MARIE MICH	287	355	343	384	463	292	337	122	170	80	483	437	---	240	409	378	389	417	124	149	291	372	129	230	235	270	216	310	285	369		295
SEATTLE TACOMA WASH.	86	441	511	532	507	380	406	377	422	351	130	418	98	196	333	92	49	175	214	293	286	101	271	331	409	214	414	402	376	306		304
SEATTLE WASH. UNIV.	108	390	444	361	458	295	364	347	383	340	75	353	96	184	236	99	46	220	211	273	240	76	177	333	379	230	382	365	354	303		271
SPOKANE WASHINGTON	354	522	490	535	513	335	498	477	435	438	450	442	184	267	297	419	199	277	332	95	142	314	354	387	408	379	382	397	391	375		370
STATE COLLEGE PENN.	354	299	521	497	188	439	473	531	494	56	345	516	551	537	524	506	461	453	358	512	476	405	260	424	202	474	427	425	386	422		417
STERLING VIRGINIA	275	332	499	434	289	284	532	450	403	133	367	497	520	509	488	452	266	462	440	487	456	431	439	---	---	---	---	---	---	444		412
SWAN ISLAND W.I.	601	568	593	576	528	534	29	450	615	604	608	553	607	544	597	607	590	606	495	531	590	573	87	351	529	587	589	539	505	478		522
TAMPA FLORIDA	488	484	381	362	489	487	434	390	371	420	170	201	104	510	510	400	378	459	347	372	449	453	409	405	379	233	345	490	433	455		394
TUCSON ARIZONA	580	501	576	600	588	542	549	571	526	---	---	566	528	389	512	478	528	522	529	535	532	518	538	530	---	452	503	437	509	478		523
WAKE ISLAND PACIFIC	633	417	393	397	510	127	600	163	233	569	619	614	306	401	423	603	603	610	588	534	460	579	540	538	158	525	516	560	583	596		480

Note.--Langley is the unit used to denote one gram calorie per square centimeter.

Values with an asterisk are interpolated.

NET RADIATION

Net radiation in langleys per day (8 a.m. to 8 a.m.) at Palmer, Alaska

SEPTEMBER 1968

Date.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
Langleys. . .	129	112	120	13	65	55	124	110	17	77	78	74	99	81	94	36	89	[illegible]	86	98	36	51	29	61	-16	18	1	19	15	-2		63

The measurement is made with a [illegible] net exchange radiometer over a plot of sod. The value represents the total incoming minus the total outgoing radiation of all wave lengths.

These data are of an experimental nature and are published as received from the Palmer Exp. Station. The instrument with which they were measured has not been checked by the ESSA, Weather Bureau.

SOLAR ULTRA-VIOLET RADIATION DATA

Daily totals and monthly average (3900 Å)

Date.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Av.
Langleys. . .	INSTRUMENT INOPERATIVE																															

These data are from an U - V Eppley total ultra violet sensor and Speedomax H (Leeds-Northrup) Recorder. It is at the same location (Agronomy Building, Iowa State University, Ames) as the published total solar radiation instrumentation. This instrument has not been checked by the ESSA, Weather Bureau.

TOTAL OZONE DATA

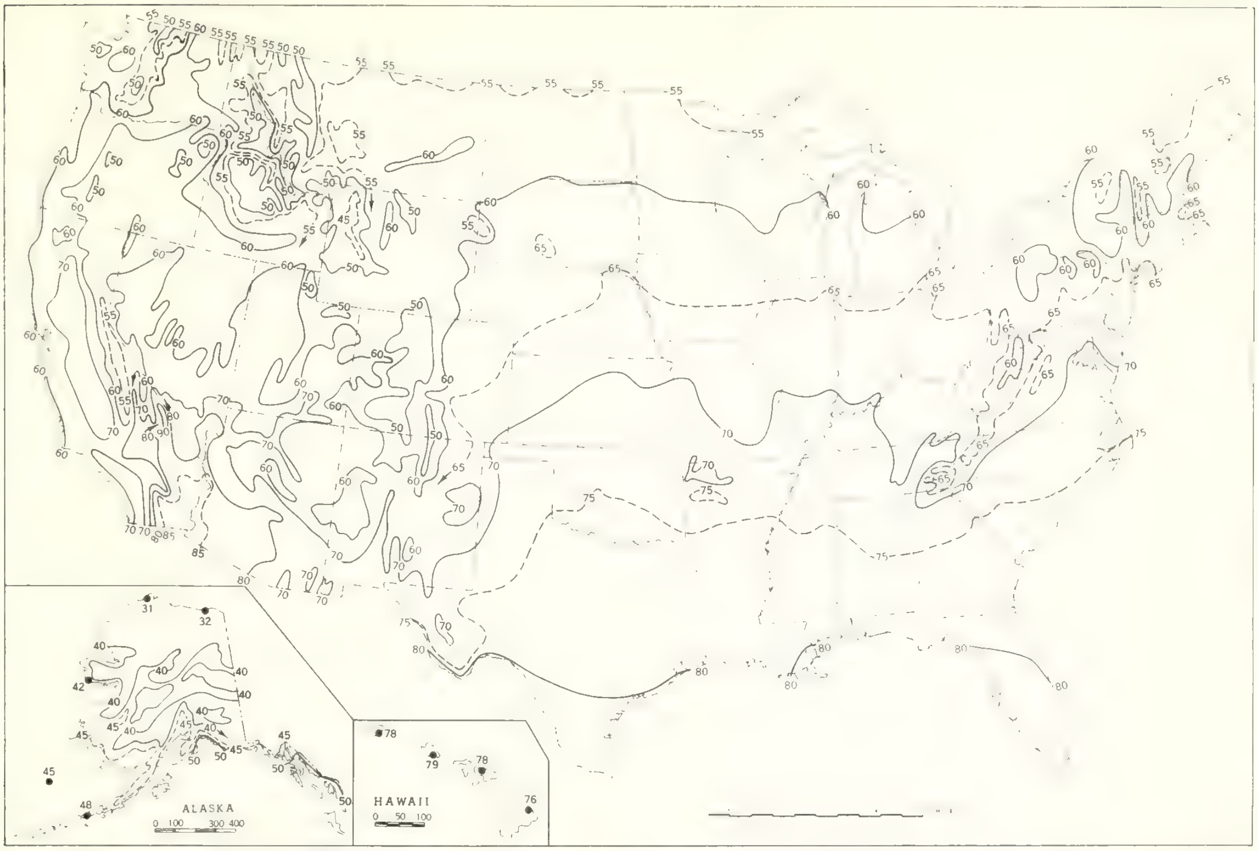
These provisional ozone data are obtained from measurements made with a Dobson ozone spectrophotometer, and are applicable approximately to local apparent noon. The data are presented in the code λ S Ω Ω Ω defined in the August 1962 WMO circular entitled "PUBLICATION OF DATA FOR METEOROLOGICAL RESEARCH, WORLD OZONE DATA".

Units. Milli-atmo-cms.

Station	Day of month																														Mean O_3
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
	Data will be delayed																															

The spectrophotometer measures the total amount of ozone in the atmosphere, i.e., the amount contained in a vertical column of air extending from ground level to the top of the atmosphere in the vicinity of the station. The amount of ozone in this column (coded Ω Ω Ω) is expressed in terms of a thickness of a layer it would occupy at standard temperature and pressure, e.g., 350 milli-atmo-cm ozone implies an ozone layer 0.350 centimeter thick. The code λ S designates the type of measurement made.

Chart 1. A. Normal Daily Average Temperature (°F. 1931-60), September.



B. Temperature Departure from 30 - Year Mean (°F 1931-60), September 1968.

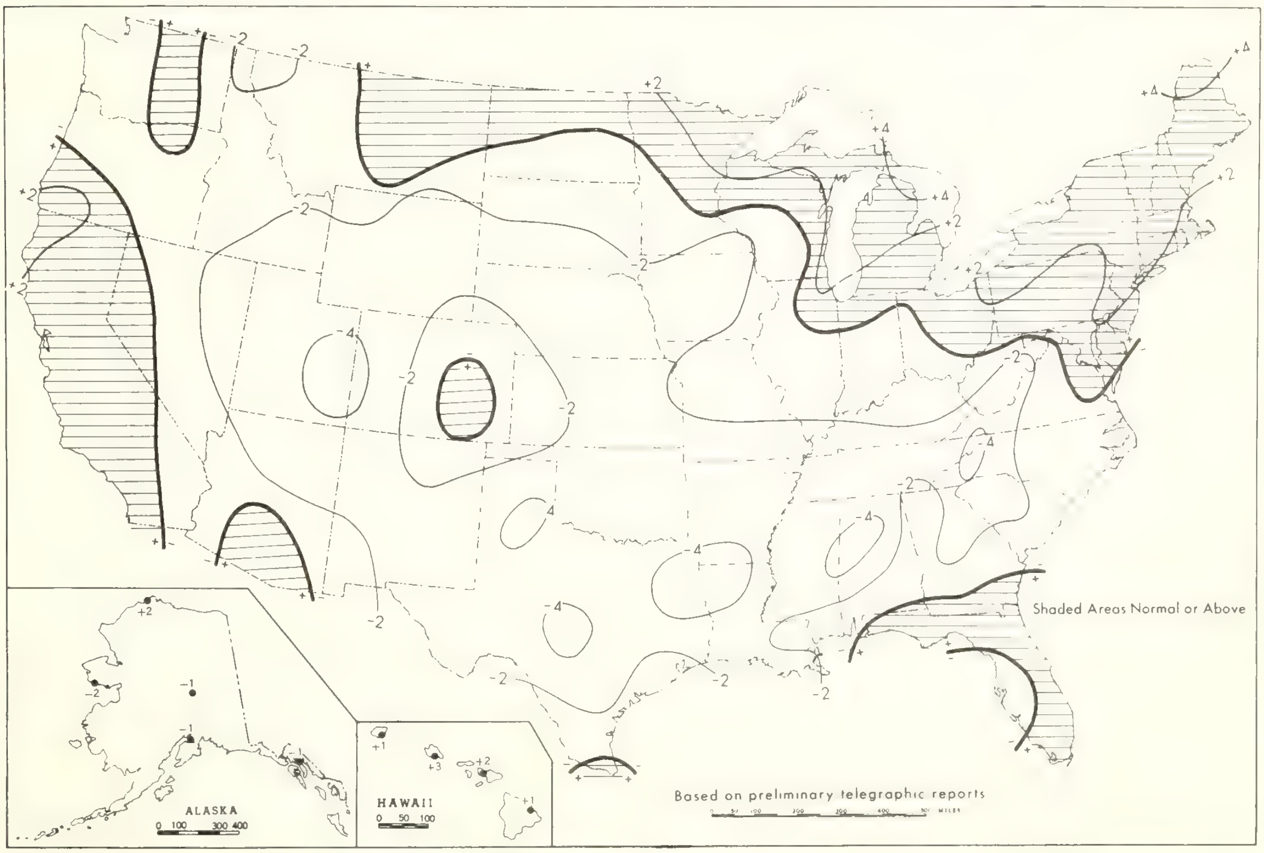


Chart II. Total Precipitation (Inches), September 1968.

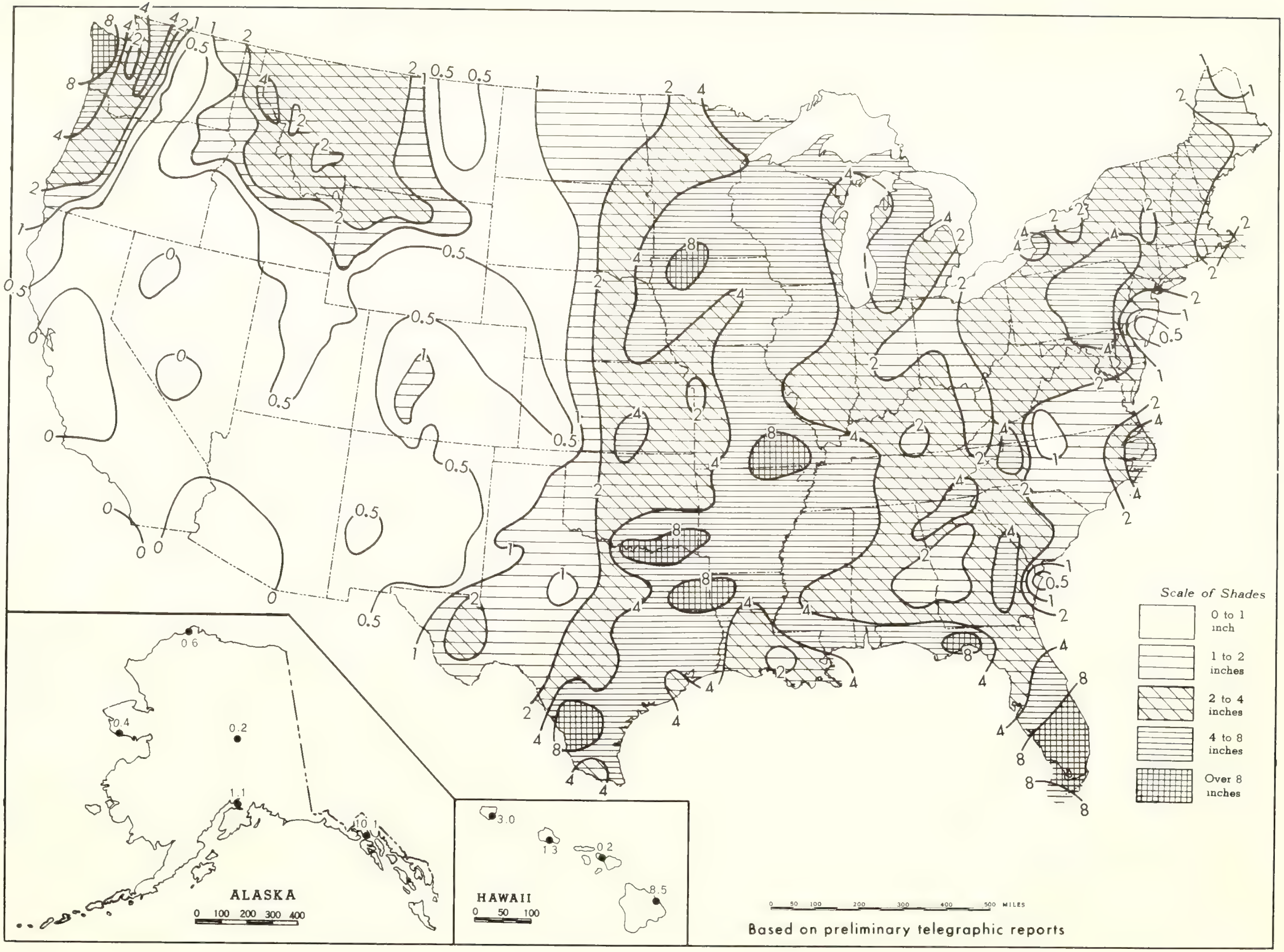


Chart III. Percentage of Normal Precipitation, September 1968.

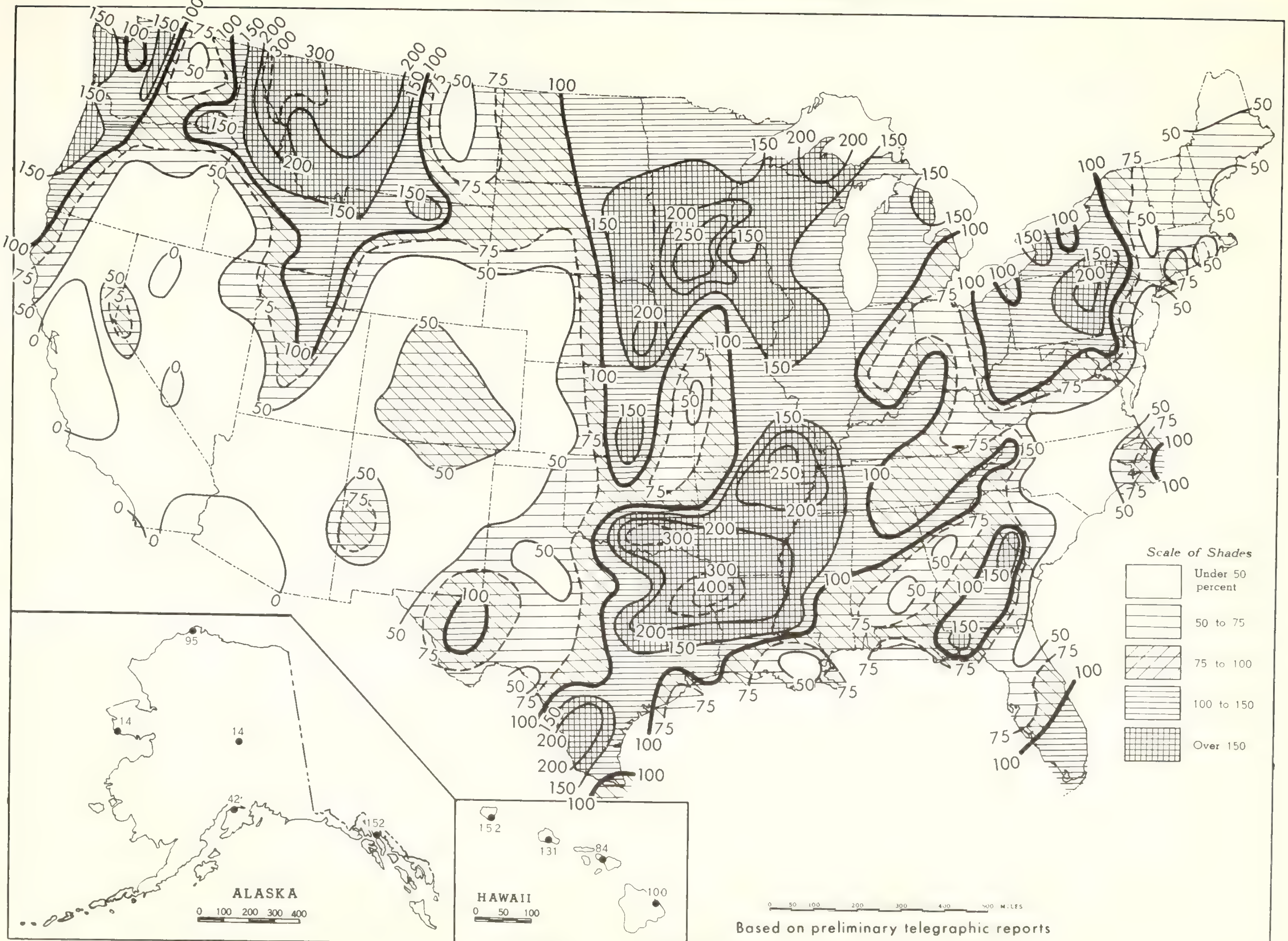
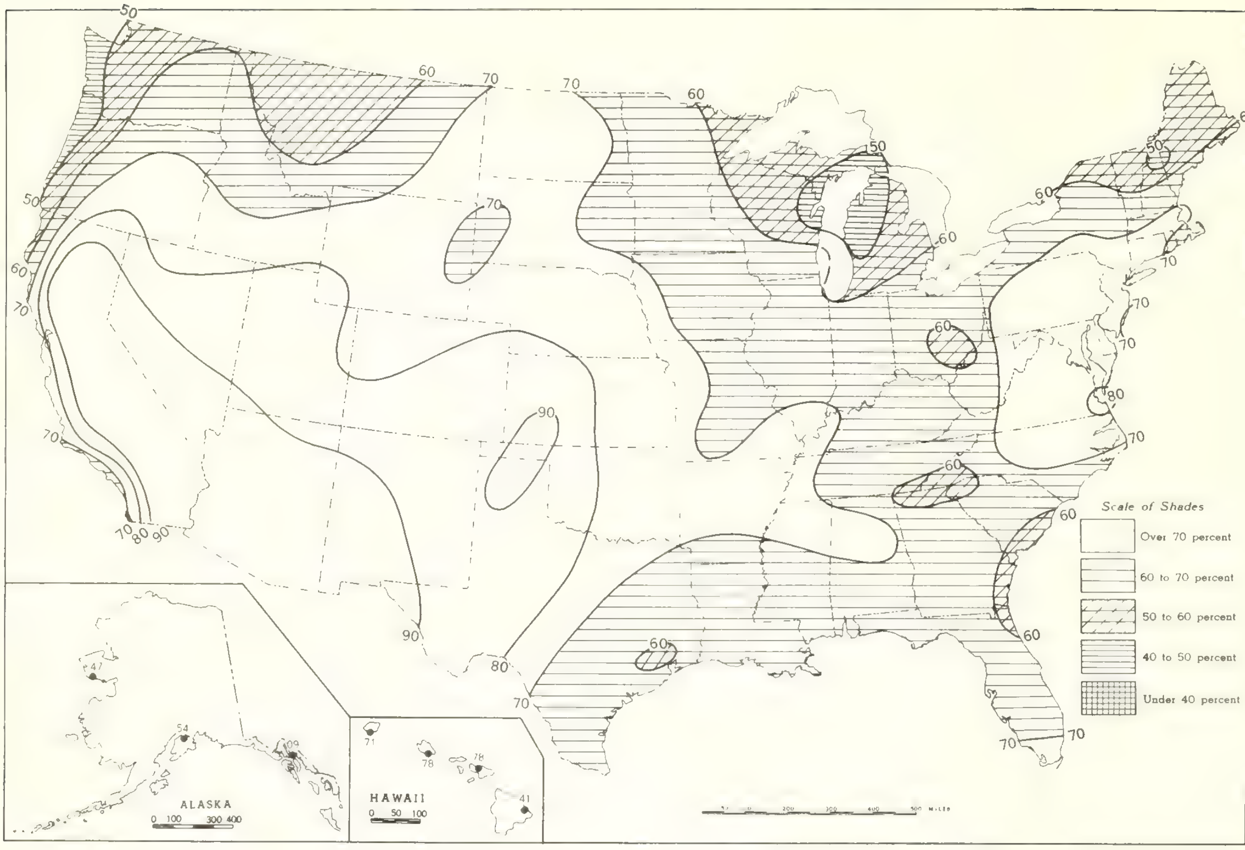
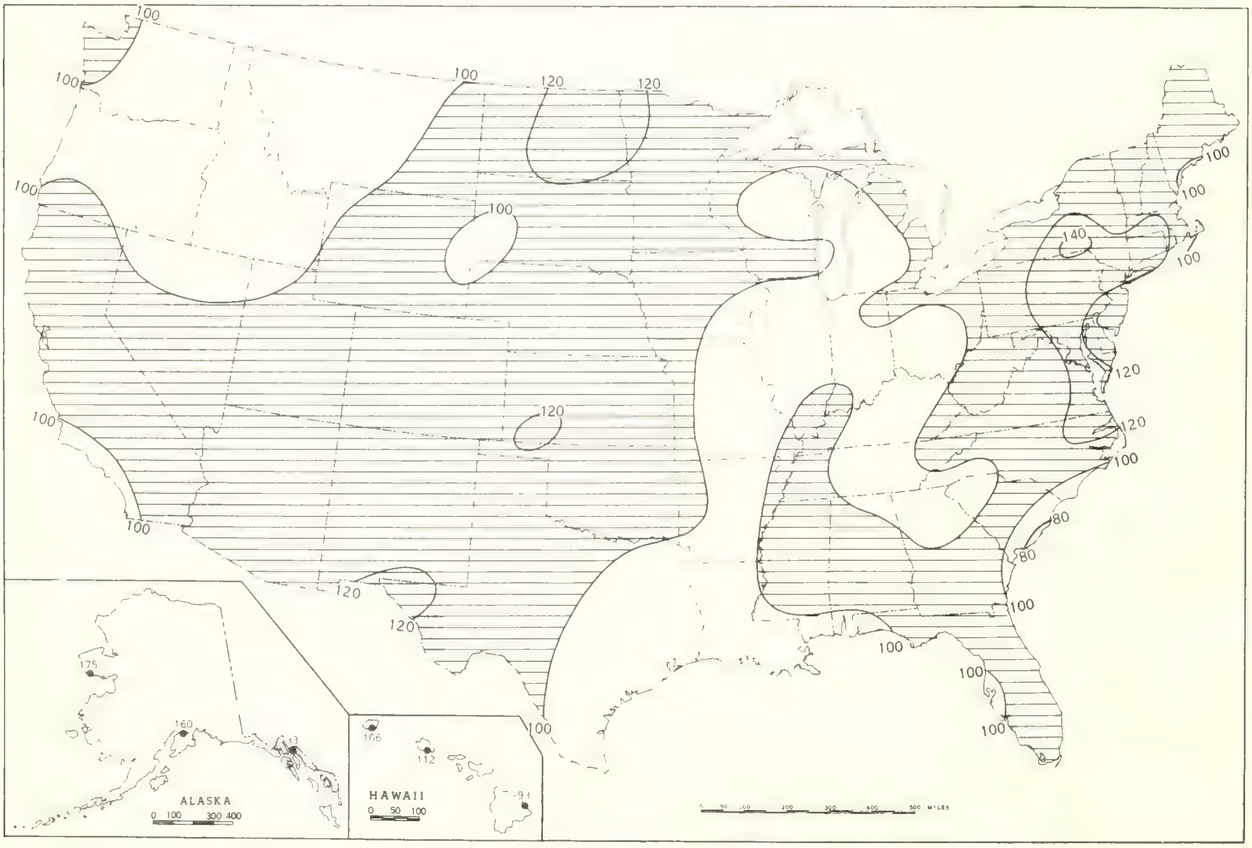


Chart VI. A. Percentage of Possible Sunshine, September 1968.

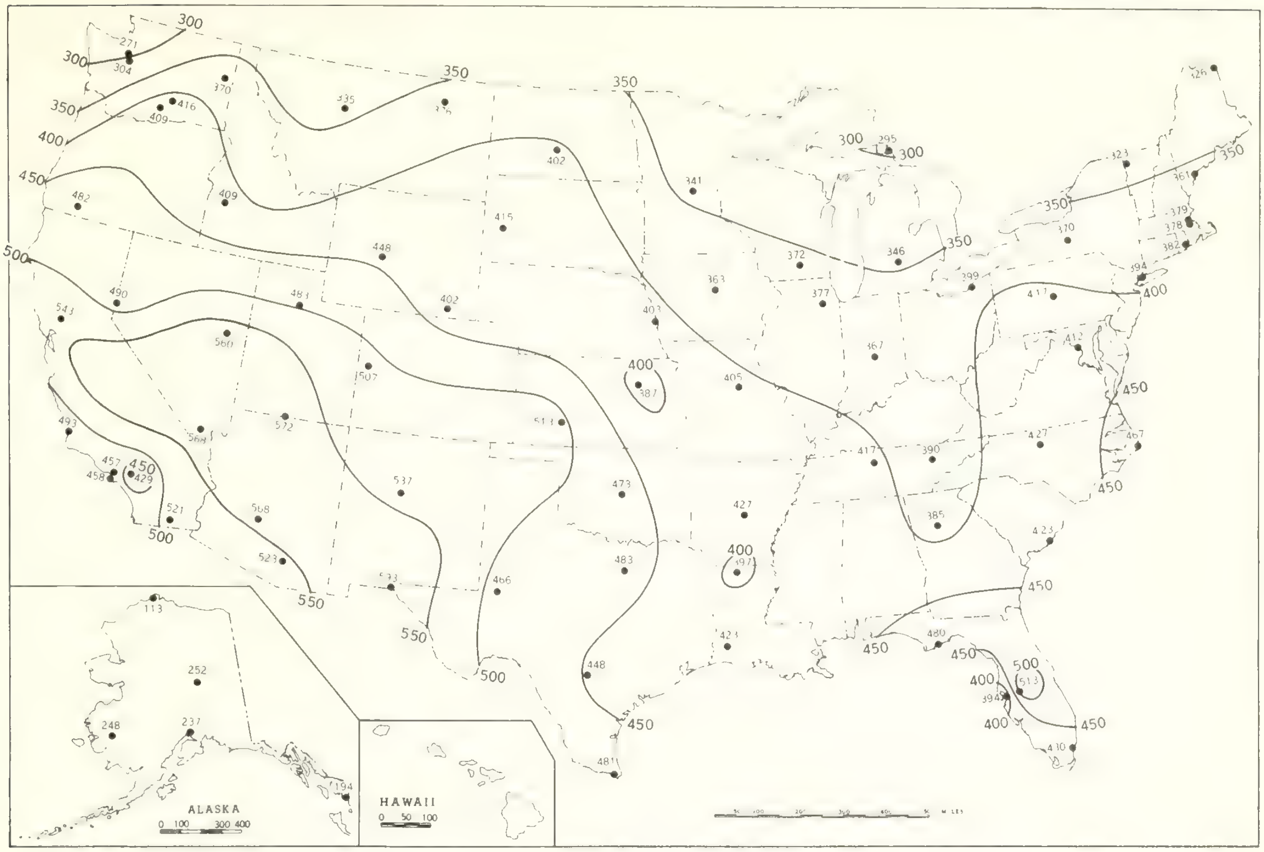


B. Percentage of Mean Monthly Sunshine, September 1968.

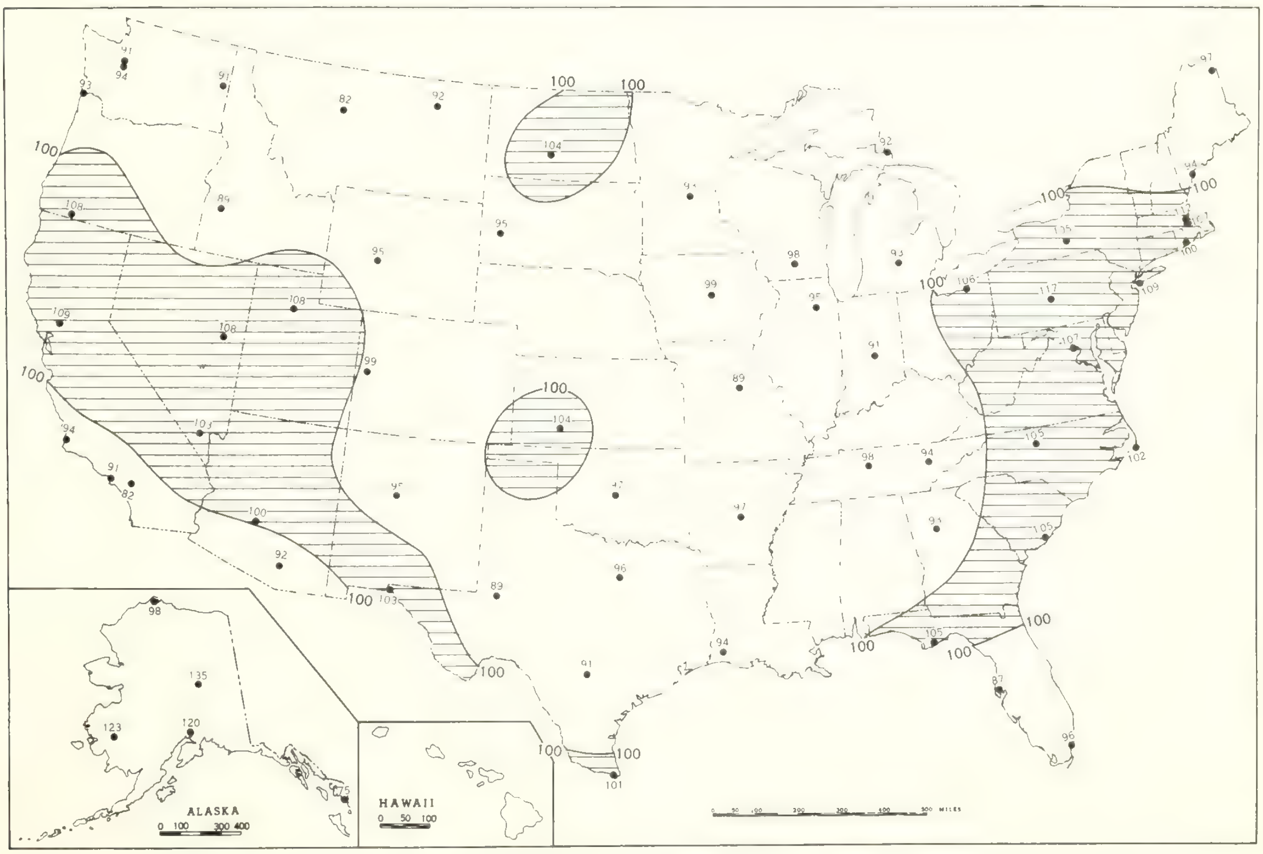


A. Computed from total number of hours of observed sunshine in relation to total number of possible hours of sunshine during month. B. Means are computed for stations having at least 10 years of record.

Chart VII. A. Average Daily Values of Solar Radiation, Langleys, September 1968.

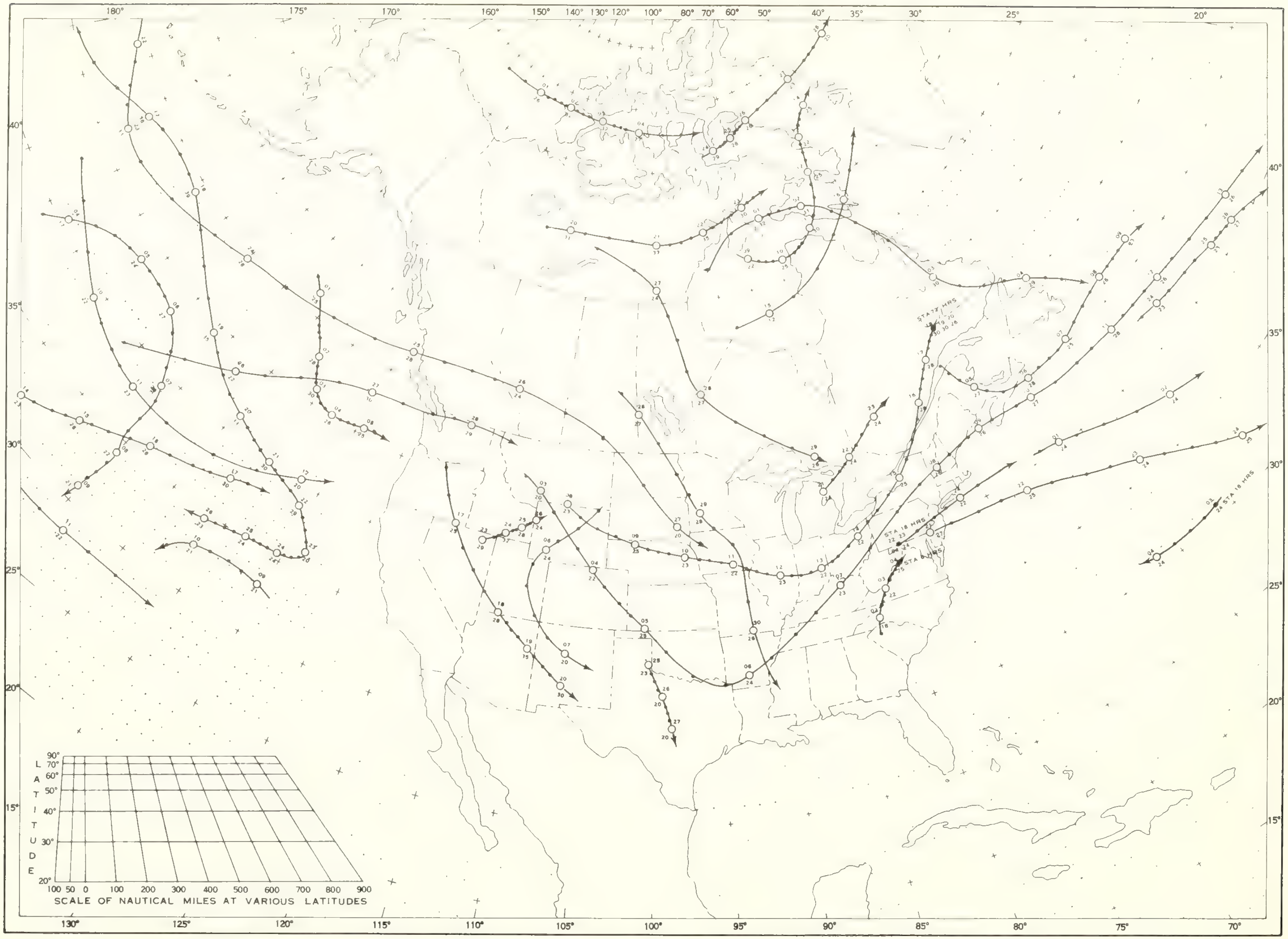


B. Percentage of Mean Daily Solar Radiation, September 1968.



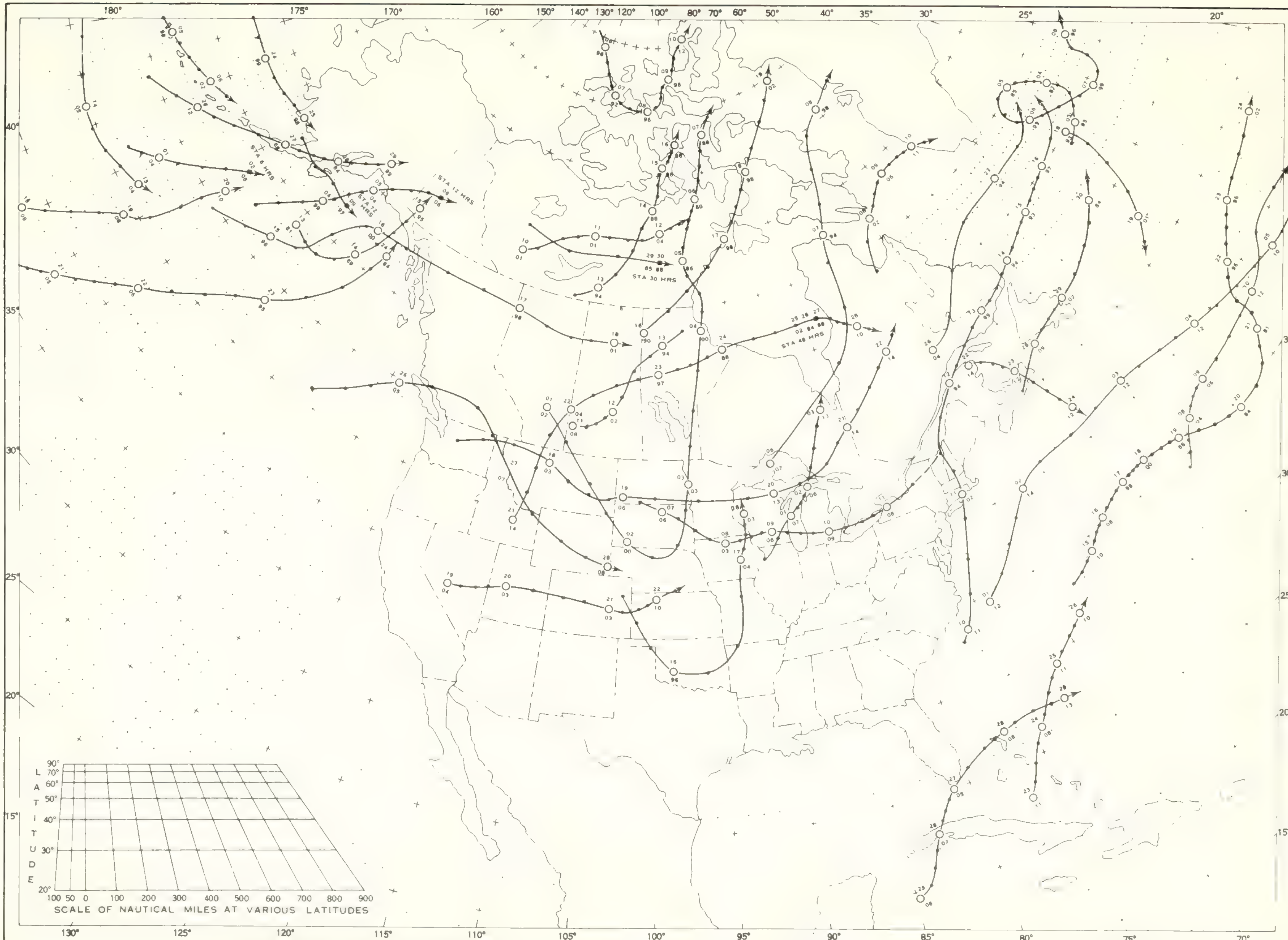
A. Mean daily solar radiation, direct + diffuse, received on a horizontal surface in langleys (1 langley = 1 gm. cal. cm.$^{-2}$) and recorded in International Pyrheliometer Scale of 1956. B. Percentage of the mean based on at least 5 years of record during the period 1950-60, and corrected to the International Pyrheliometer Scale of 1956.

Chart VIII. Tracks of Centers of Anticyclones at Sea Level, September 1968.



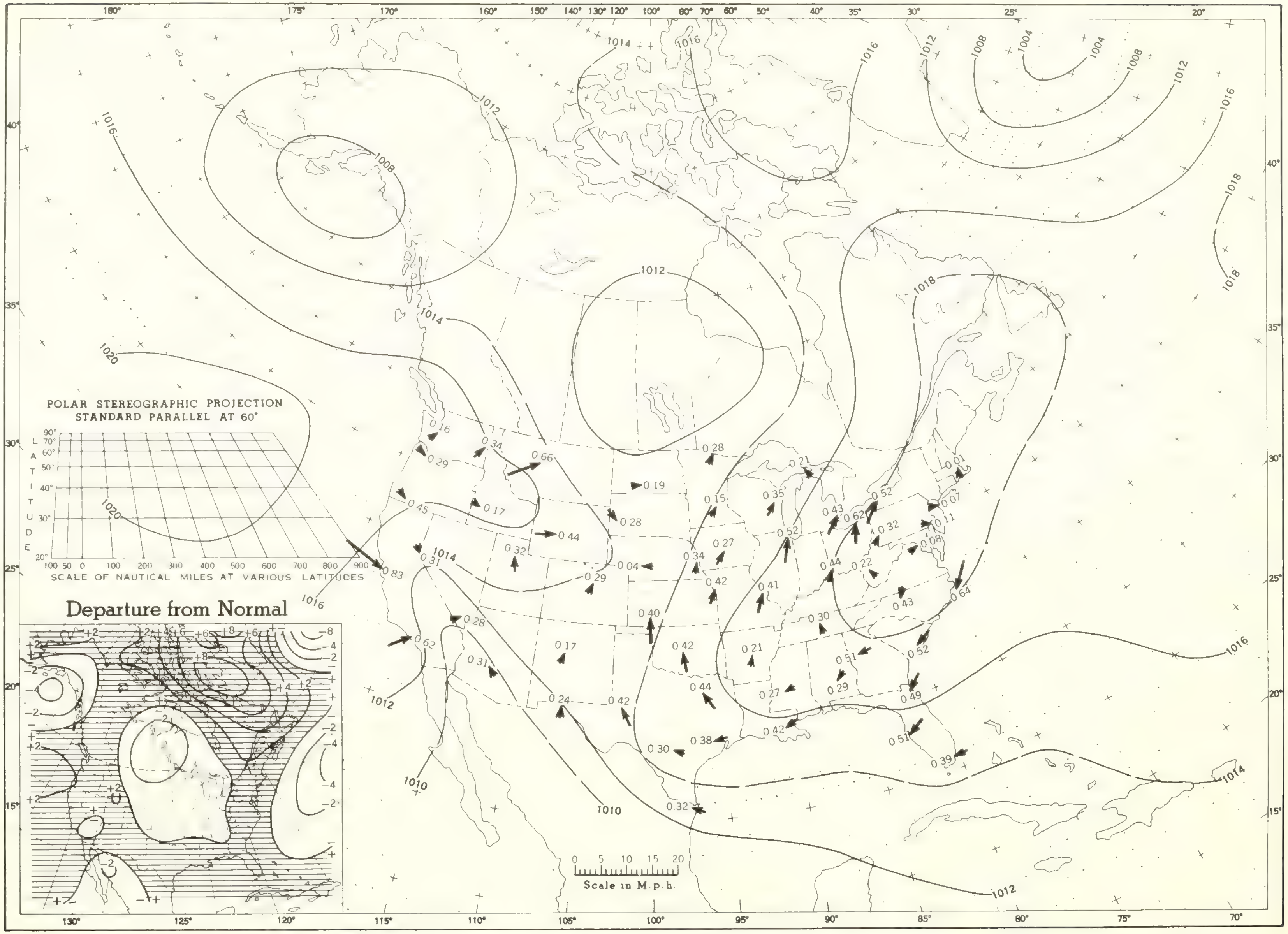
Circle indicates position of center at 7:00 a.m. E.S.T. Figure above circle indicates date, figure below, pressure to nearest millibar. Dots indicate intervening 6-hourly positions. Squares indicate position of stationary center for period shown. Dashed line in track indicates reformation at new position. Only those centers which could be identified for 24 hours or more are included.

Chart IX. Tracks of Centers of Cyclones at Sea Level, September 1968.



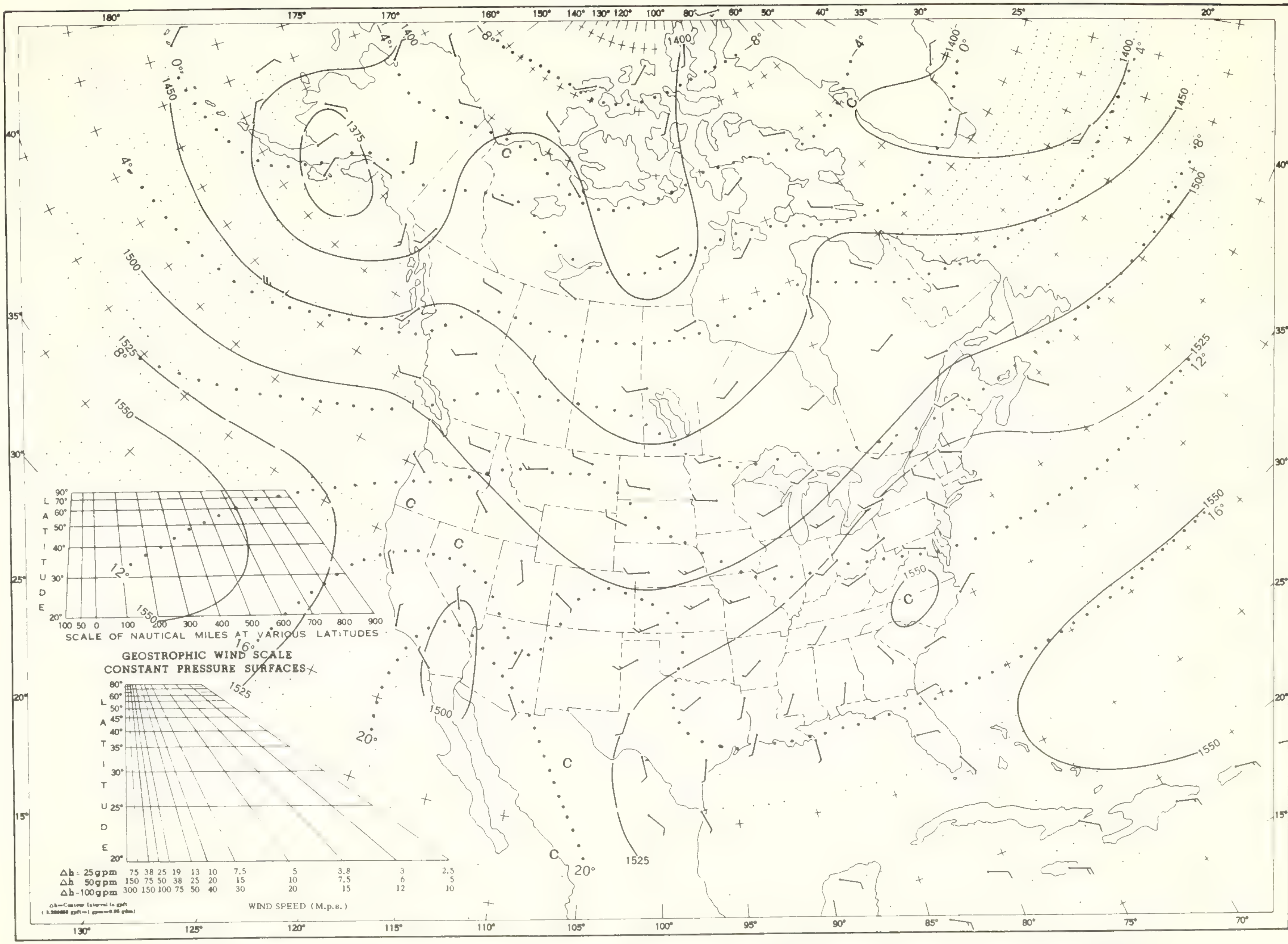
Circle indicates position of center at 7:00 a.m. E.S.T. Figure above circle indicates date, figure below, pressure to nearest millibar. Dots indicate intervening 6-hourly positions. Squares indicate position of stationary center for period shown. Dashed line in track indicates reformation at new position. Only those centers which could be identified for 24 hours or more are included.

Chart X. Average Sea Level Pressure (mb) and Resultant Surface Wind, **September 1968**. Inset. Departure of Average Pressure (mb) from Normal, **September 1968**.



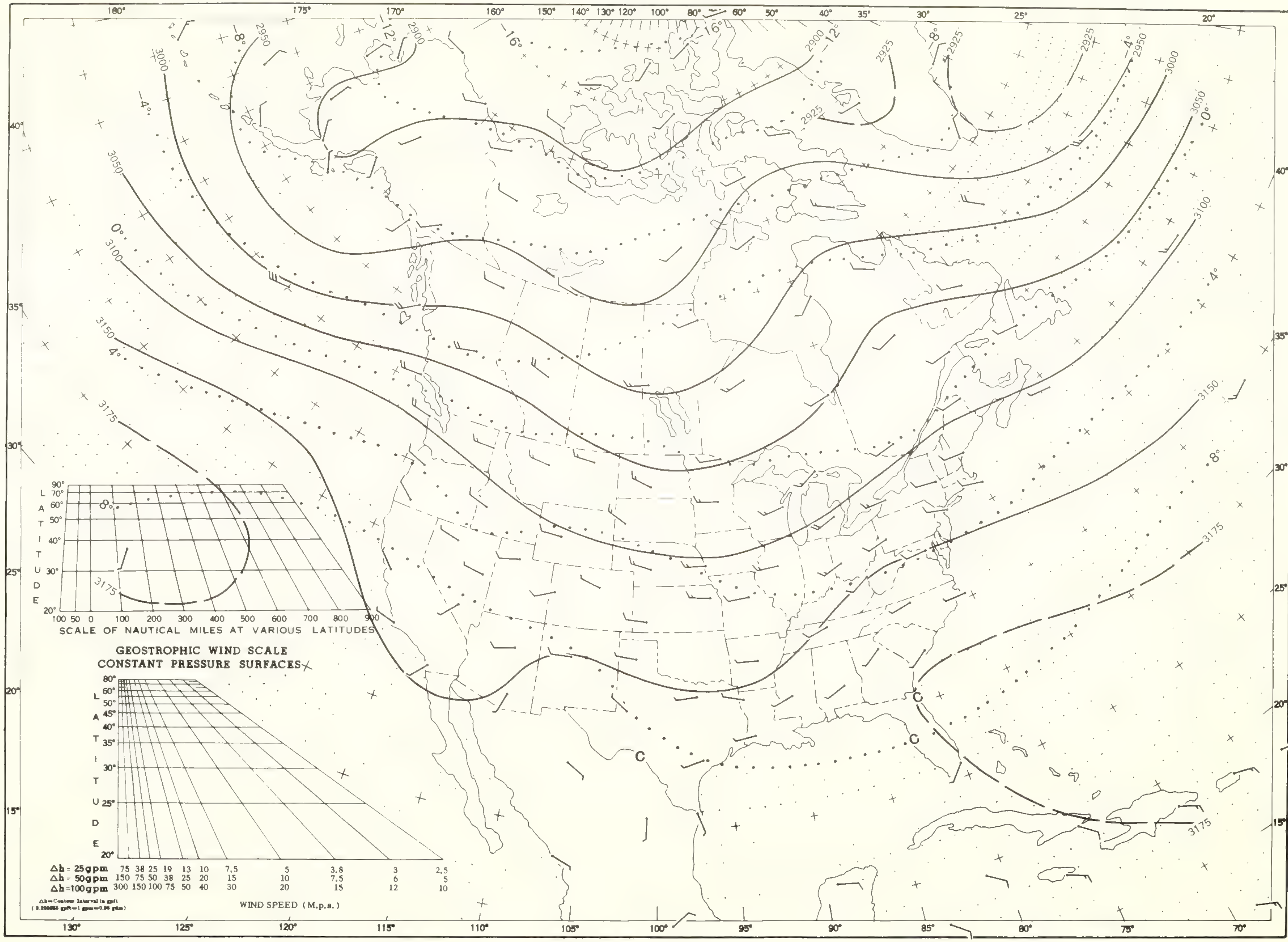
Average sea level pressures are obtained from eight daily 3-hourly observations. Resultant wind directions and speeds are shown by arrows. Constancy ratios (resultant speed÷average speed) are shown to two decimal places. Pressure normals are computed for stations having at least 10 years of record and for 10° intersections in a diamond grid over the oceans.

Chart XI. 850-mb. Surface, 1200 GMT, **September 1968.** Average Height and Temperature, and Resultant Winds.



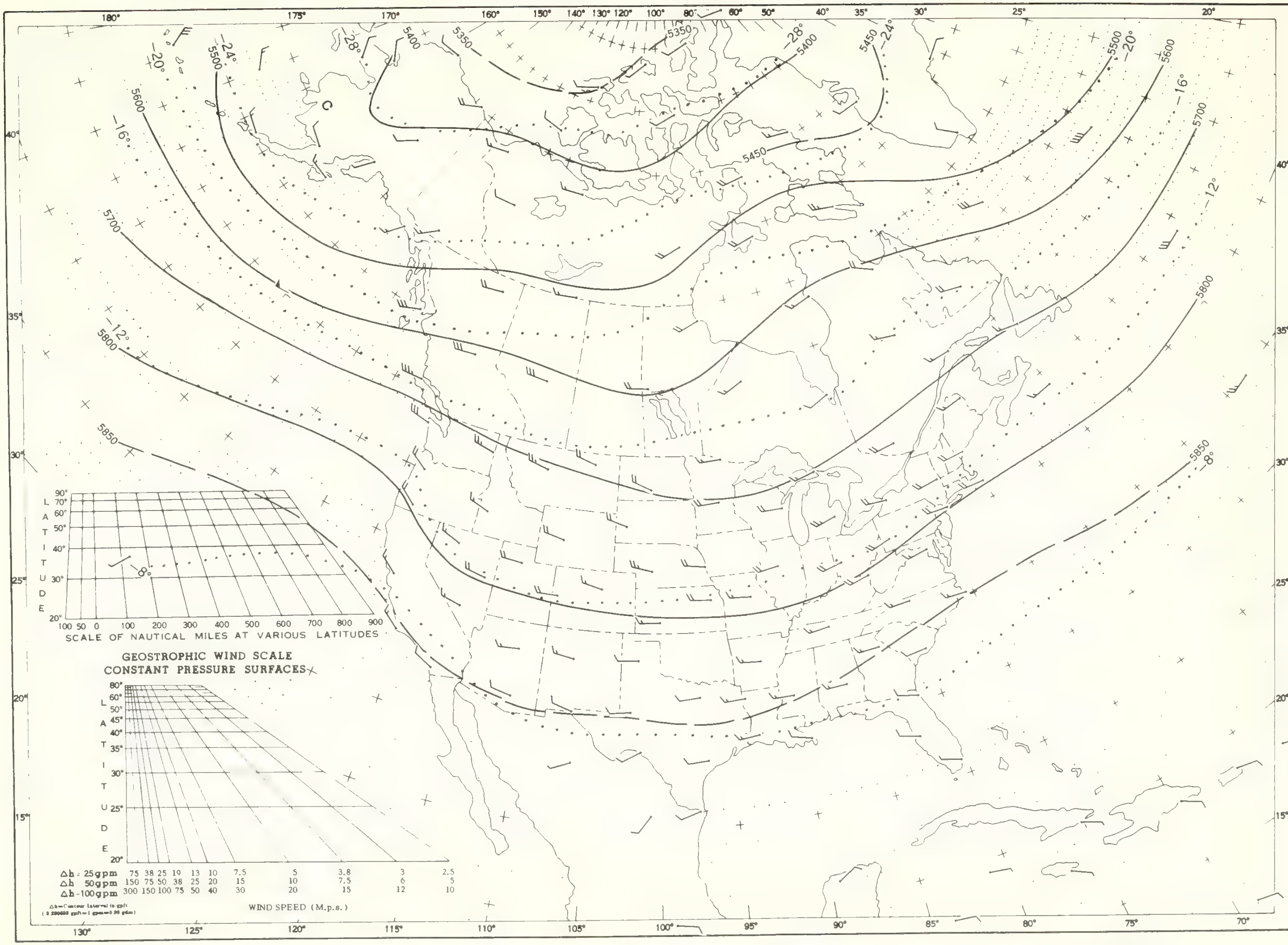
Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XII. 700-mb. Surface, 1200 GMT, September 1968. Average Height and Temperature, and Resultant Winds.



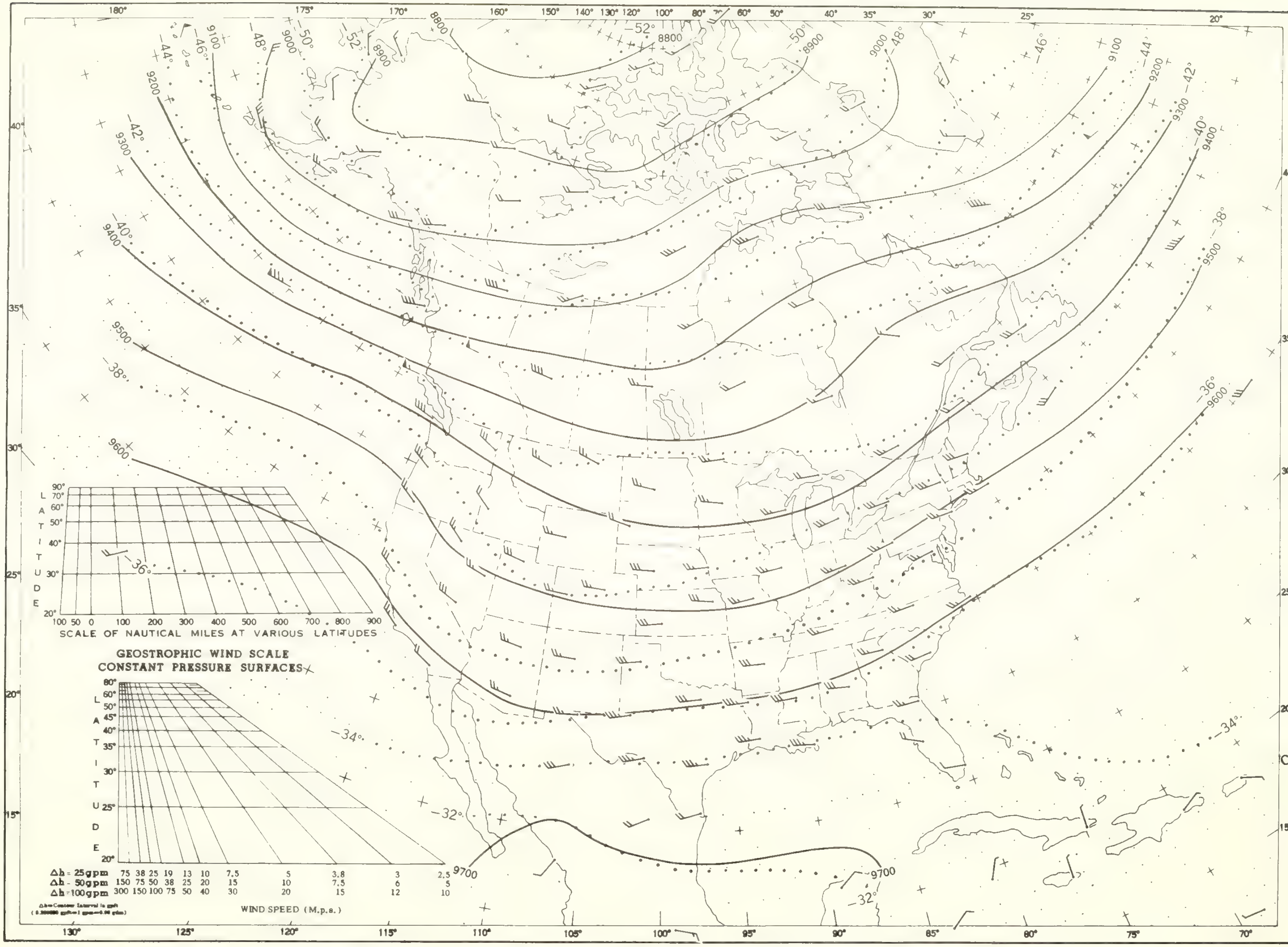
Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XIII. 500-mb. Surface, 1200 GMT, September 1968. Average Height and Temperature, and Resultant Winds.



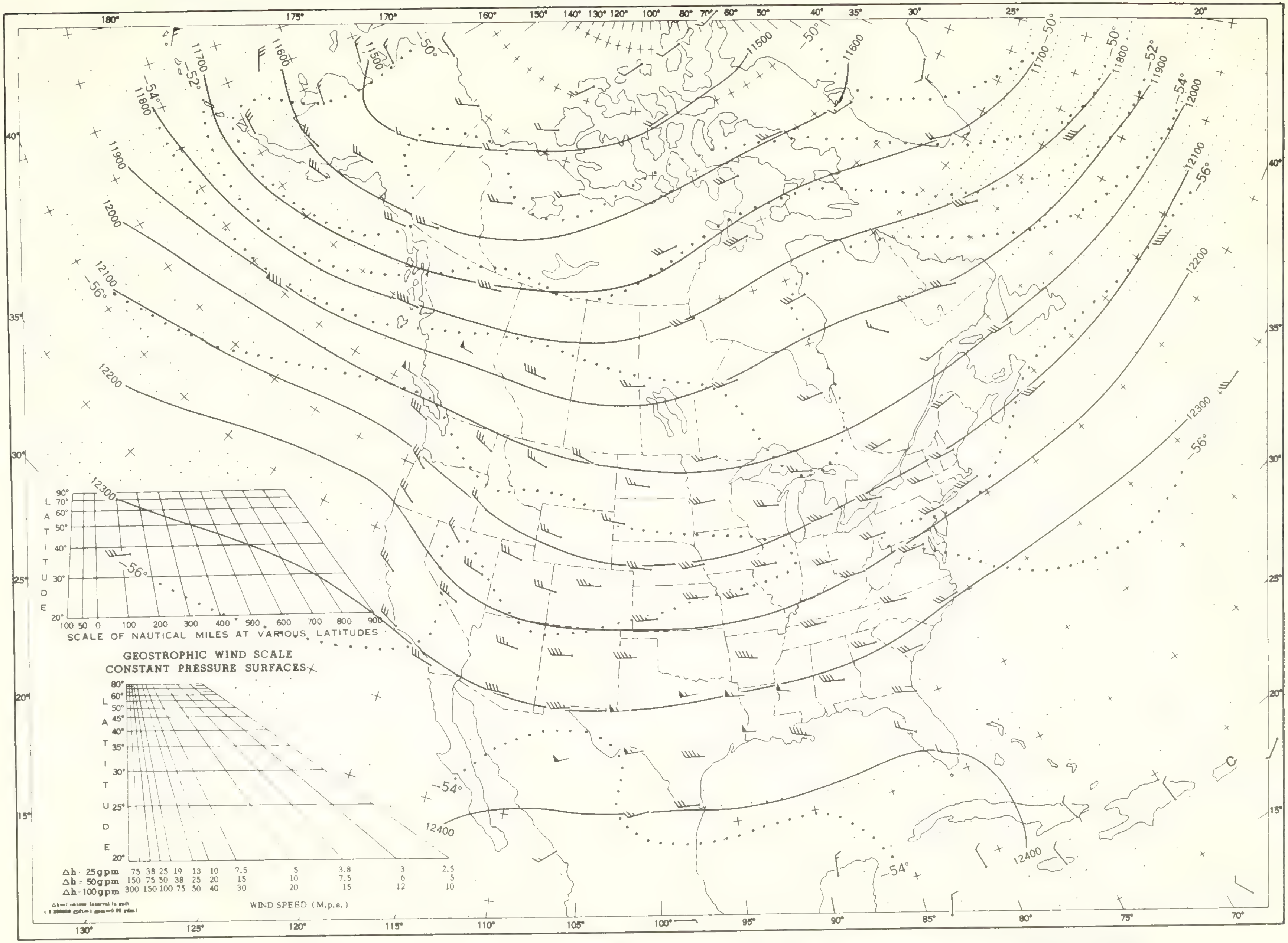
Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XIV. 300-mb. Surface, 1200 GMT, September 1968. Average Height and Temperature, and Resultant Winds.



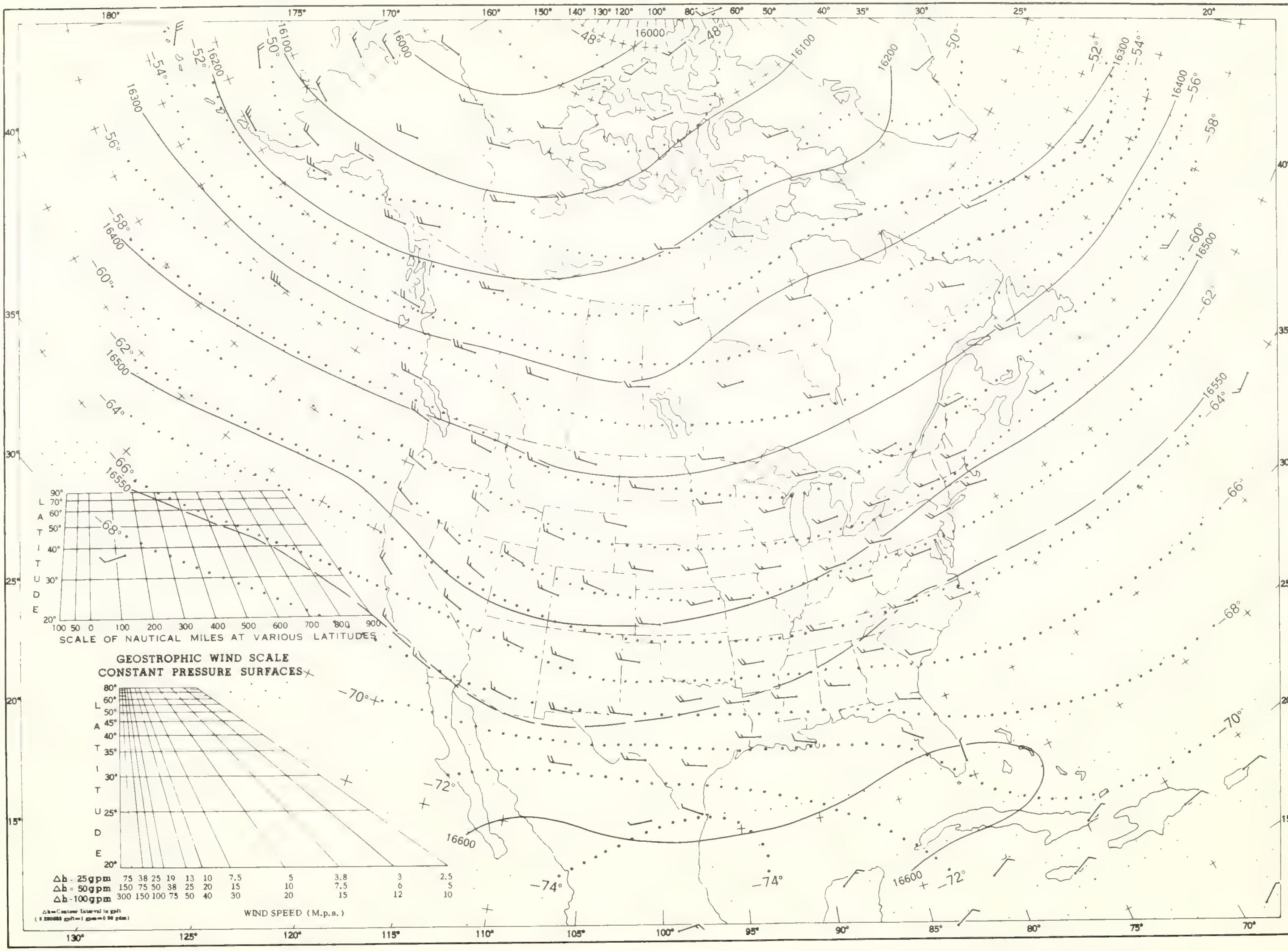
Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XV. 200-mb. Surface, 1200 GMT, **September 1968.** Average Height and Temperature, and Resultant Winds.



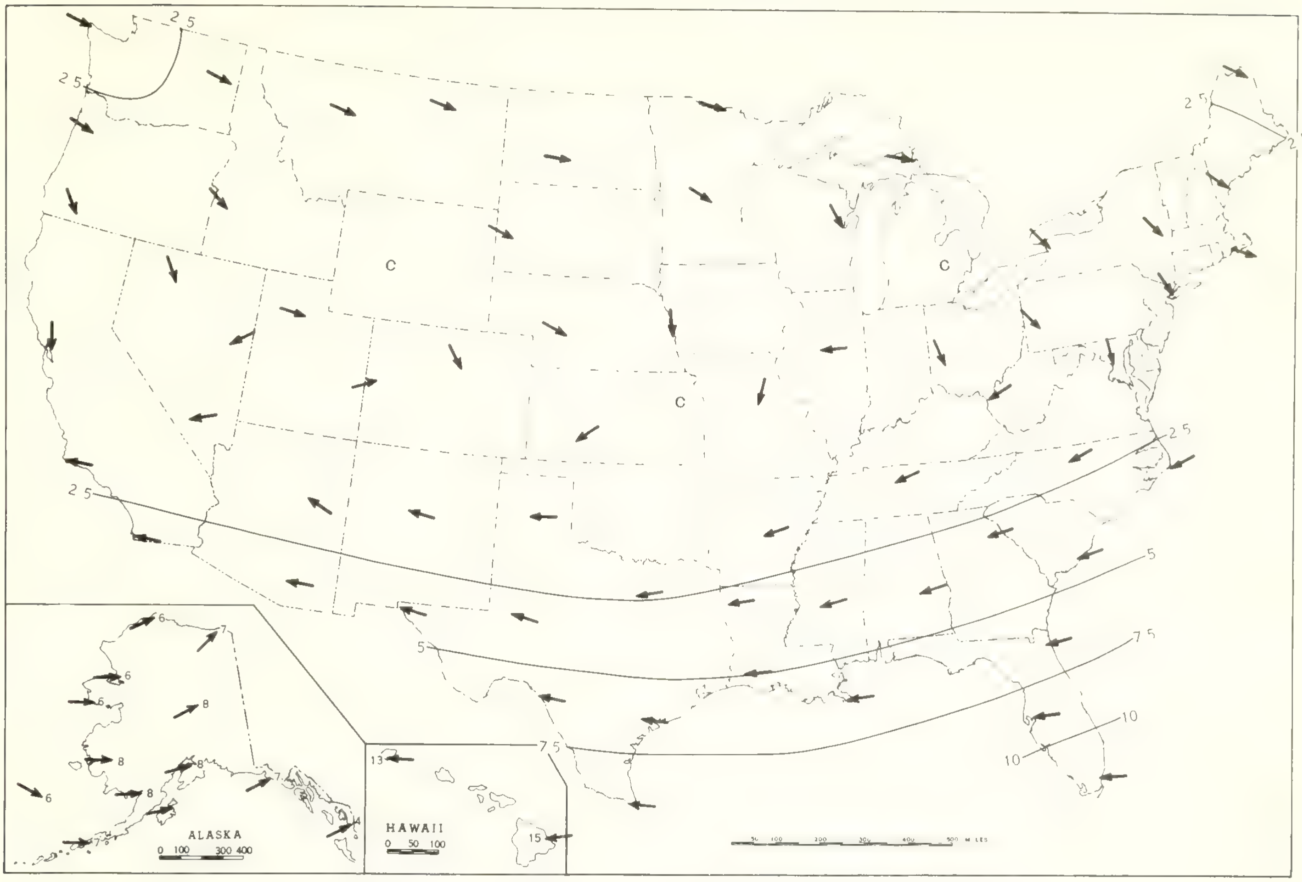
Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XVI. 100-mb. Surface, 1200 GMT, September 1968. Average Height and Temperature, and Resultant Winds.

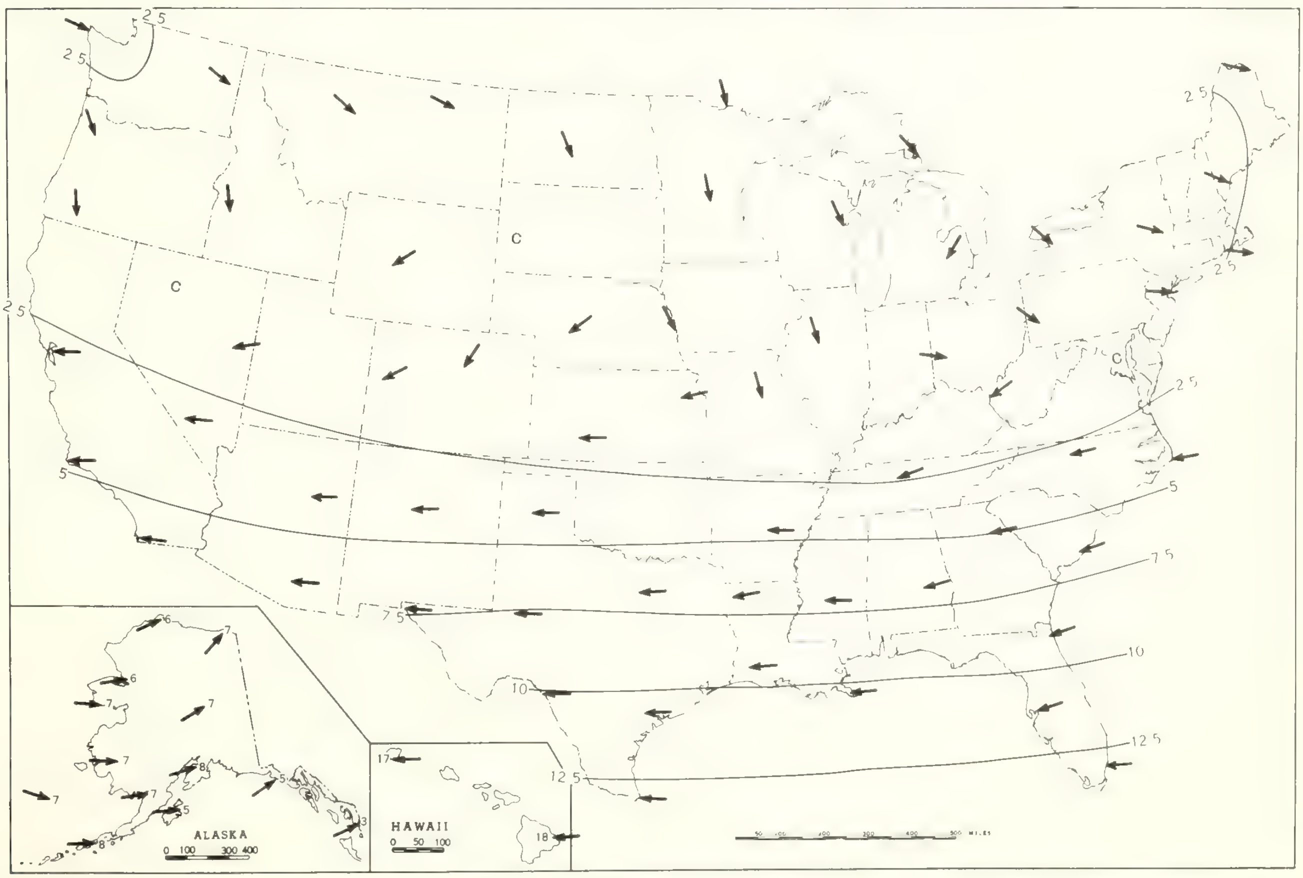


Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XVII. A. 50-mb. Surface, 1200 GMT, September 1968. Resultant Winds.



B. 30-mb. Surface, 1200 GMT, September 1968. Resultant Winds.



Wind speed (isotachs) in meters per second. Arrows show resultant wind direction. All wind data are based on rawin observations.

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CLIMATOLOGICAL DATA

NATIONAL SUMMARY

OCTOBER 1968

Volume 19 No. 10

Asheville 1969

C O N T E N T S

NOTE: Delayed data and corrections will be carried in the June and December issues of this publication. An explanatory page "Description of Charts" will be carried in the January and July issues.

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CLIMATOLOGICAL DATA

NATIONAL SUMMARY

Volume 19 No. 10 OCTOBER 1968

GENERAL SUMMARY OF WEATHER CONDITIONS

HIGHLIGHTS:

1. The "rainy season" began in the Pacific Northwest.
2. Hurricane Gladys drenched Florida and ended the drought in North Carolina.
3. Temperatures ranged widely. Many stations set new temperature records. Some western stations had never been so warm so late in the fall; a few central and southern stations had never been so cool so early in the season. Hard freezes occurred in the Deep South.

TEMPERATURE.--Temperatures changed erratically in October. Cool weather prevailed over most of the Nation during the first week. The cool temperatures persisted over the West in the second and third weeks while the East warmed. The last 10 days were warm in the West and cool in the East. Numerous stations set new high temperature records for so late in the season. For instance: On the 14th, Goodland, Kans., registered 92°; Pueblo, Colo., 90°; Albuquerque, N. Mex., 85°; and Roswell, N. Mex., 94°. On the 28th: Ely, Nev., 77°; Lander, Wyo., 76°. On the 29th: Havre, Mont., 77°; Billings, Mont., 80°; Sheridan, Wyo., 83°; Casper, Wyo., 75°; and Boise, Idaho, 77°.

A few stations recorded cooler early fall temperatures than had occurred in previous autumns: Tulsa, Okla., 39° on the 4th; Nashville, Tenn., 32° on the 5th; and New Orleans, La., 35° on the 29th.

October began sunny and mild over most of the Nation. The first major outbreak of the season came to the Central and East early in the month as a cold front pushed across the Great Plains to the Gulf of Mexico. Temperatures tumbled sharply as the front advanced. At Moline, Ill., the mercury fell from 81° on the afternoon of the 2d to 32° on the morning of the 4th. Subfreezing temperatures occurred as far south as the Boston Mountains in northwestern Arkansas and at Asheville, N. C., in the southern Appalachians. Over much of central and eastern United States, this was the coolest weather since the end of May.

Cold Canadian air brought freezing temperatures southward into the Intermountain region and most of the Rockies in the second week of October.

The mercury plunged to 5° at Big Piney, Wyo., and to 10° at Milford, Utah, on the morning of the 9th. Meanwhile, warm moist Gulf air streamed northward over mid-America. Valentine, Nebr., registered 87° on the afternoon of the 13th and afternoon temperatures reached the low 80's in Lower Michigan from the 14th to the 16th.

Cold air continued to spill into the West at mid-month and soon spread eastward across the Great Plains. Grand Island, Nebr., warmed to 86° on the 15th but only to 61° on the next day. While the Canadian blast held afternoon temperatures in eastern North Dakota in the 30's on the 18th, southerly winds pumped summer heat northward over the East warming Albany, N. Y., to 82°.

In general, the West averaged cooler than normal in the third week of October while the East averaged warmer than normal. Temperatures from the Great Lakes to New England averaged 10° to 12° warmer than normal. This situation was reversed in the 4th week when warming occurred in the West while the East cooled sharply.

On the last day of October, southerly winds warmed mid-America with the mercury reaching the 80's as far north as Iowa. Cool weather continued farther east with maximums ranging from the 40's in New York and New England to the 60's and 70's in the Carolinas.

PRECIPITATION.--Precipitation in October exceeded 1 inch in the Far West with some North Pacific coastal locations receiving over 10 inches. Less than 0.50 inch fell in the Great Basin, the Rocky Mountains, and along the western edge of the northern and central Great Plains. Totals over the eastern half of the Nation ranged from 1 to more than 4 inches, the largest amounts falling in southern Florida and along the middle Atlantic coast.

Sparse showers occurred over the central Great Plains and parts of the Southeast on October 1, but the first important precipitation fell as snow in the central Rocky Mountains and as cold rain in the northern Great Plains on the 2d. In some areas, the rain and snow were driven by winds gusting to 45 to 50 m.p.h. Thunderstorms developed in the Gulf air ahead of a cold front, occurring in the Great Lakes region and Ohio River Valley on the 2d and from Texas to New England on the 3d. Sleet fell in central Iowa and the remnants of tropical storm Pauline brought heavy rains to the usually dry Southwest. Generous showers fell in the central United States on the 5th and from the Mississippi River to the Atlantic Ocean on the 6th.

Light snow fell in the northern and central Rockies early in the second week of October. Meanwhile, a Pacific storm edged into the Far Northwest, bringing cool wet weather to that area. Substantial rains fell along the coast of Washington and Oregon with snow in the mountains above 4,000 feet. The wet weather spread southward, bringing the first general rains of the season to California with snow above 8,000 feet. By October 13, the storm extended across the northern Rocky Mountains and was leaving snow in the higher elevations.

Heavy thunderstorms occurred from eastern Texas to the middle Mississippi River Valley on October 8 and 9. A few tornadoes and damaging hailstorms occurred in Texas and torrential rains caused a quick rise in the streams in Missouri and Oklahoma. South Carolina benefited from the first general precipitation in 2 months. Light rain fell in the Great Lakes region and the Ohio River Valley on the 8th and 9th. Much of the Atlantic coast received general rains on the 7th and scattered light showers on the 10th and 11th. Light snow flurries occurred in the higher mountains of New England on the latter date.

Precipitation continued in the Northwest in the third week of October. Several inches of rain fell along the Washington and Oregon coast with lesser amounts inland in those States and along the coast of California. Snow accumulated to 30 inches above 5,500 feet in the Cascades. Only light rain fell along the eastern slopes of the Sierras and little or none in the deserts. Snow flurries occurred in the northern and central Rockies, accumulating to 1 to 2 feet in the higher mountains in Wyoming but only to an inch or less at most lower elevations.

OCTOBER 1968

Heavy showers drenched mid-America on the 15th and 16th with storm totals ranging from 2 to more than 6 inches from the Oklahoma Panhandle to central Minnesota. Hurricane Gladys, packing 75 m.p.h. winds, crossed northern Florida on the 19th accompanied by damaging storm tides and leaving millions of dollars damage to roads, homes, and other buildings along the miles of beaches from Venice to Cedar Keys. In North Carolina, the rains from Hurricane Gladys ended the worst drought in over a third of a century.

In the last week of October, the light rains continued in the Far Northwest, and scattered thundershowers occurred from Wisconsin to Texas, in the Northeast, and southern Florida.

CONDENSED CLIMATOLOGICAL SUMMARY

OCTOBER 1968

Section	Temperature						Precipitation			
	Monthly extremes						Monthly extremes			
	Station	Highest	Date	Station	Lowest	Date	Station	Greatest	Station	Least
		°F			°F			In.		In.
Alabama	4 Stations	93	4+	Waterloo	19	26	Oneonta	3.50	Evergreen	0.24
Alaska	Cape Hinchinbrook	60	1	Clear Water	-19	29	Ketchikan	30.62	Allakaket	.01
Arizona	Maricopa 4N	109	2	Lukachukai	12	5	Lakeside Ranger Sta	2.27	10 Stations	.00
Arkansas	Wynne	93	15	Gilbert	23	29	Warren	7.80	Ratcliff	.92
California	2 Stations	104	25+	Bodie	4	19	Brush Creek Ranger Sta	8.32	11 Stations	.00
Colorado	Holly	95	15	2 Stations	-2	18+	Cheesman	2.34	2 Stations	.00
Connecticut	West Thompson Dam	85	3	West Thompson Dam	18	31	Trap Falls Reservoir	4.02	Hartford Brainard Fld	1.72
Delaware	3 Stations	88	3	Bridgeville 1NW	25	31	Newark University Farm	3.47	Milford 2WSW	1.47
Florida	Myakka River St Park	96	6	2 Stations	28	29+	Kendall 2E	16.30	Milton Exp Station	.69
Georgia	Bainbridge	97	3	Blairsville Exp Sta	22	30+	Atkinson 1W	7.93	Blakely	.22
Hawaii	Mauna Kea Beach 98	96	22+	Mauna Loa Slope Obs	33	25+	Waiahi Upper 1052	19.96	Kona Village 93.8	.32
Idaho	Brownlee Dam	86	1	Stanley 1NNE	0	9	Mullan FAA	5.88	May Ranger Station	.00
Illinois	Mt Carmel Waterworks	89	1	Galesburg	20	25	Mount Sterling	4.09	Pontiac	.23
Indiana	5 Stations	87	16+	2 Stations	21	30	Valparaiso Waterworks	3.03	Monroeville 3ENE	.58
Iowa	Columbus Junction	87	15	Chariton	19	25	Sibley	7.33	Burlington Radio KBUR	.79
Kansas	3 Stations	98	15+	2 Stations	22	24+	Bushong	7.46	Saint Francis	.12
Kentucky	do	89	15+	4 Stations	21	30+	2 Stations	5.59	Dundee 4ESE	.58
Louisiana	2 Stations	95	4+	2 Stations	31	29	New Orleans London	6.33	Baton Rouge WBAP	.06
Maine	do	86	16+	do	22	31+	Van Buren 2	4.64	East Sangerville 5SE	1.76
Maryland	do	89	3	Oakland 1SE	17	31	Boyds 2NW	4.33	Leonardtown 3NW	1.07
Massachusetts	4 Stations	87	17+	2 Stations	21	31	Heath	3.91	East Brimfield Dam	1.52
Michigan	do	85	16+	Stambaugh 1S	15	30	Munising	9.23	Cheboygan RR Light Sta	.28
Minnesota	2 Stations	87	16+	Detroit Lakes 1NNE	17	4	Lamberton SW Exp Sta	7.88	Hallock	.65
Mississippi	3 Stations	90	12	Tupelo 2WNW	25	29	Ashland	5.86	Picayune	.16
Missouri	do	90	31+	3 Stations	19	29	Albany	8.14	Festus 2NW	.28
Montana	Wyola	87	29	Cooke City	3	17	Troy 18N	5.50	2 Stations	.00
Nebraska	3 Stations	94	15+	Harrison	16	18	Hartington	6.86	Haigler	.09
Nevada	2 Stations	92	27+	Charleston	2	9	Ruth	1.89	2 Stations	.00
New Hampshire	Windham	87	2	Mount Washington	8	31	Mount Washington	5.75	Mount Sunapee	1.60
New Jersey	6 Stations	88	4+	Indian Mills 2W	19	31	Millville FAA AP	4.40	Bound Brook 2W	1.62
New Mexico	4 Stations	95	14+	Gavilan	3	18	Belen	1.66	11 Stations	.00
New York	Little Falls Mill St	87	3	2 Stations	18	31	Turin 1N	6.47	Troopsburg 4NE	1.49
North Carolina	Hamlet	97	3	Grandfather Mountain	17	29	Grandfather Mountain	11.51	Yanceyville 2NNE	1.55
North Dakota	4 Stations	83	12+	Medora	10	20	Wahpeton	2.37	9 Stations	T
Ohio	Toledo Blade	88	16	Toledo Sewage	12	30	Youngstown WBAP	4.94	2 Stations	.69
Oklahoma	2 Stations	98	14	2 Stations	25	29+	Duncan	5.61	Regnier	.02
Oregon	Medford WBAP	89	3	Fremont	3	8	Valsetz	14.27	Owyhee Dam	.13
Pennsylvania	Conneautville	88	1	Zion Grove	16	31	Meadville 1S	7.07	Donora	.90
Puerto Rico	Manati	97	2	Gurabo Substation	58	24+	Maricao	18.55	Cayey 1E	.64
Rhode Island	Providence WBAP	85	2	Kingston	21	31	Kingston	2.82	Providence WBAP	1.79
South Carolina	4 Stations	92	4+	3 Stations	25	31+	Marion	14.30	Spartanburg	1.06
South Dakota	2 Stations	91	13	Deerfield 4NW	7	18+	Vermillion 2N	6.01	2 Stations	.00
Tennessee	do	89	2+	Mountain City No 2	19	30	Mountain City No 2	5.50	Dyersburg FAA AP	1.37
Texas	do	102	3	Plains	23	19	Welder Wildlife Fndtn	8.58	10 Stations	.00
Utah	St George	92	2	Silver Lake Brighton	6	17	Silver Lake Brighton	4.50	2 Stations	.00
Vermont	5 Stations	82	17+	Mount Mansfield	17	31	Mount Mansfield	6.35	Bennington 2NNW	1.75
Virginia	Richmond WBAP	91	3	2 Stations	18	31	Peaks of Otter	11.21	Tangier Island	1.01
Washington	2 Stations	86	1	Winthrop 1WSW	18	31	Neah Bay 1E	22.22	Winthrop 1WSW	.39
West Virginia	do	87	15+	2 Stations	15	31	Alpena 1NW	6.00	Mannington 1W	1.71
Wisconsin	Oconto	87	16	Hatfield Hydro Plant	14	25	Weyerhauser 1N	6.09	Shawano	.53
Wyoming	2 Stations	87	15+	Kendall	-8	20+	LaGrange	1.62	3 Stations	T

+ And also on an earlier date or dates.

NOTE: Dates in the above Condensed Climatological Summary apply to the period 24 hours prior to time of observation. In some cases the actual occurrence is on the calendar date preceding that shown. (See individual Climatological Data for times of observations).

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	No. of days: Max. 90° F. or above	No. of days: Min. 32° F. or below	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	No. of days: .01 inch or more	No. of days: With thunderstorms	Snow, Sleet: Total	Snow, Sleet: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Fastest mile: Speed	Fastest mile: Direction	Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	Ft.	Mb.	Mb.	°F.	°F.	°F.	°F.	°F.		°F.				°F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
ALABAMA																																
BIRMINGHAM	620	995.3	1017.9	75	51	63.2	-2.5	88	2	29	29+	0	2	52	70	1.20	-1.75	0.55	5	1	0.0	0	1.7	7	24	W	28	12	10	9	5.1	68
HUNTSVILLE	624	994.9	1018.0	74	51	62.1	-1.1	89	2	30	29+	0	2	52	73	1.94	-0.78	1.12	4	3	0.0	0	1.4	11	26	30	6	11	10	10	5.1	
MOBILE	211	1009.1	1016.9	81	59	70.1	0.2	90	3+	38	29	3	0	57	69	1.13	-1.90	0.55	8	1	0.0	0	2.4	3	21	34	19	12	13	6	4.5	
MONTGOMERY	183	1010.2	1017.5	79	53	65.9	-0.7	90	3+	31	26	2	3	52	66	0.80	-1.48	0.71	4	1	0.0	0	1.2	35	18	W	28	11	14	6	4.5	62
ALASKA																																
ANCHORAGE	114	994.6	999.3	39	28	33.1	-2.7	49	3	14	20	0	24	26	73	1.61	-0.26	0.69	9	0	15.1	8	2.9	1	22	35	16	5	4	22	8.1	27
ANNETTE	110	1000.7	1004.7	52	41	46.6	-0.1	58	9	32	30	0	1	40	80	18.81	1.93	2.39	24	0	0.0	0	6.9	14	41	14	16	1	3	27	8.7	
BARROW	31	1007.5	1007.9	23	11	17.1	0.5	33	10	-10	21	0	31	14	85	0.30	-0.20	0.12	8	0	3.3	5	6.6	12	35	12	25	2	6	23	8.0	
BARTER ISLAND	39	1006.1	1007.9	24	11	17.5	0.3	31	3+	-5	30+	0	31	14	84	0.20	-0.64	0.06	9	0	2.7	1	3.8	17	43	10	27	2	3	26	8.8	
BETHEL	125	995.3	1000.9	36	23	29.2	-2.2	48	1	10	24	0	30	26	88	1.07	-0.47	0.36	9	0	4.5	2	1.5	15	29	11	31	2	3	26	8.6	
COLD BAY	96	999.0	1002.8	44	34	38.9	-1.2	51	8+	18	26	0	12	32	77	8.02	3.43	4.90	21	0	15.6	13	6.2	27	46	17	28	2	9	20	8.0	
FAIRBANKS	436	986.8	1004.1	30	15	22.1	-4.1	50	2	-4	31	0	30	15	76	0.31	-0.54	0.10	11	0	6.7	2	1.4	1	15	33	16+	1	7	23	8.3	
JUNEAU	12	1002.0	1002.8	45	33	39.0	-2.6	51	10	21	30	0	15	36	91	4.60	-3.73	0.84	20	0	T	0	6.9	11	37	12	23+	1	6	24	8.8	25
KING SALMON	49	998.3	1000.3	37	20	28.4	-7.3	49	6	1	28	0	28	22	78	0.51	-1.64	0.19	8	0	0.3	T	1.2	36	28	10	31	3	10	18	7.3	
KOTZEBUE	10	1002.4	1002.9	27	19	22.8	-1.9	37	10	6	23+	0	31	19	83	0.38	-0.21	0.15	7	0	4.9	3	13.9	10	36	11	30	4	4	23	7.9	
MC GRATH	344	990.2	1003.1	29	15	21.8	-5.0	44	2	-5	28+	0	29	15	75	0.83	-0.49	0.20	12	0	10.8	3	0.6	3	17	2	2	3	3	25	8.5	
NOME	13	998.6	999.4	34	22	28.1	-1.6	42	2	8	18+	0	28	20	70	1.68	-0.03	0.46	22	0	8.5	5	6.0	10	32	13	19	5	5	21	7.8	30
ST. PAUL ISLAND	22	998.3	999.1	42	32	37.0	-0.2	47	8+	22	20	0	16	34	86	3.77	0.62	0.93	26	0	10.1	1	8.6	24	52	22	28	2	8	21	8.1	
SHEMYA	122	1001.0	1004.7	45	36	40.3	0.6	51	10	26	21	0	8	35	79	2.78	0.02	0.58	21	0	2.2	1	12.9	24	53	30	27	1	10	20	7.6	
YAKUTAT	28	998.6	999.8	44	28	35.9	-6.0	50	10+	20	29	0	25	33	90	12.55	-7.04	2.01	23	1	5.3	T	5.3	10	55	14	2	4	4	23	8.2	
ARIZONA																																
FLAGSTAFF	7006	789.4	1017.7	64	30	46.9	-0.1	73	2	20	18+	0	22	26	51	1.38	-0.14	1.34	2	2	0.0	T	1.2	20	22	19	14	19	7	5	3.1	
PHOENIX	1117	973.2	1011.8	89	56	72.7	2.0	95	24+	48	18	18	0	41	37	0.35	-0.11	0.35	1	1	0.0	0	1.9	11	33Y	E	3	23	5	3	2.2	91
TUCSON	2584	925.2	1012.0	87	56	71.7	1.7	94	14	45	17+	13	0	34	30	0.09	-0.55	0.09	2	0	0.0	0	3.0	17	29	W	15	25	3	3	1.7	94
WINSLOW	4895	852.7	1016.4	74	40	56.6	-0.8	83	29+	25	18	0	6	28	39	0.70	0.04	0.70	2	0	0.0	0	2.6	20	25	23	30	19	7	5	3.0	
YUMA	194	1004.4	1011.5	90	59	74.9	0.4	96	26+	53	20	18	0	43	37	T	-0.38		0	0	0.0	0	0.8	33	26	N	3	23	7	1	1.7	93
ARKANSAS																																
FORT SMITH	447	1000.7	1017.2	77	47	62.0	-1.8	92	2	29	29	2	1	47	66	1.79	-1.66	0.95	5	3	0.0	0	1.2	7	26	W	27	12	11	8	4.4	77
LITTLE ROCK	257	1007.8	1017.3	75	51	62.9	-0.2	88	15+	34	29	0	0	50	68	2.81	-0.07	1.82	6	3	0.0	0	1.8	28	31	S	17	17	7	7	4.2	69
CALIFORNIA																																
BAKERSFIELD	475	998.3	1015.7	78	54	66.2	-0.6	90	28	48	31+	1	0	50	61	1.29	0.97	0.80	4	0	0.0	0	1.6	34	18	4	13	20	4	7	3.1	
BISHOP	4108	874.4		78	39	58.5	1.1	85	26+	32	21	0	1			0.08	-0.35	0.08	2		0.0	0						19	5	7	3.3	
BLUE CANYON	5280			63	46	54.4	0.6	76	2	31	15+	0	2			5.87	2.46	3.61	6		2.7	2			24	18	29+	15	5	11	4.5	
EUREKA U	43			59	47	53.3	-1.1	69	26	41	8	0	0			2.81	-0.38	1.25	11		0.0	0			30	S	29	4	11	16	7.1	58
FRESNO	328	1003.7	1015.5	77	49	63.3	-1.3	87	28	43	8	0	0	49	68	1.54	1.11	0.88	4	1	0.0	0	1.0	32	17	E	29+	18	7	6	3.2	82
LONG BEACH	34	1013.5	1014.9	76	55	65.7	-0.8	91	24+	45	25	2	0	54	73	0.26	0.09	0.18	3	1	0.0	0	2.2	26	17	27	29	5	16	10	6.0	
LOS ANGELES	105	1010.5	1014.2	72	59	65.3	0.4	94	24	55	13	1	0	56	77	0.32	-0.07	0.13	4	1	0.0	0	3.6	24	33Y	NW	15	9	13	9	5.6	
LOS ANGELES U	270			78	60	69.2	1.8	98	24	56	27	4	0			0.55	0.14	0.29	4		0.0	0			18	N	15	13	9	9	4.5	
MT SHASTA R	3544			65	36	50.1	-1.8	81	3	24	8	0	8			1.83	-0.61	1.11	5		0.0	0										
OAKLAND	6	1016.3	1016.6	69	53	60.9	-0.2	81	25	47	21+	0	0	52	76	0.29	-0.49	0.13	5	0	0.0	0	3.3	27	23	16	29	12	8	11	4.7	
RED BLUFF	342	1003.1	1015.8	78	50	63.7	-1.9	91	23	41	9	4	0	42	55	1.31	-0.06	0.61	6	1	0.0	0	1.0	33	34	SE	12	10	11	10	5.0	82
SACRAMENTO	17	1014.9	1015.8	76	48	62.0	-1.5	85	26+	43	30+	0	0	47	68	0.60	-0.17	0.35	5	0	0.0	0	1.7	22	24	W	11	18	5	8	3.8	87
SANDBERG R	4517	863.5		67	49	57.8	-0.9	80	27	33	15	0	0	31	45	0.43	-0.06	0.30	5		0.0	0			33	34	15	18	7	6	3.5	
SAN DIEGO	13	1013.2	1014.3	74	59	66.6	0.5	87	24	54	31+	0	0	55	70	0.04	-0.45	0.03	2	0	0.0	0	3.1	30	23	NW	17	13	8	10	4.7	63
SAN FRANCISCO	8	1015.9	1016.7	69	50	59.5	-1.0	83	26+	44	15+	0	0	49	74	0.45	-0.29	0.21	4	0	0.0	0	6.4	28	29	WNW	17	12	10	9	4.5	
SAN FRANCISCO U	52			67	54	60.5	-0.9	82	26	50	27	0	0			0.62	-0.27	0.24	6		0.0	0			23	W	27					71
SANTA MARIA	236			73	50	61.4	1.0	90	24	41	26	1	0			1.89	1.29	1.24	3		0.0	0						15	12	4	3.8	
STOCKTON	22	1015.2	1016.3	77	50	63.0	-1.0	86	26	44	30+	0	0	46	60	0.62	-0.01	0.21	4	0	0.0	0	3.5	30	22	14	12	20	3	8	3.8	
COLORADO																																
ALAMOSA	7536			65	25	44.9	0.5	73	29+	7	18	0	23			0.11	-0.49	0.09	2		0.2	T						12	13	6	4.5	
COLORADO SPRINGS	6145	811.7	1015.7	67	37	51.5	1.2	81	29+	22	18	0	7	21	34	0.43	-0.26	0.31	4	1	0.2	T	2.3	3	29	20	15	9	10	12	5.8	
DENVER	5283	836.1	1013.9	68	35	51.9	0.5	83	29+	25	27+	0	10	28	47	0.75	-0.26	0.36	4	2	0.4	T	2.2	19	34	NE	15	13	6	12	5.3	71
GRAND JUNCTION	4855	853.7	1016.6	67	40	53.8	-1.2	81	14	27	17	0	5	30	46	0.94	0.20	0.28	4	2	0.0	0	2.4	12	28	SW	30	6	13	12	5.7	63
PUEBLO	4684	855.4	1013.6	75	41	57.9	3.1	90	14	20	18	1	5	28	35	0.29	-0.70	0.20	2	0	0.0	0	1.3	31	41	N	16	10	13	8	5.0	83

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure: Station ∅	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	No. of days: Max. 90° F. or above	No. of days: Min. 32° F. or below	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	No. of days: .01 inch or more	No. of days: With thunderstorms	Snow, Sleet: Total	Snow, Sleet: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Fastest mile: Speed	Fastest mile: Direction	Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	Ft.	Mb.	Mb.	°F.	°F.	°F.	°F.	F.		F.				°F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
CONNECTICUT																																
BRIDGEPORT	7	1016.6	1017.1	66	51	58.8	3.4	80	2	35	31	0	0	49	70	1.79	- 1.59	0.91	7	0	0.0	0	5.5	28	32	25	27	10	10	11	5.3	
HARTFORD	169	1009.8	1016.2	66	44	54.7	1.7	83	17+	28	31+	0	3	45	73	2.03	- 1.15	0.79	6	0	0.0	0	3.0	27	30	NW	21	5	13	13	6.3	60
NEW HAVEN	6	1016.6		66	49	57.2	3.2	78	3	34	6	0	0			1.92	- 1.53	0.71	6		0.0	0			26	NW	21	9	11	11	5.4	72
DELAWARE																																
WILMINGTON	74	1015.2	1018.2	68	50	59.0	2.4	84	3	30	31	0	1	47	67	3.28	0.37	1.72	6	2	0.0	0	2.4	25	23	27	26+	8	12	11	5.8	
DIST.OF COLUMBIA																																
WASH NATL AP	10	1015.9	1018.2	71	52	61.3	2.3	88	2	32	31	0	1	48	65	3.17	0.10	1.09	8	3	0.0	0	1.6	27	33	W	3	7	11	13	6.0	55
FLORIDA																																
APALACHICOLA U	13			79	63	70.8	- 0.4	86	4+	43	26	0	0			3.22	0.78	2.90	4	2	0.0	0			26	E	5	17	6	8	4.0	66
DAYTONA BEACH	31	1014.9	1016.3	81	66	73.2	- 0.2	89	7	46	30	0	0	62	71	7.44	1.83	2.75	11	6	0.0	0	3.9	7	35	21	19	8	9	14	6.3	
FORT MYERS	15	1014.6	1015.1	84	68	76.1	0.0	91	7	53	30	3	0	67	79	7.99	3.90	3.40	12	4	0.0	0	4.2	7	30	14	16	7	15	9	5.3	
JACKSONVILLE	20	1015.6	1016.6	81	63	72.4	1.4	90	8+	42	30	2	0	62	75	5.09	- 0.07	1.68	15	2	0.0	0	2.3	4	39	SE	19	9	7	15	5.9	59
KEY WEST	4	1013.2	1013.9	84	75	79.4	0.4	88	9+	67	31+	0	0	71	78	6.80	0.98	2.53	19	8	0.0	0	5.1	9	49	SE	16	5	9	17	7.1	63
LAKELAND U	214			82	66	73.7	- 0.8	89	8+	48	26	0	0			3.48	0.55	2.34	9		0.0	0						13	12	6	4.6	63
MIAMI	7	1013.9	1014.3	84	72	77.8	0.0	89	19+	56	30	0	0	68	73	8.71	0.50	3.15	15	5	0.0	0	4.2	8	28	12	17	4	11	16	6.7	
ORLANDO	108	1011.9	1016.2	83	65	74.3	0.3	90	8+	47	30	2	0	63	74	5.47	1.51	1.87	11	3	0.0	0	3.3	7	38	19	19	9	8	14	5.9	
PENSACOLA	112	1012.5	1016.5	80	60	69.9	- 0.5	87	15	38	29	0	0	57	67	0.93	- 2.05	0.74	5		0.0	0	2.7	6	32	S	6	13	12	6	4.4	74
TALLAHASSEE	55	1014.6	1016.8	82	56	69.3	- 0.3	91	7+	32	27	2	1	58	75	4.70	2.27	3.37	4	4	0.0	0	3.9	5	20	16	7	12	10	9	4.6	
TAMPA	19	1015.2	1015.4	83	64	73.2	- 1.5	90	8	45	27	1	0	62	73	4.16	1.38	2.54	8	2	0.0	0	4.5	6	37	19	18	13	6	12	5.3	
WEST PALM BEACH	15	1014.2	1014.8	82	68	75.3	- 2.9	88	19	46	30	0	0	67	77	10.24	2.28	3.26	15	5	0.0	0	4.1	7	35	13	17	5	13	13	6.6	
GEORGIA																																
ATHENS	802	989.2	1017.9	73	51	62.0	- 1.0	86	1	31	30	0	1	50	71	3.06	0.20	1.16	8	3	0.0	0	1.6	1	18	29	28	10	11	10	5.2	
ATLANTA	1010	981.4	1018.0	73	51	61.7	- 0.7	85	2+	29	26	0	2	51	73	2.99	0.55	1.36	7	0	0.0	0	1.8	4	29	W	26	10	8	13	5.7	60
AUGUSTA	145	1012.2	1017.5	77	52	64.8	- 0.4	88	3+	33	27	0	0	53	74	3.13	1.12	1.16	6	0	0.0	0	1.6	35	23	28	28	11	9	11	5.3	
COLUMBUS	385			77	54	65.3	- 0.1	88	2	32	29	0	1	54	73	0.85	- 0.92	0.56	4		0.0	0	2.6	2	20	31	25	13	7	11	4.9	
MACON	354	1004.7	1017.7	77	51	63.7	- 2.5	89	3	30	27	0	4	52	71	2.60	0.59	1.53	7	1	0.0	0	2.6	1	23	NW	25	10	9	12	5.4	62
ROME	637			73	48	60.4	- 0.8	87	2	27	26	0	5			1.50	- 1.43	0.58	7		0.0	0										
SAVANNAH	46	1015.2	1017.2	80	57	68.7	1.5	90	3	35	30+	1	0	57	71	3.53	0.95	1.18	6	4	0.0	0	2.1	5	27	W	24	12	4	15	5.7	70
HAWAII																																
HILO	27	1013.2	1014.4	86	69	77.1	2.0	88	1	65	24	0	0	70	82	5.97	- 4.83	1.38	19	3	0.0	0	2.0	15	20	E	1	8	13	10	5.8	50
HONOLULU	7	1013.2	1013.7	88	73	80.6	2.4	92	14	66	25	10	0	70	73	2.13	0.29	1.08	15	5	0.0	0	5.4	7	26	NE	20+	12	9	10	5.3	64
KAHULUI	48	1011.2	1013.6	90	68	79.0	1.7	92	11+	61	24	20	0	69	74	0.80	- 0.07	0.44	6	1	0.0	0	5.6	6	26	NE	21	14	8	9	4.7	79
LIHUE	103	1009.5	1014.5	82	70	76.2	- 0.7	85	4+	63	26	0	0	72	86	9.93	5.90	4.34	14	3	0.0	0	2.5	6	29	SW	1	8	12	11	5.9	60
IDAHO																																
BOISE	2838	917.4	1017.5	65	40	52.4	0.8	78	1	28	8	0	1	33	52	0.70	- 0.14	0.30	6	1	0.0	0	1.9	14	26	NW	14	9	9	13	5.7	64
LEWISTON	1413			61	40	50.4	- 1.6	72	3	32	8	0	1			1.34	0.13	0.65	10		0.0	0						7	7	17	6.7	
POCATELLO	4454	864.9	1018.8	62	31	46.0	- 3.1	73	4	18	9	0	19	27	53	0.58	- 0.31	0.47	3	0	0.0	0	5.6	22	31	SW	12	10	15	6	4.9	69
ILLINOIS																																
CAIRO U	314			70	51	60.6	- 1.3	84	15+	34	29	0	0			1.35	- 1.53	0.49	7		0.0	0			33	SW	2	12	10	9	4.7	66
CHICAGO O HARE	658	990.5	1015.1	64	45	54.7	1.6	84	15	27	30	0	3	43	66	1.04	- 1.71	0.28	8	3	0.0	0	4.8	21	30	18	17	14	4	13	5.3	
CHICAGO MIDWAY	607	992.6	1015.2	65	46	55.7	0.6	87	15	33	30	0	0	42	63	0.71	- 2.07	0.23	8	2	0.0	0	7.2	21	29	SW	27+	11	9	11	5.4	58
MOLINE	582	992.9	1014.5	64	42	53.2	- 1.6	85	15	25	29	0	4	42	68	1.09	- 1.37	0.65	8	1	T	T	6.0	21	39	W	27	10	12	9	5.4	62
PEORIA	652	991.5	1015.4	65	43	53.9	- 1.4	84	15	28	29+	0	3	43	69	0.58	- 1.95	0.21	6	3	0.0	0	5.3	21	38	SW	17	12	10	9	5.1	65
ROCKFORD	724	987.1	1014.2	63	43	53.2	0.7	83	15	28	29	0	5	42	68	1.26	- 1.44	0.63	8	1	0.0	0	4.8	21	32	19	17	11	10	10	5.3	
SPRINGFIELD	588	993.6	1015.8	67	43	54.8	- 1.9	86	15	26	29	0	4	42	65	1.43	- 1.48	1.03	8	3	0.0	0	6.2	20	32	W	27	14	7	10	4.7	71
INDIANA																																
EVANSVILLE	381	1003.4	1017.7	70	44	56.9	- 2.2	86	14	27	26	0	5	46	70	2.10	- 0.47	1.53	5	3	0.0	0	2.2	23	25	S	2	10	10	11	5.1	68
FORT WAYNE	791	986.5	1016.5	64	42	53.3	0.3	83	15+	24	30	0	5	41	68	1.00	- 1.86	0.33	9	2	0.0	0	5.5	23	37	W	27	9	7	15	6.3	60
INDIANAPOLIS	792	987.8	1016.9	66	43	54.4	- 1.0	82	15+	28	30+	0	4	43	70	1.13	- 1.49	0.44	8	2	0.0	0	3.9	22	29	W	27	9	8	14	5.7	56
SOUTH BEND	773	987.5	1015.5	62	45	53.7	0.3	82	15	29	30	0	1	43	69	1.43	- 1.74	0.33	9	2	T	T	5.2	22	28	26	27	7	9	15	6.2	

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	No. of days: Max. 90° F. or above	No. of days: Min. 32 F. or below	Average dew point	Average relative humidity
	Ft.	Mb.	Mb.	°F.	°F.	°F.	°F.	F.		°F.				°F.	%
IOWA															
BURLINGTON	692			65	43	54.1	- 1.3	84	15	24	29	0	5	43	68
DES MOINES	938	979.0	1013.8	65	43	53.8	- 0.4	85	31	25	29+	0	6	43	69
DUBUQUE	1056	974.6		61	41	50.7	0.0	80	15	25	29	0	6		
SIOUX CITY	1095	972.6	1012.5	64	42	52.9	- 1.1	85	15	27	4	0	7	42	71
WATERLOO	868	981.4	1013.3	62	40	50.6	- 1.1	82	15	23	29+	0	9	42	74
KANSAS															
CONCORDIA	1470	960.4	1013.3	70	45	57.6	- 0.1	88	30+	29	28	0	1	43	64
DODGE CITY	2582	923.5	1013.8	74	45	59.6	1.3	96	14	32	24	3	1	40	54
GOODLAND	3650	886.9	1013.1	73	38	55.0	1.9	92	14	24	24	1	7	30	45
TOPEKA	876	982.7	1014.5	69	45	57.3	- 0.9	84	30+	31	29	0	3	46	69
WICHITA	1321	966.8	1014.6	71	47	59.3	- 0.6	87	30+	32	28	0	1	46	66
KENTUCKY															
COVINGTON	869	985.8	1017.6	67	45	55.9	- 0.2	83	15+	25	30	0	3	45	70
LEXINGTON	966	982.7	1018.2	67	46	56.6	- 1.5	83	1	29	30	0	2	45	67
LOUISVILLE	477	999.7	1017.4	69	46	57.4	- 0.5	84	1	29	30+	0	2	45	66
LOUISIANA															
ALEXANDRIA	92	1013.2	1017.4	82	54	67.9	0.8	91	3+	36	29+	3	0	57	75
BATON ROUGE	64	1014.2	1017.0	83	58	70.4	1.3	92	3	37	26	8	0	57	68
LAKE CHARLES	9	1015.6	1016.7	81	58	69.7	- 0.8	90	3+	44	29	2	0	60	79
NEW ORLEANS	3	1016.3	1017.1	79	58	68.5	- 1.9	89	2	35	29	0	0	60	77
SHREVEPORT	254	1007.8	1017.1	78	55	66.6	- 1.7	88	2+	38	29	0	0	55	71
MAINE															
CARIBOU	624	989.8		57	40	48.4	5.4	79	18+	30	30+	0	6		
PORTLAND	47	1012.9	1015.1	64	42	52.8	4.2	85	2	27	31	0	4	43	74
MARYLAND															
BALTIMORE	148	1012.5	1018.2	69	50	59.7	2.7	84	3+	31	31	0	1	46	63
MASSACHUSETTS															
BLUE HILL OBS R	629			64	46	54.9	2.2	85	2	30	31	0	1		
BOSTON	15	1015.2	1016.2	65	51	57.9	2.9	85	2	39	31	0	0	45	67
NANTUCKET	43	1015.9	1016.2	63	51	57.0	2.7	72	17+	39	31+	0	0	51	83
WORCESTER	986	979.7	1016.7	62	44	53.0	2.5	81	2	28	31	0	2	42	69
MICHIGAN															
ALPENA	689	988.5	1013.8	60	40	50.0	3.7	84	15	21	31	0	11	42	75
DETROIT	619			63	48	55.6	1.8	82	16+	30	30	0	2	43	64
DETROIT M WAYNE CO	633	991.2	1015.4	64	43	53.5	1.3	83	15	26	31+	0	4	43	70
FLINT	770	986.8	1014.9	60	42	50.9	- 0.5	79	15	24	30	0	4	42	73
GRAND RAPIDS	784	985.4	1014.7	61	43	51.8	0.7	82	15	24	30	0	3	42	72
HOUGHTON LAKE	1149	972.2	1014.5	58	40	48.9	1.9	79	16	22	30	0	9	42	79
LANSING	841	983.4	1015.3	62	41	51.3	0.0	82	15	22	30	0	7	43	74
MARQUETTE U	677			57	44	50.5	2.5	83	15	30	29	0	3		
MUSKEGON	627	991.2	1014.2	60	45	52.8	0.3	81	16	29	30	0	1	43	73
SAULT STE MARIE	721	986.1	1012.7	56	40	48.1	1.8	80	16+	28	29+	0	7	43	84
MINNESOTA															
DULUTH	1428	959.4	1011.2	54	38	46.2	1.6	73	15	25	24	0	9	38	76
INTERNATIONAL FALLS	1179	966.8	1010.3	54	35	44.4	2.0	72	13	21	24	0	14	37	80
MINNEAPOLIS	834	981.0	1011.4	60	42	50.7	1.8	85	15	27	29	0	4	43	76
ROCHESTER	1297	964.4	1012.4	59	40	49.4	- 0.5	82	15	27	29+	0	7	41	74
ST CLOUD	1034	972.9	1010.9	57	39	48.0	0.7	82	15	26	4	0	9		76

State and Station	Precipitation: Total	Departure from normal	Greatest in 24 hours	No. of days: .01 inch or more	No. of days: With thunderstorms	Snow, Sleet: Total	Snow, Sleet: Maximum depth on ground	Wind: Resultant speed	Resultant direction	Fastest mile: Speed	Fastest mile: Direction	Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
IOWA																	
BURLINGTON	0.79	- 1.91		8	4	T		5.0	22	29	29	27+	11	11	9	5.2	
DES MOINES	1.47	- 0.59	0.65	6	5	T	0	4.9	22	35	NW	27	10	10	11	5.5	56
DUBUQUE	1.32	- 1.42	0.36	8		T	0						8	9	14	6.3	
SIOUX CITY	4.77	3.35	2.63	8	3	T	T	1.5	28	47	NW	26	10	7	14	5.9	60
WATERLOO	2.97	0.85	1.43	8	5	T	T	4.2	21	32	31	27+	7	10	14	6.1	
KANSAS																	
CONCORDIA	3.12	1.44	2.65	5	4	0.0	0	4.8	21	38	NW	26	11	12	8	5.0	72
DODGE CITY	4.88	3.46	4.55	3	6	0.0	0	4.3	22	41	N	26	11	10	10	5.1	81
GOODLAND	0.44	- 0.32	0.44	1	1	0.0	0	4.4	28	35	35	26	11	11	9	4.8	
TOPEKA	4.19	1.85	2.16	7	6	0.0	0	4.1	21	32	NW	27	10	12	9	5.4	60
WICHITA	3.06	0.66	2.04	4	4	0.0	0	5.9	20	42	W	8	11	11	9	4.8	69
KENTUCKY																	
COVINGTON	1.35	- 0.91	0.59	7	0	0.0	0	2.9	21	20	22	27+	9	8	14	6.0	
LEXINGTON	2.57	0.29	0.88	8	2	0.0	0	2.9	20	22	23	27	9	11	11	5.5	
LOUISVILLE	1.00	- 1.25	0.39	7	1	0.0	0	2.1	23	29	NW	3	10	10	11	5.7	67
LOUISIANA																	
ALEXANDRIA	0.32	- 3.21	0.22	4	1	0.0	0	1.9	2	29	36	3	14	9	8	4.4	
BATON ROUGE	0.06	- 2.39	0.05	2	2	0.0	0	2.0	5	20	32	24	16	9	6	4.3	
LAKE CHARLES	2.38	- 0.68	0.94	6	5	0.0	0	1.9	6	29	31	6	16	6	9	4.7	
NEW ORLEANS	1.40	- 1.44	0.65	7	1	0.0	0	2.9	4	22	6	1	13	12	6	4.2	
SHREVEPORT	1.90	- 0.91	0.94	5	2	0.0	0	0.8	18	21	36	9+	12	12	7	4.6	67
MAINE																	
CARIBOU	3.51	0.15	1.99	12		T	0						1	7	23	8.3	
PORTLAND	2.00	- 1.20	0.89	11	1	T	0	2.6	27	31	NW	21	11	7	13	5.6	57
MARYLAND																	
BALTIMORE	3.13	- 0.05	1.30	8	2	0.0	0	2.6	27	32	NW	4	7	11	13	5.9	48
MASSACHUSETTS																	
BLUE HILL OBS R	2.26	- 1.49	0.97	6		0.0	0			44	NW	21					61
BOSTON	1.85	- 1.29	1.04	6	0	0.0	0	6.1	28	33	NW	21	11	10	10	5.1	64
NANTUCKET	2.99	- 0.71	1.52	10	1	0.0	0	5.4	29	35	N	8	8	13	10	5.9	56
WORCESTER	1.88	- 1.59	0.86	5	1	0.0	0	5.0	27	25	32	21	8	12	11	5.7	
MICHIGAN																	
ALPENA	1.98	- 0.44	0.78	14	0	1.5	1	3.8	23	30	SW	2	5	10	16	6.7	45
DETROIT	1.36	- 1.27	0.42	9	2	0.0		5.2	24	29	27	27					
DETROIT M WAYNE CO	1.09	- 1.48	0.25	9	1	T	T	4.8	23	33	SW	27	10	8	13	6.0	57
FLINT	1.51	- 0.86	0.50	9	2	T	T	5.8	22	29	27	3	9	8	14	6.1	
GRAND RAPIDS	4.05	1.44	0.84	11	3	0.0	0	4.6	21	43	SW	27	7	10	14	6.4	52
HOUGHTON LAKE	3.09	0.10	1.12	17	2	1.0	T	4.2	23	32	23	27	4	10	17	7.0	
LANSING	1.56	- 0.94	0.40	12	1	T	T	5.0	22	38	SW	27	10	7	14	6.2	47
MARQUETTE U	2.47	0.14	0.73	14		2.0	2			33	SW	15	3	9	19	7.5	48
MUSKEGON	2.68	0.13	0.66	11	3	T	T	4.8	22	28	26	27	8	11	12	6.5	
SAULT STE MARIE	4.20	1.38	0.97	17	4	1.2	T	1.6	18	25	W	23+	2	7	22	8.0	33
MINNESOTA																	
DULUTH	5.28	3.11	1.83	15	2	T	T	1.3	24	43	NW	22	4	5	22	8.0	40
INTERNATIONAL FALLS	3.22	1.48	0.86	14	1	0.4	T	1.6	30	28	5	17	2	9	20	8.0	
MINNEAPOLIS	5.62	4.03	1.96	12	5	T	T	3.6	22	34	SW	15	6	8	17	6.9	50
ROCHESTER	2.94	1.24	1.39	10	3	0.2	T	7.0	21	29	30	27+	7	9	15	6.6	
ST CLOUD	5.80	4.16	2.48	12		T	T						4	11	16	7.2	

See footnotes at end of table

CLIMATOLOGICAL DATA
ENGLISH UNITS

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	No. of days: Max. 90°F. or above	No. of days: Min. 32°F. or below	Average dew point	Average relative humidity	Precipitation: Total	Departure from normal	Greatest in 24 hours	No. of days: .01 inch or more	No. of days: With thunderstorms	Snow, Sleet: Total	Snow, Sleet: Maximum depth on ground	Wind: Resultant speed	Resultant direction	Fastest mile: Speed	Fastest mile: Direction	Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	Ft.	Mb.	Mb.	°F.	°F.	°F.	°F.	°F.		°F.				°F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
MISSISSIPPI																																
JACKSON	310	1005.4	1017.4	80	52	66.2	- 0.8	90	3	30	29	1	1	53	68	0.28	- 1.76	0.15	3	1	0.0	0	1.0	8	20	NW	28+	16	5	10	4.4	64
MERIDIAN	290	1006.8	1018.1	78	51	64.6	- 1.0	89	3+	31	29	0	2	54	74	1.99	- 0.23	1.04	4	2	0.0	0	1.0	32	21	2	4	12	7	12	5.1	
MISSOURI																																
COLUMBIA	778	987.1	1015.3	69	47	57.6	- 1.1	86	15+	30	29+	0	3	45	66	2.17	- 0.95	1.07	8	4	0.0	0	5.0	20	38	NW	27	12	9	10	5.0	65
KANSAS CITY	742	987.8	1014.6	71	49	59.6	- 0.6	88	14	34	29	0	0	46	65	3.52	0.66	1.50	6	4	0.0	0	5.3	21	33	SW	21	10	13	8	5.1	68
ST JOSEPH	811			73	47	59.8	2.4	88	14	26	29	0	5			3.32	1.14		8	4	0.0		3.9	20	24	29	27	12	12	7	4.7	
ST LOUIS	535	995.9	1016.5	68	45	56.9	- 1.5	88	31	29	25	0	2	45	65	0.69	- 2.17	0.31	6	1	0.0	0	4.3	20	26	W	27+	12	10	9	4.9	72
SPRINGFIELD	1268	971.2	1016.7	69	43	56.4	- 3.3	84	30+	28	29+	0	6	44	67	3.28	- 0.48	1.59	9	5	0.0	0	5.4	19	34	NW	23	19	5	7	4.1	73
MONTANA																																
BILLINGS	3567	890.3	1014.0	63	42	52.1	2.6	80	29	30	27	0	2	28	43	0.51	- 0.58	0.19	6	0	T	0	6.5	26	56	NW	20	8	8	15	6.2	54
GLASGOW	2284	930.9	1013.4	60	32	45.8	0.4	77	28	20	17	0	17	28	56	0.10	- 0.54	0.06	4	0	T	T	2.5	32	44	32	26	6	8	17	6.5	
GREAT FALLS	3662	886.9	1014.4	60	36	48.0	0.5	77	29	21	27	0	10	26	45	0.11	- 0.62	0.04	4	0	0.2	T	9.3	23	38	SW	22+	6	11	14	6.6	56
HAVRE	2584	920.8	1013.4	59	30	44.7	- 1.1	77	29	20	27+	0	18	28	56	0.17	- 0.62	0.06	6	0	T	0	7.4	26	40	NW	10+	4	7	20	7.5	65
HELENA	3828	880.5	1016.9	58	31	44.4	- 1.2	73	29	21	17	0	19	29	58	0.23	- 0.43	0.15	3	0	0.4	T	5.7	27	37	W	4	7	9	15	6.6	51
KALISPELL	2965	911.3	1017.3	52	30	41.0	- 2.9	65	1	22	17	0	21	33	77	1.50	0.26	0.54	11	0	T	T	2.4	19	20	21	10+	4	5	22	7.8	
MILES CITY	2629	920.4	1013.6	63	35	48.7	- 0.3	79	28+	21	18	0	11	31	55	0.63	- 0.24		6	0	T		4.1	29								
MISSOULA	3190	905.5	1018.7	53	31	42.0	- 2.0	65	1	20	27	0	20	32	72	0.54	- 0.45	0.37	8	0	T	0	1.3	29	32	W	6	4	4	23	7.6	47
NEBRASKA																																
GRAND ISLAND	1841	947.2	1013.1	68	41	54.2	0.8	86	15	29	28	0	5	40	64	3.61	2.65	2.75	4	2	0.0	0	3.9	26	40	34	26	8	14	9	5.6	
LINCOLN U	1150			68	47	57.2	0.5	82	30+	33	28	0	0			2.93	1.35	1.77	5		0.0	0			38	NW	27	10	13	8	5.4	62
NORFOLK	1544			64	40	52.1	- 0.8	80	15+	26	4	0	9			4.57	3.39	2.79	6		0.0	0						10	8	13	5.9	
NORTH PLATTE	2775	915.7	1013.6	69	33	51.1	0.1	91	14	22	28	1	16	33	57	1.50	0.59	1.25	4	2	0.0	0	3.4	31	45	NW	23	10	13	8	5.3	70
OMAHA	977	977.3	1012.8	67	44	55.8	0.1	84	15	32	29+	0	3	45	72	4.62	2.89	3.13	5	3	0.0	0	2.5	23	40	NW	26	8	12	11	5.8	75
SCOTTSBLUFF	3957	878.8	1014.8	67	34	50.8	0.4	87	14	22	18	0	13	30	52	0.86	0.17	0.55	4	1	0.0	0	5.2	32	40	34	26	8	11	12	5.7	
VALENTINE	2587			67	34	50.5	1.2	91	14	23	24	1	14			0.56	- 0.32	0.34	3		0.0	0			45	NW	26	10	11	10	5.4	68
NEVADA																																
ELKO	5050	846.3	1017.3	68	33	50.6	3.7	81	3	18	8	0	17	29	51	0.79	0.04	0.75	3	0	0.0	0	1.2	25	26	28	20	9	11	11	5.4	
ELY	6253	810.4	1017.2	64	30	46.7	0.8	77	28	18	9	0	23	24	49	1.44	0.71	1.09	3	0	3.5	T	4.1	20	32	SE	13	10	13	8	5.2	76
LAS VEGAS	2162	938.0	1014.0	81	53	67.0	0.4	88	12+	43	18	0	0	28	25	T	- 0.20	T	0	0	0.0	0	2.7	24	35	NW	15	18	7	6	3.4	85
RENO	4404	866.9	1016.9	70	31	50.6	1.4	82	3	21	15+	0	22	28	48	0.01	- 0.50	0.01	1	0	0.0	0	1.3	23	34	S	12+	14	7	10	4.7	84
WINNEMUCCA	4301	868.9	1017.1	67	31	49.2	1.5	79	28	19	31	0	19	21	33	0.49	- 0.32	0.49	2	0	0.0	0	0.5	23	32	SW	12	9	13	9	5.3	78
NEW HAMPSHIRE																																
CONCORD	342	1003.4	1016.0	64	39	51.2	2.5	82	16+	23	6	0	7	42	74	2.23	- 0.43	0.93	7	1	0.0	0	2.6	29	31	NW	21	8	11	12	6.1	58
MT WASHINGTON OBS	6262			37	27	32.1	1.2	56	18	8	31	0	22			5.75	- 0.44	1.29	15	2	19.0	2			105Y	NW	21	5	5	21	7.7	33
NEW JERSEY																																
ATLANTIC CITY	64	1015.2	1017.6	66	44	55.0	- 2.2	84	3	25	31	0	5	46	72	2.73	- 0.47	1.12	6	2	0.0	0	3.8	26	24	28	26+	7	13	11	5.9	52
ATLANTIC CITY U	11			67	54	60.2	1.6	78	1	35	31	0	0			2.36	- 1.03	0.82	6						33	NW	21+					
NEWARK	7	1016.3	1017.2	68	51	59.7	3.1	83	3+	33	31	0	0	49	69	2.02	- 1.09	0.81	6	0	0.0	0	4.5	25	25	29	26+	8	13	10	5.6	
TRENTON U	56			67	51	58.6	1.8	83	2	34	31	0	0			1.92	- 0.92	1.06	6		0.0	0			27	NW	29	11	8	12	5.4	58
NEW MEXICO																																
ALBUQUERQUE	5311	839.8	1015.4	74	43	58.3	0.3	85	14	26	18	0	1	27	34	0.12	- 0.63	0.06	4	2	0.0	0	1.1	36	42	E	3	16	9	6	3.6	82
CLAYTON	4969			73	42	57.6	2.3	88	13	26	18	0	4			0.02	- 0.98	0.02	1		0.0	0						16	8	7	4.0	
RATON	6379			71	33	51.8	0.7	82	14+	12	18	0	14			0.06	- 0.98	0.06	1		0.6	T						14	7	10	5.0	
ROSWELL	3617	892.0		81	40	60.3	1.3	94	14+	26	19	9	8	35	45	0.41	- 0.66	0.20	5	3	0.0	0	0.5	22	26	NW	16	17	9	5	3.4	83
NEW YORK																																
ALBANY	275	1006.1	1017.0	65	42	53.3	2.5	84	2	28	27	0	5	43	72	2.18	- 0.59	0.64	9	3	0.0	0	3.3	23	30	W	21	2	15	14	7.1	46
BINGHAMTON	1590	958.3	1017.5	58	42	49.9	0.1	79	2	28	30	0	4	43	79	3.14	0.05	1.27	12	2	1.1	1	4.7	24	26	W	3	4	5	22	7.7	45
BUFFALO	705	990.2	1016.0	62	45	53.5	2.7	80	2	31	31	0	1	45	77	3.03	0.03	0.79	15	4	T	0	5.1	24	32	SW	23	6	8	17	6.7	53
J.F. KENNEDY	13	1016.6	1017.4	65	52	58.2	0.6	79	1	39	31+	0	0	48	70	1.85	- 1.36	0.71	6	1	0.0	0	4.2	27	29	33	21	7	11	13	6.0	
NEW YORK U	132	1013.5	1016.8	68	53	60.5	2.2	85	2	36	31	0	0	46	63	2.20	- 0.94	1.01	7	0	0.0	0	3.8	26	23	NW	30+					64
NEW YORK LA GUARDIA	11	1015.6	1017.3	66	53	59.8	1.2	83	3+	37	31	0	0	46	62	1.95	- 1.42	0.77	6	0	0.0	0	4.5	28	30	NW	21	8	14	9	5.5	

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Date	Temperature: Lowest	Date	No. of days: Max. 90° F. or above	No. of days: Min. 32° F. or below	Average dew point	Average relative humidity
	Ft.	Mb.	Mb.	°F.	°F.	°F.	°F.	°F.		°F.				°F.	%
NEW YORK															
ROCHESTER	547	995.6	1016.1	63	44	53.8	2.0	83	2	33	31+	0	0	46	77
SYRACUSE	410	1001.4	1016.4	62	43	52.5	0.7	81	2	31	31	0	1	46	79
NORTH CAROLINA															
ASHEVILLE	2140	942.1	1018.5	68	45	56.7	0.9	81	1	26	30+	0	6	49	82
CAPE HATTERAS P	7	1018.0	1018.2	74	60	66.6	1.2	83	19	39	30	0	0	56	70
CHARLOTTE	736	990.5	1018.1	71	50	60.6	- 1.9	83	2	31	30+	0	3	50	74
GREENSBORO	897	986.8	1018.5	71	49	60.2	0.9	86	3+	32	31+	0	2	47	67
RALEIGH	434	1002.4	1018.0	74	50	62.0	1.5	89	3	30	27	0	4	51	74
WILMINGTON	26	1016.6	1017.9	76	55	65.2	- 0.2	87	3+	36	31+	0	0	55	73
NORTH DAKOTA															
BISMARCK	1647	952.6	1012.9	59	31	45.1	- 1.6	78	12	21	10	0	19	31	63
FARGO	896	978.3	1011.4	57	36	46.7	0.2	80	13	24	28+	0	12	38	75
WILLISTON	1899	944.1	1012.9	58	33	45.3	- 0.3	76	12	19	18	0	16	32	65
OHIO															
AKRON	1208	972.6	1017.2	64	45	54.6	1.7	82	1	31	31	0	1	44	71
CINCINNATI OBS	761			67	46	56.5	- 1.4	84	15+	30	30	0	1		
CLEVELAND	777	987.8	1017.0	62	42	52.1	- 1.3	81	1	27	31	0	2	43	73
COLUMBUS	812	987.5	1017.7	65	44	54.1	- 0.1	83	17+	29	30	0	3	42	65
DAYTON	1002	981.0	1017.4	64	44	53.9	- 1.7	80	15+	29	30	0	2	42	68
MANSFIELD	1295			64	44	54.4	2.0	83	17	29	30	0	3	42	67
TOLEDO	669	991.5	1016.7	64	40	52.0	- 0.1	84	15	21	30	0	7	43	73
YOUNGSTOWN	1178	974.3	1017.4	62	43	52.4	0.5	80	1	28	31+	0	2	44	76
OKLAHOMA															
OKLAHOMA CITY	1285	969.5	1015.8	75	50	62.1	- 0.8	89	2	36	18	0	0	49	67
TULSA	650	991.9	1016.0	75	49	62.2	- 0.6	90	2	35	25	1	0	48	65
OREGON															
ASTORIA	8	1015.2	1015.9	58	43	50.6	- 2.3	68	27	34	8+	0	0	45	82
BURNS U	4151	874.4	1018.2	61	30	45.4	- 3.0	76	3+	21	9+	0	23	29	60
EUGENE	359	1003.7	1017.2	63	43	52.9	- 0.3	74	3	37	31+	0	0	46	82
MEACHAM	4050		1017.3	51	35	43.1	- 3.2	68	3	28	31+	0	12		
MEDFORD	1298	969.9	1017.6	70	43	56.7	3.7	89	3	34	8	0	0	42	64
PENDLETON	1482	963.1	1017.2	62	40	50.8	- 2.9	71	23	32	28	0	1	36	62
PORTLAND	21	1015.2	1016.7	61	43	52.1	- 2.1	72	3	35	31	0	0	46	82
SALEM	196	1009.5	1016.8	62	41	51.5	- 2.6	72	2	32	31	0	1	46	82
SEXTON SUMMIT R	3836	884.5	1016.5	56	41	48.8	- 1.9	74	3	31	14	0	1		
PACIFIC AREA															
JOHNSTON	7	1010.8	1011.6	87	78	82.1	1.2	89	13	73	20	0	0	73	75
KOROR R	94	1006.1	1009.6	89	76	82.5	1.3	91	31+	73	19+	18	0	75	82
KWAJALEIN	8	1008.5	1009.4	88	78	82.9	1.0	91	13+	73	19+	6	0	75	79
MAJURO	10	1009.8	1010.1	87	76	81.1	0.6	90	14+	73	26+	3	0	75	79
PAGO PAGO	12	1011.5	1011.8	85	74	79.5		89	8	70	9	0	0	75	86
PONAPE R	123	1004.1	1009.4	88	72	79.9	0.2	91	25+	69	23	12	0	74	85
TAGUAC GUAM R	361			86	71	78.4	- 0.9	88	19+	66	19	0	0		
TRUK MOEN ISLAND	5	1008.5	1008.9	87	75	81.2	0.6	90	23+	72	22+	2	0	76	83
WAKE	11	1010.5	1010.9	88	78	82.7	1.1	90	31+	72	3	3	0	74	78
YAP R	44	1007.1	1008.8	87	74	80.4	- 1.2	89	26+	71	9+	0	0	75	84
PENNSYLVANIA															
ALLENTOWN	387	1003.7	1017.6	66	45	55.6	1.8	84	2	28	31	0	3	46	73
ERIE	731	989.5	1016.5	63	47	55.1	2.5	81	16	32	31	0	1	44	68
HARRISBURG	338	1005.1	1017.9	65	48	56.1	0.4	84	2	30	31	0	1	45	70
PHILADELPHIA	5	1016.6	1017.5	68	48	58.1	2.4	85	3+	28	31	0	2	46	67
PITTSBURGH	1137	973.2	1017.6	63	42	52.2	- 0.9	81	1	23	31	0	3	41	69

State and Station	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	No. of days: .01 inch or more	No. of days: With thunderstorms	Snow, Sleet: Total	Snow, Sleet: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Fastest mile: Speed	Fastest mile: Direction	Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
NEW YORK																	
ROCHESTER	2.89	0.31	1.14	13	1	T	0	4.5	23	30	W	3	6	9	16	6.8	47
SYRACUSE	5.81	2.63	1.72	17	2	0.8	1	2.9	22	26	NW	19	6	9	16	6.7	42
NORTH CAROLINA																	
ASHEVILLE	5.02	1.89	2.95	8	2	0.0	0	1.9	34	25	34	29	9	8	14	5.9	52
CAPE HATTERAS P	9.58	5.34	3.03	12	4	0.0	0	1.7	7	60	NNW	20	9	7	15	5.8	75
CHARLOTTE	3.02	0.06	0.98	10	1	0.0	0	1.1	1	24	SW	3	11	6	14	5.6	72
GREENSBORO	4.60	1.89	2.03	11	2	0.0	0	0.6	32	33	W	28	8	10	13	5.9	63
RALEIGH	5.15	2.44	1.93	10	5	0.0	0	0.7	8	25	29	28	9	11	11	5.6	73
WILMINGTON	4.46	1.45	1.56	11	0	0.0	0	1.6	6	35	N	19	13	4	14	5.3	58
NORTH DAKOTA																	
BISMARCK	0.05	- 0.80	0.02	4	1	T	T	4.8	32	42	N	27	2	14	15	6.9	60
FARGO	1.75	0.64	1.02	9	0	0.8	T	3.3	33	40	NW	27	6	8	17	7.0	54
WILLISTON	0.31	- 0.42	0.17	6	0	T	T	4.5	28	39	NW	26	7	6	18	6.9	56
OHIO																	
AKRON	1.38	- 1.10	0.73	10	1	0.2	T	4.6	21	25	24	2	10	10	11	5.7	
CINCINNATI OBS	1.39	- 0.85	0.63	8		0.0	0			17	W	28+					55
CLEVELAND	2.90	0.48	0.72	11	1	T	0	6.1	22	28	W	29	7	9	15	6.3	54
COLUMBUS	2.59	0.48	1.52	7	2	0.0	0	3.0	21	30	SW	2	10	9	12	5.9	57
DAYTON	1.38	- 0.85	0.44	8	2	T	0	4.1	21	26	NW	3	10	9	12	5.7	58
MANSFIELD	0.78	- 1.49	0.27	10	0	T	0	6.8	22	29	19	27	11	7	13	5.5	
TOLEDO	1.11	- 1.28	0.40	11	1	0.0	0	4.9	23	31	SW	27	10	7	14	6.0	53
YOUNGSTOWN	4.94	2.23	2.37	15	2	T	0	3.8	22	21	33	29	9	8	14	6.1	
OKLAHOMA																	
OKLAHOMA CITY	2.40	- 0.11	1.19	4	4	0.0	0	4.2	18	29	SW	31	12	8	11	4.7	76
TULSA	2.64	- 0.67	1.00	4	3	0.0	0	5.9	19	34	S	16	13	11	7	4.3	74
OREGON																	
ASTORIA	8.03	0.25	1.26	21	1	0.0	0	3.2	17	25	18	4+	1	8	22	8.3	
BURNS U	0.73	- 0.13	0.37	7		T	T	2.8	30				8	10	13	5.9	
EUGENE	5.99	2.16	1.64	14	0	0.0	0	3.1	18	25	17	29	0	14	17	7.7	
MEACHAM	2.09	- 0.75	0.75	13		3.5	T			23	25	14	8	2	21	7.2	
MEDFORD	0.62	- 1.32	0.22	9	0	0.0	0	0.9	29	28	14	29	8	7	16	6.3	
PENDLETON	1.03	- 0.15	0.41	9	0	0.0	0	4.0	25	35	28	11	6	9	16	6.6	
PORTLAND	5.03	1.42	0.92	19	0	0.0	0	3.1	14	31	S	14	1	7	23	8.2	35
SALEM	6.14	2.23	1.64	19	1	0.0	0	4.1	19	30	18	14	1	13	17	7.6	
SEXTON SUMMIT R	3.81	0.40	1.52	9		1.6	1			38	11	26	9	8	14	6.1	
PACIFIC AREA																	
JOHNSTON	2.91	- 0.36	0.83	19	0	0.0	0	9.1	9	34	SW	1	3	13	15	6.7	73
KOROR R	11.46	- 1.63	3.12	17	3	0.0	0	3.2	28	36	SW	16	0	8	23	8.5	66
KWAJALEIN	14.75	3.87	6.53	16	2	0.0	0	1.5	10	40	20	26	0	3	28	9.5	
MAJURO	12.06	- 3.11	4.02	17	0	0.0	0	0.2	14	22	W	20	2	10	19	7.6	59
PAGO PAGO	18.88		3.90	24	5	0.0	0	8.8	10	28	E	25	6	6	19	7.1	40
PONAPE R	14.65	- 1.32	4.22	22	3	0.0	0	2.2	18	21	NE	29	4	6	21	8.0	57
TAGUAC GUAM R	13.31	0.21	4.82	23		0.0	0			44	W	22	2	14	15	7.4	46
TRUK MOEN ISLAND	11.78	- 1.67	6.55	22	2	0.0	0	3.3	22	34	SW	31+	1	7	23	8.5	65
WAKE	7.12	1.85	1.75	21	1	0.0	0	11.4	9	46	S	6	6	15	10	6.1	75
YAP R	11.21	- 1.98	3.78	15	1	0.0	0	2.3	28	26	SE	18	1	10	20	7.9	56
PENNSYLVANIA																	
ALLENTOWN	2.99	0.02	1.34	7	2	0.0	0	3.8	16	28	18	26	8	9	14	6.0	
ERIE	3.40	0.10	0.98	14	3	T	0	4.5	22	25	27	29+	6	7	18	5.6	
HARRISBURG	2.34	- 0.63	1.04	9	1	0.0	0	3.0	26	29	NW	4	6	9	16	6.5	50
PHILADELPHIA	3.15	0.37	1.56	7	0	0.0	0	3.1	27	25	W	29+	7	14	10	6.0	54
PITTSBURGH	2.13	- 0.39	1.14	13	1	T	0	3.4	24	25	24	28+	5	14	12	6.5	59

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Date	Temperature: Lowest	Date	No. of days: Max. 90° F. or above	No. of days: Min. 32° F. or below	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	No. of days: .01 inch or more	No. of days: With thunderstorms	Snow, Sleet: Total	Snow, Sleet: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Fastest mile: Speed	Fastest mile: Direction	Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	Ft.	Mb.	Mb.	F.	F.	F.	F.	F.		F.				F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
PENNSYLVANIA																																
READING U	266			66	50	58.3	1.1	84	2	33	31	0	0			3.08	0.24	1.01	8		0.0	0			35	NW	26	10	8	13	5.9	45
SCRANTON	930	983.7	1018.0	62	45	53.4	2.4	82	2	29	31+	0	2	45	74	1.65	-1.85	0.74	10	1	T	0	3.5	23	22	S	3+	7	10	14	6.7	42
WILLIAMSPORT	524	998.6	1017.8	64	44	53.9	0.8	80	2+	25	31	0	3	48	83	3.72	0.40	1.70	10	2	0.0	0	2.5	26	26	29	4	4	10	17	7.2	
RHODE ISLAND																																
BLOCK ISLAND	110			63	52	57.4	2.2	74	1	39	31	0	0			2.74	-0.28	1.55	6		0.0	0						10	8	13	5.7	
PROVIDENCE	51	1013.9	1016.3	66	46	55.9	2.7	85	2	33	31	0	0	45	71	1.79	-1.31	0.72	6	0	0.0	0	4.6	29	26	34	21	11	9	11	5.3	62
SOUTH CAROLINA																																
CHARLESTON	40	1015.6	1017.3	78	57	67.1	0.9	89	3	37	31+	0	0	56	72	6.86	4.02	2.42	9	4	0.0	0	1.8	5	33Y	SW	28	11	6	14	5.7	50
CHARLESTON U	9			76	62	68.7	0.6	86	3+	43	29	0	0			7.44	4.70	2.17	10		0.0	0			34	SE	17					
COLUMBIA	213	1009.8	1018.0	76	52	64.0	-0.7	89	3+	31	30	0	3	53	75	4.31	1.93	2.61	7	1	0.0	0	1.2	36	27	21	7+	13	6	12	5.3	57
GNVLE-SPARTANBURG	957	983.7	1018.4	72	50	60.9	-1.5	84	2	30	30	0	1	49	71	2.82	-0.54	1.41	7	1	0.0	0	1.8	36	24	SW	3	10	8	13	5.5	55
SOUTH DAKOTA																																
ABERDEEN	1296	964.8	1011.9	60	34	46.7	-1.5	81	13	21	4	0	16	36	71	0.60	-0.59	0.38	7	0	0.3	T	3.6	33	37	33	27	7	11	13	6.5	
HURON	1282	965.1	1011.9	61	36	48.4	-0.4	80	14+	24	24	0	11	39	74	1.93	0.78	0.77	7	0	T	T	2.7	29	43	NW	27	6	10	15	6.6	60
RAPID CITY	3162	902.8	1013.6	67	36	51.0	1.0	84	13+	20	18	0	13	26	43	0.14	-0.65	0.14	1	0	0.0	0	7.6	32	54	NW	26+	9	8	14	5.8	61
SIOUX FALLS	1418	960.0	1011.8	61	37	49.4	-0.9	78	13	22	4	0	13	39	71	4.57	3.32	1.93	9	2	0.7	T	3.5	29	35	36	17	9	10	12	6.0	
TENNESSEE																																
BRISTOL	1507	964.8	1019.0	70	46	57.6	-0.4	83	13+	27	30	0	4	45	68	2.51	0.36	1.12	11	2	T	0	0.7	33	17	28	28+	9	8	14	5.8	
CHATTANOOGA	665	993.2	1018.0	73	50	61.9	-0.2	86	13+	29	26	0	3	52	76	2.52	-0.50	1.34	6	0	0.0	0	0.8	28	21	NW	28	10	8	13	5.7	54
KNOXVILLE	980	982.7	1017.7	69	48	58.8	-2.1	84	1	29	30	0	2	48	71	3.40	0.79	1.37	9	2	0.0	0	1.0	34	24	SW	3	10	8	13	5.6	62
MEMPHIS	258	1007.5	1017.6	73	51	62.2	-0.9	86	1	33	29	0	0	51	68	2.87	0.15	2.47	4	3	0.0	0	1.1	21	21	SW	27	12	10	9	4.6	69
NASHVILLE	590	995.9	1017.8	72	47	59.5	-2.0	86	1	27	26	0	5	49	72	3.92	1.60	2.39	9	3	0.0	0	1.8	21	23	SW	27+	8	9	14	5.7	55
OAK RIDGE R	905			70	48	58.7	-1.2	84	1	29	30	0	2			2.23	-0.44	0.77	8		0.0	0			38Y		27	10	6	15	6.0	
TEXAS																																
ABILENE	1762	954.3	1015.1	83	57	69.5	3.3	98	2	36	18	4	0	47	49	0.14	-2.71	0.12	2	0	0.0	0	5.2	19	37	S	16	15	7	9	4.6	74
AMARILLO	3604	891.3	1013.4	77	47	62.1	1.6	94	14	33	18	3	0	39	49	0.90	-0.86	0.70	4	2	0.0	0	5.2	22	40	SW	15	17	6	8	4.1	80
AUSTIN	597	994.2	1016.2	83	61	72.0	1.3	92	2	44	25	2	0	58	66	0.60	-2.23	0.26	6	3	0.0	0	2.2	15	24	NW	16	8	15	8	5.4	57
BROWNSVILLE	19	1014.2	1014.8	87	69	77.7	1.8	91	9+	53	26	5	0	68	76	3.39	-0.14	2.49	8	3	0.0	0	4.7	12	29	NE	6	13	9	9	4.7	66
CORPUS CHRISTI	41	1014.2	1015.6	83	66	74.5	0.0	90	3	50	25	1	0	67	80	3.68	0.92	1.94	8	4	0.0	0	5.1	11	29	NE	6	8	16	7	5.3	68
DALLAS	481	999.0	1016.4	80	58	68.9	1.1	92	2	43	28	1	0	53	61	2.72	0.02	2.59	7	4	0.0	0	4.3	15	28	NE	9	14	9	8	4.4	73
DEL RIO	1026	979.0	1014.8	84	62	73.1	1.7	94	2	49	25	3	0	59	66	1.84	-0.14	1.45	4	2	0.0	0	6.5	12	22	12	15	9	10	12	5.8	
EL PASO	3918	882.5	1013.2	82	48	65.0	0.6	92	14	37	18	3	0	37	39	0.11	-0.74	0.10	2	1	0.0	0	0.6	20	38	NW	15	22	6	3	2.3	93
FORT WORTH	537	995.9	1016.5	80	56	67.8	-0.1	92	2	41	28+	1	0	55	68	2.18	-0.41	1.92	6	3	0.0	0	3.6	18	21	18	31+	14	9	8	4.6	
GALVESTON U	7			79	70	74.2	0.7	85	13+	55	25	0	0			2.28	-0.58	1.39	5		0.0	0			30	NW	6					65
HOUSTON	50	1014.6	1016.6	84	63	73.5	2.1	93	3	47	25	5	0	61	70	3.91	0.14	1.65	7	4	0.0	0	3.0	10	29	2	9	10	12	9	5.2	62
LUBBOCK	3254	904.2	1014.7	77	47	61.9	0.7	89	14+	32	18	0	1	42	54	0.81	-1.19	0.65	5	6	0.0	0	3.1	20	31	29	16	14	11	6	4.3	
MIDLAND	2851	917.0	1014.4	82	52	67.0	1.1	94	13+	37	18	5	0	43	47	0.19	-1.47	0.10	4	3	0.0	0	3.6	17	28	17	16+	15	11	5	3.8	
PORT ARTHUR	16	1016.6	1017.1	81	60	70.4	0.1	88	9+	43	25	0	0	59	70	3.11	0.23	1.41	6	3	0.0	0	2.2	7	30	N	9	14	8	9	4.6	69
SAN ANGELO	1903	948.9	1014.7	84	55	69.4	1.1	98	2	36	28+	10	0	52	59	0.11	-1.72	0.06	4	0	0.0	0	5.2	18	30	19	16	10	14	7	4.5	
SAN ANTONIO	788	988.5	1016.1	83	61	72.2	1.6	92	3+	41	25	5	0	59	68	0.69	-1.81	0.22	7	3	0.0	0	2.3	13	31	N	24	5	17	9	6.1	58
VICTORIA	104	1011.9	1016.0	84	64	74.1	1.5	92	3	47	25	4	0	63	74	1.91	-1.57	1.08	4	5	0.0	0	3.7	11	35Y	N	24	9	11	11	5.6	
WACO	501	998.3	1016.3	82	60	70.7	1.3	90	2	42	28	1	0	55	62	1.46	-1.09	1.40	4	2	0.0	0	3.9	15	23	14	15	13	11	7	4.9	
WICHITA FALLS	994	979.0	1015.4	81	52	66.4	0.0	94	2	38	28+	4	0	51	64	2.40	-0.47	1.30	5	5	0.0	0	4.6	14	32	22	16	13	7	11	4.8	
UTAH																																
MILFORD	5028	848.0		67	34	50.9	0.2	78	2	23	9	0	14			0.93	0.16	0.88	4		T	0						11	9	11	5.2	
SALT LAKE CITY	4220	873.4	1017.8	65	38	51.7	0.0	78	29	27	17	0	9	32	54	1.64	0.49	1.15	5	0	T	0	2.6	17	34	S	14	13	7	11	5.0	88
WENDOVER	4237	873.0	1018.6	61	40	50.7	-2.5	77	12	30	9	0	3			0.35	-0.11	0.25	3		0.0	0										
VERMONT																																
BURLINGTON	332	1003.1	1015.5	59	41	49.8	2.2	80	2	23	31	0	4	42	73	2.73	-0.24	1.03	14	1	T	0	3.0	22	27	S	3	6	8	17	7.0	56
VIRGINIA																																
LYNCHBURG																3.65	1.01	1.37	9		0.0	0			22	W	26	10	8	13	5.6	51

See footnotes at end of table

CLIMATOLOGICAL DATA
ENGLISH UNITS

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	No. of days: Max. 90° F. or above	No. of days: Min. 32 F. or below	Average dew point	Average relative humidity	Precipitation: Total	Departure from normal	Greatest in 24 hours	No. of days: .01 inch or more	No. of days: With thunderstorms	Snow, Sleet: Total	Snow, Sleet: Maximum depth on ground	Wind: Resultant speed	Resultant direction	Fastest mile: Speed	Fastest mile: Direction	Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	Ft.	Mb.	Mb.	F.	F.	°F.	F.	F.		F.				F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
VIRGINIA																																
NORFOLK	22	1017.3	1018.3	71	55	63.1	1.1	87	3	38	31+	0	0	53	72	4.44	1.52	2.87	9	3	0.0	0	0.5	3	34	SW	28	11	11	9	5.2	63
RICHMOND	164	1012.5	1018.5	75	49	61.9	3.2	91	3	28	31	1	2	49	67	1.59	- 1.41	0.56	7	2	0.0	0	0.1	28	21	NW	26	8	11	12	5.5	59
ROANOKE	1149	976.3	1018.5	68	47	57.4	- 0.8	83	2	28	31	0	3	45	68	8.06	4.85	6.41	8	2	T	0	1.9	29	27	30	28	9	9	13	5.7	
WALLOPS ISLAND	9			68	54	61.0		78	3	33	31	0	0			2.12		0.78	9		0.0	0			38Y	NW	4					
WASHINGTON																																
OLYMPIA	195	1008.5	1015.7	59	39	48.6	- 2.8	73	3	30	18	0	3	43	83	6.07	0.79	0.83	19	0	0.0	0	4.3	21	21	19	29+	0	7	24	8.6	
QUILLAYUTE	179	1006.8	1014.3	56	42	49.0	- 2.4	68	27	33	2	0	0	46	89	17.46	6.93	3.12	23	0	0.0	0	3.9	16	26	SE	29	0	5	26	8.8	13
SEATTLE TACOMA	400	999.3	1015.7	57	46	51.5	- 0.9	68	3	40	31	0	0	45	81	4.32	0.30	0.96	16	0	0.0	0	4.9	18	28	SW	29	0	4	27	8.9	44
SPOKANE	2356	931.6	1016.0	55	35	45.2	- 3.9	68	3	28	16	0	9	34	70	2.24	0.67	0.62	14	0	0.0	0	5.1	18	30	SW	15+	4	9	18	7.5	41
STAMPEDE PASS R	3958	878.1		42	34	37.9	- 4.5	53	24+	29	31	0	17			8.83	0.02	1.41	21		38.2	7						1	2	28	9.0	
WALLA WALLA U	949			61	43	52.3	- 2.8	69	1	36	29+	0	0			1.62	0.09	0.62	11		0.0	0			26	W	11	6	5	20	7.4	48
YAKIMA	1052	978.0	1016.8	60	33	46.3	- 4.2	70	1	22	31	0	13	33	65	0.94	0.34	0.56	6	0	0.0	0	4.1	28	30	28	6	5	12	14	6.6	
WEST INDIES																																
SAN JUAN P.R.	13	1011.9	1014.4	88	75	81.6	1.6	92	14	73	18+	5	0	73	77	2.33	- 3.50	0.59	12	8	0.0	0	4.8	9	25	E	28	10	16	5	4.7	80
SWAN ISLAND	28			86	76	80.9	- 0.8	88	15+	72	30	0	0			9.81	0.11	1.50	28		0.0	0						1	11	19	8.0	
WEST VIRGINIA																																
BECKLEY	2504	929.9	1018.6	61	43	52.1	- 1.5	77	1	27	5	0	8	43	73	2.63	- 0.08	1.37	11	1	T	T	3.1	21	23	21	27+	12	2	17	6.0	
CHARLESTON	939	983.7	1017.9	67	45	56.0	- 1.3	81	17+	26	31	0	2	48	78	3.16	0.58	1.07	13	3	T	0	2.1	21	22	24	28	9	8	14	6.2	
ELKINS	1970	947.2		64	39	51.3	- 0.8	78	14	20	31	0	8			3.21	0.18	1.05	11		0.5	0			23	14	18	8	7	16	6.5	
HUNTINGTON	827	988.2	1018.3	67	46	56.7	- 0.6	84	17+	32	31	0	1	46	73	2.89	1.04	0.94	10	2	0.0	0	2.0	21	23	25	28	10	7	14	6.0	
PARKERSBURG U	615			67	46	56.4	- 0.6	82	17+	30	31	0	2			2.76	0.71	1.44	11		0.0	0			24	W	3					54
WISCONSIN																																
GREEN BAY	682	987.5	1012.9	60	41	50.5	1.1	84	15	20	30	0	7	40	70	1.01	- 0.90	0.50	5	1	0.0	0	5.5	23	29	NW	2	6	12	13	6.1	53
LA CROSSE	651	988.2	1012.9	61	43	52.0	0.9	82	15	27	25	0	5	43	74	2.59	0.40		10	3	0.0		4.7	19								
MADISON	858	982.1	1013.5	61	41	50.7	0.8	84	15	25	25	0	8	42	71	0.85	- 1.36	0.31	11	2	0.0	0	5.7	22	32	SW	17	7	10	14	6.0	51
MILWAUKEE	672	988.8	1014.0	61	44	52.7	2.7	84	15	28	30	0	3	42	69	0.94	- 1.16	0.37	10	3	0.0	0	5.4	22	36	SW	27	11	10	10	5.3	57
WYOMING																																
CASPER	5338	837.1	1014.9	63	33	47.9	- 0.4	75	29+	18	27	0	16	24	46	0.58	- 0.26	0.28	6	0	0.7	T	8.1	24	35	23	10	9	8	14	6.0	
CHEYENNE	6126	812.4	1014.9	64	35	49.2	1.7	79	29+	20	27	0	13	23	40	0.86	0.03	0.45	4	2	0.5	T	7.7	30	54	NW	26	9	12	10	5.3	64
LANDER	5563	829.0	1014.9	62	34	47.9	0.8	76	28	22	17	0	14	23	42	0.14	- 1.07	0.08	2	1	0.5	1	2.3	26	42	NW	26	8	8	15	5.6	73
SHERIDAN	3964	878.1	1015.6	62	31	46.8	- 1.0	83	29	23	18+	0	20	28	53	0.63	- 0.50	0.37	7	0	T	0	3.5	30	31	NW	4	7	8	16	6.3	59

Data from airport unless otherwise specified. U indicates Urban, R indicates Rural, sites.

Precipitation data in column headed "Greatest in 24 hours" are computed on a 24-hour basis without regard to calendar day - data may include precipitation with a measurable amount from the last day of the previous month or the first day of the following month.

Wind directions under resultant direction are in tens of degrees.

Value entered in column "Fastest Mile" is the highest observed 1-minute wind speed when the direction is in tens of degrees. These stations are not equipped with a recording anemometer from which "Fastest Mile" data can be evaluated.

B Number of days maximum 70°F. or above for Alaskan Stations.
Y Peak Gust.
\+ And also on an earlier date or dates.
Ø Station pressures apply to elevations shown in the "Elevations - Station Pressure" table of the annual issue of this publication.

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	No. of days: Max 32.2 °C or above	No. of days: Min 0 C or lower	Average dew point	Average relative humidity	Precipitation: Total	Departure from normal	Greatest in 24 hours	No. of days: 25 mm or more	No. of days: With thunderstorms	Snow, Sleet: Total	Snow, Sleet: Maximum depth on ground	Wind: Resultant speed	Resultant direction	Fastest mile (1.6 kilometers): Speed	Direction	Date	No. of days (sunrise to sunset): Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	M.	Mb.	Mb.	C.	C.	C.	C	C.		C.				C.	%	Mm.	Mm.	Mm.			Mm.	Mm.	M.p.s.		M.p.s.							%
ALABAMA																																
BIRMINGHAM	189	995.3	1017.9	23.9	10.6	17.3	-1.4	31.1	2	-1.7	29+	0	2	11.1	70	30	-44	14	5	1	0	0	0.8	7	10.7	W	28	12	10	9	5.1	68
HUNTSVILLE	190	994.9	1018.0	23.3	10.6	16.7	-0.6	31.7	2	-1.1	29+	0	2	11.1	73	49	-20	28	4	3	0	0	0.6	11	11.6	30	6	11	10	10	5.1	
MOBILE	64	1009.1	1016.9	27.2	15.0	21.2	0.1	32.2	3+	3.3	29	3	0	13.9	69	29	-48	14	8	1	0	0	1.1	3	9.4	34	19	12	13	6	4.5	
MONTGOMERY	56	1010.2	1017.5	26.1	11.7	18.8	-0.4	32.2	3+	-0.6	26	2	3	11.1	66	20	-38	18	4	1	0	0	0.5	35	8.0	W	28	11	14	6	4.5	62
ALASKA																																
ANCHORAGE	35	994.6	999.3	3.9	-2.2	0.6	-1.5	9.4	3	-10.0	20	0	24	-3.3	73	41	-7	18	9	0	384	203	1.3	1	9.8	35	16	5	4	22	8.1	27
ANNETTE	34	1000.7	1004.7	11.1	5.0	8.1	-0.1	14.4	9	0.0	30	0	1	4.4	80	478	49	61	24	0	0	0	3.1	14	18.3	14	16	1	3	27	8.7	
BARROW	9	1007.5	1007.9	-5.0	-11.7	-8.3	0.3	0.6	10	-23.3	21	0	31	-10.0	85	8	-5	3	8	0	84	127	3.0	12	15.6	12	25	2	6	23	8.0	
BARTER ISLAND	12	1006.1	1007.9	-4.4	-11.7	-8.1	0.2	-0.6	3+	-20.6	30+	0	31	-10.0	84	5	-16	2	9	0	69	25	1.7	17	19.2	10	27	2	3	26	8.8	
BETHEL	38	995.3	1000.9	2.2	-5.0	-1.6	-1.2	8.9	1	-12.2	24	0	30	-3.3	88	27	-12	9	9	0	114	51	0.7	15	13.0	11	31	2	3	26	8.6	
COLD BAY	29	999.0	1002.8	6.7	1.1	3.8	-0.7	10.6	8+	-7.8	26	0	12	0.0	77	204	87	124	21	0	396	330	2.8	27	20.6	17	28	2	9	20	8.0	
FAIRBANKS	133	986.8	1004.1	-1.1	-9.4	-5.5	-2.3	10.0	2	-20.0	31	0	30	-9.4	76	8	-14	3	11	0	170	51	0.6	1	6.7	33	16+	1	7	23	8.3	
JUNEAU	4	1002.0	1002.8	7.2	0.6	3.9	-1.4	10.6	10	-6.1	30	0	15	2.2	91	117	-95	21	20	0	T	0	3.1	11	16.5	12	23+	1	6	24	8.8	25
KING SALMON	15	998.3	1000.3	2.8	-6.7	-2.0	-4.1	9.4	6	-17.2	28	0	28	-5.6	78	13	-42	5	8	0	8	T	0.5	36	12.5	10	31	3	10	18	7.3	
KOTZEBUE	3	1002.4	1002.9	-2.8	-7.2	-5.1	-1.1	2.8	10	-14.4	23+	0	31	-7.2	83	10	-5	4	7	0	124	76	6.2	10	16.1	11	30	4	4	23	7.9	
MC GRATH	105	990.2	1003.1	-1.7	-9.4	-5.7	-2.8	6.7	2	-20.6	28+	0	29	-9.4	75	21	-12	5	12	0	274	76	0.3	3	7.6	2	2	3	3	25	8.5	
NOME	4	998.6	999.4	1.1	-5.6	-2.2	-0.9	5.6	2	-13.3	18+	0	28	-6.7	70	43	-1	12	22	0	216	127	2.7	10	14.3	13	19	5	5	21	7.8	30
ST. PAUL ISLAND	7	998.3	999.1	5.6	0.0	2.8	-0.1	8.3	8+	-5.6	20	0	16	1.1	86	96	16	24	26	0	257	25	3.8	24	23.2	22	28	2	8	21	8.1	
SHEMYA	37	1001.0	1004.7	7.2	2.2	4.6	0.3	10.6	10	-3.3	21	0	8	1.7	79	71	1	15	21	0	56	25	5.8	24	23.7	30	27	1	10	20	7.6	
YAKUTAT	9	998.6	999.8	6.7	-2.2	2.2	-3.3	10.0	10+	-6.7	29	0	25	0.6	90	319	-179	51	23	1	135	T	2.4	10	24.6	14	2	4	4	23	8.2	
ARIZONA																																
FLAGSTAFF	2135	789.4	1017.7	17.8	-1.1	8.3	-0.1	22.8	2	-6.7	18+	0	22	-3.3	51	35	-4	34	2	2	0	T	0.5	20	9.8	19	14	19	7	5	3.1	
PHOENIX	340	973.2	1011.8	31.7	13.3	22.6	1.1	35.0	24+	8.9	18	18	0	5.0	37	9	-3	9	1	1	0	0	0.8	11	14.8Y	E	3	23	5	3	2.2	91
TUCSON	788	925.2	1012.0	30.6	13.3	22.1	0.9	34.4	14	7.2	17+	13	0	1.1	30	2	-14	2	2	0	0	0	1.3	17	13.0	W	15	25	3	3	1.7	94
WINSLOW	1492	852.7	1016.4	23.3	4.4	13.7	-0.4	28.3	29+	-3.9	18	0	6	-2.2	39	18	1	18	2	0	0	0	1.2	20	11.2	23	30	19	7	5	3.0	
YUMA	59	1004.4	1011.5	32.2	15.0	23.8	0.2	35.6	26+	11.7	20	18	0	6.1	37	T	-10	T	0	0	0	0	0.4	33	11.6	N	3	23	7	1	1.7	93
ARKANSAS																																
FORT SMITH	136	1000.7	1017.2	25.0	8.3	16.7	-1.0	33.3	2	-1.7	29	2	1	8.3	66	45	-42	24	5	3	0	0	0.5	7	11.6	W	27	12	11	8	4.4	77
LITTLE ROCK	78	1007.8	1017.3	23.9	10.6	17.2	-0.1	31.1	15+	1.1	29	0	0	10.0	68	71	-2	46	6	3	0	0	0.8	28	13.9	S	17	17	7	7	4.2	69
CALIFORNIA																																
BAKERSFIELD	145	998.3	1015.7	25.6	12.2	19.0	-0.3	32.2	28	8.9	31+	1	0	10.0	61	33	25	20	4	0	0	0	0.7	34	8.0	4	13	20	4	7	3.1	
BISHOP	1252	874.4		25.6	3.9	14.7	0.6	29.4	26+	0.0	21	0	1			2	-9	2	2		0	0						19	5	7	3.3	
BLUE CANYON	1609			17.2	7.8	12.4	0.3	24.4	2	-0.6	15+	0	2			149	62	92	6		69	51			10.7	18	29+	15	5	11	4.5	
EUREKA U	13			15.0	8.3	11.8	-0.6	20.6	26	5.0	8	0	0			71	-10	32	11		0	0			13.4	S	29	4	11	16	7.1	58
FRESNO	100	1003.7	1015.5	25.0	9.4	17.4	-0.7	30.6	28	6.1	8	0	0	9.4	68	39	28	22	4	1	0	0	0.4	32	7.6	E	29+	18	7	6	3.2	82
LONG BEACH	10	1013.5	1014.9	24.4	12.8	18.7	-0.4	32.8	24+	7.2	25	2	0	12.2	73	7	2	5	3	1	0	0	1.0	26	7.6	27	29	5	16	10	6.0	
LOS ANGELES	32	1010.5	1014.2	22.2	15.0	18.5	0.2	34.4	24	12.8	13	1	0	13.3	77	8	-2	3	4	1	0	0	1.6	24	14.8Y	NW	15	9	13	9	5.6	
LOS ANGELES U	82			25.6	15.6	20.7	1.0	36.7	24	13.3	27	4	0			14	4	7	4		0	0			8.0	N	15	13	9	9	4.5	
MT SHASTA R	1080			18.3	2.2	10.1	-1.0	27.2	3	-4.4	8	0	8			46	-15	28	5		0	0										
OAKLAND	2	1016.3	1016.6	20.6	11.7	16.1	-0.1	27.2	25	8.3	21+	0	0	11.1	76	7	-12	3	5	0	0	0	1.5	27	10.3	16	29	12	8	11	4.7	
RED BLUFF	104	1003.1	1015.8	25.6	10.0	17.6	-1.1	32.8	23	5.0	9	4	0	5.6	55	33	-2	15	6	1	0	0	0.4	33	15.2	SE	12	10	11	10	5.0	82
SACRAMENTO	5	1014.9	1015.8	24.4	8.9	16.7	-0.8	29.4	26+	6.1	30+	0	0	8.3	68	15	-4	9	5	0	0	0	0.8	22	10.7	W	11	18	5	8	3.8	87
SANDBERG R	1377	863.5		19.4	9.4	14.3	-0.5	26.7	27	0.6	15	0	0	-0.6	45	11	-2	8	5		0	0			14.8	34	15	18	7	6	3.5	
SAN DIEGO	4	1013.2	1014.3	23.3	15.0	19.2	0.3	30.6	24	12.2	31+	0	0	12.8	70	1	-11	1	2	0	0	0	1.4	30	10.3	NW	17	13	8	10	4.7	63
SAN FRANCISCO	2	1015.9	1016.7	20.6	10.0	15.3	-0.6	28.3	26+	6.7	15+	0	0	9.4	74	11	-7	5	4	0	0	0	2.9	28	13.0	WNW	17	12	10	9	4.5	
SAN FRANCISCO U	16			19.4	12.2	15.8	-0.5	27.8	26	10.0	27	0	0			16	-7	6	6		0	0			10.3	W	27					71
SANTA MARIA	72			22.8	10.0	16.3	0.6	32.2	24	5.0	26	1	0			48	33	31	3		0	0						15	12	4	3.8	
STOCKTON	7	1015.2	1016.3	25.0	10.0	17.2	-0.6	30.0	26	6.7	30+	0	0	7.8	60	16	-T	5	4	0	0	0	1.6	30	9.8	14	12	20	3	8	3.8	
COLORADO																																
ALAMOSA	2297			18.3	-3.9	7.2	0.3	22.8	29+	-13.9	18	0	23			3	-12	2	2		5	T						12	13	6	4.5	
COLORADO SPRINGS	1873	811.7	1015.7	19.4	2.8	10.8	0.7	27.2	29+	-5.6	18	0	7	-6.1	34	11	-7	8	4	1	5	T	1.0	3	13.0	20	15	9	10	12	5.8	
DENVER	1610	836.1	1013.9	20.0	1.7	11.1	0.3	28.3	29+	-3.9	27+	0	10	-2.2	47	19	-7	9	4	2	10	T	1.0	19	15.2	NE	15	13	6	12	5.3	71
GRAND JUNCTION	1480	853.7	1016.6	19.4	4.4	12.1	-0.7	27.2	14	-2.8	17	0	5	-1.1	46	24	5	7	4	2	0	0	1.1	12	12.5	SW	30	6	13	12	5.7	63
PUEBLO	1428	855.4	1013.6	23.9	5.0	14.4	1.7	32.2	14	-6.7	18	1	5	-2.2	35	7	-18	5	2	0	0	0	0.6	31	18.3	N	16	10	13	8	5.0	83
CONNECTICUT																																
BRIDGEPORT	2	1016.6	1017.1	18.9	10.6	14.9	1.9	26.7	2	1.7	31	0	0	9.4	70	45	-40	23	7	0	0	0	2.5	28	14.3	25	27	10	10	11	5.3	

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	No. of days: Max 32.2 °C or above	No. of days: Min. 0 °C or lower	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	No. of days: .25 mm or more	No. of days: With thunderstorms	Snow, Sleet: Total	Snow, Sleet: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Fastest mile (1.6 kilometers): Speed	Fastest mile: Direction	Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	M.	Mb.	Mb.	°C.	C.	C.	C.	C.		C.				C.	%	Mm.	Mm.	Mm.			Mm.	Mm.	M.p.s.		M.p.s.							%
CONNECTICUT																																
HARTFORD	52	1009.8	1016.2	18.9	6.7	12.6	0.9	28.3	17+	- 2.2	31+	0	3	7.2	73	52	- 29	20	6	0	0	0	1.3	27	13.4	NW	21	5	13	13	6.3	60
NEW HAVEN	2	1016.6		18.9	9.4	14.0	1.8	25.6	3	1.1	6	0	0			49	- 39	18	6		0	0			11.6	NW	21	9	11	11	5.4	72
DELAWARE																																
WILMINGTON	23	1015.2	1018.2	20.0	10.0	15.0	1.3	28.9	3	- 1.1	31	0	1	8.3	67	83	9	44	6	2	0	0	1.1	25	10.3	27	26+	8	12	11	5.8	
DIST.OF COLUMBIA																																
WASH NATL AP	3	1015.9	1018.2	21.7	11.1	16.3	1.3	31.1	2	0.0	31	0	1	8.9	65	81	3	28	8	3	0	0	0.7	27	14.8	W	3	7	11	13	6.0	55
FLORIDA																																
APALACHICOLA U	4			26.1	17.2	21.6	-0.2	30.0	4+	6.1	26	0	0			82	20	74	4	2	0	0			11.6	E	5	17	6	8	4.0	66
DAYTONA BEACH	9	1014.9	1016.3	27.2	18.9	22.9	-0.1	31.7	7	7.8	30	0	0	16.7	71	189	46	70	11	6	0	0	1.7	7	15.6	21	19	8	9	14	6.3	
FORT MYERS	5	1014.6	1015.1	28.9	20.0	24.5	0.0	32.8	7	11.7	30	3	0	19.4	79	203	99	86	12	4	0	0	1.9	7	13.4	14	16	7	15	9	5.3	
JACKSONVILLE	6	1015.6	1016.6	27.2	17.2	22.4	0.8	32.2	8+	5.6	30	2	0	16.7	75	129	- 2	43	15	2	0	0	1.0	4	17.4	SE	19	9	7	15	5.9	59
KEY WEST	1	1013.2	1013.9	28.9	23.9	26.3	0.2	31.1	9+	19.4	31+	0	0	21.7	78	173	25	64	19	8	0	0	2.3	9	21.9	SE	16	5	9	17	7.1	63
LAKELAND U	65			27.8	18.9	23.2	-0.4	31.7	8+	8.9	26	0	0			88	14	59	9		0	0						13	12	6	4.6	63
MIAMI	2	1013.9	1014.3	28.9	22.2	25.4	0.0	31.7	19+	13.3	30	0	0	20.0	73	221	13	80	15	5	0	0	1.9	8	12.5	12	17	4	11	16	6.7	
ORLANDO	33	1011.9	1016.2	28.3	18.3	23.5	0.2	32.2	8+	8.3	30	2	0	17.2	74	139	38	47	11	3	0	0	1.5	7	17.0	19	19	9	8	14	5.9	
PENSACOLA	34	1012.5	1016.5	26.7	15.6	21.1	-0.3	30.6	15	3.3	29	0	0	13.9	67	24	- 52	19	5		0	0	1.2	6	14.3	S	6	13	12	6	4.4	74
TALLAHASSEE	17	1014.6	1016.8	27.8	13.3	20.7	-0.2	32.8	7+	0.0	27	2	1	14.4	75	119	58	66	4	4	0	0	1.7	5	8.9	16	7	12	10	9	4.6	
TAMPA	6	1015.2	1015.4	28.3	17.8	22.9	-0.8	32.2	8	7.2	27	1	0	16.7	73	106	35	65	8	2	0	0	2.0	6	16.5	19	18	13	6	12	5.3	
WEST PALM BEACH	5	1014.2	1014.8	27.8	20.0	24.1	-1.6	31.1	19	7.8	30	0	0	19.4	77	260	58	83	15	6	0	0	1.8	7	15.6	13	17	5	13	13	6.6	
GEORGIA																																
ATHENS	244	989.2	1017.9	22.8	10.6	16.7	-0.6	30.0	1	- 0.6	30	0	1	10.0	71	78	5	29	8	3	0	0	0.7	1	8.0	29	28	10	11	10	5.2	
ATLANTA	308	981.4	1018.0	22.8	10.6	16.5	-0.4	29.4	2+	- 1.7	26	0	2	10.6	73	76	14	35	7	0	0	0	0.8	4	13.0	W	26	10	8	13	5.7	60
AUGUSTA	44	1012.2	1017.5	25.0	11.1	18.2	-0.2	31.1	3+	0.6	27	0	0	11.7	74	80	28	29	6	0	0	0	0.7	35	10.3	28	28	11	9	11	5.3	
COLUMBUS	117			25.0	12.2	18.5	-0.1	31.1	2	0.0	29	0	1	12.2	73	22	- 23	14	4		0	0	1.2	2	8.9	31	25	13	7	11	4.9	
MACON	108	1004.7	1017.7	25.0	10.6	17.6	-1.4	31.7	3	- 1.1	27	0	4	11.1	71	66	15	39	7	1	0	0	1.2	1	10.3	NW	25	10	9	12	5.4	62
ROME	194			22.8	8.9	15.8	-0.4	30.6	2	- 2.8	26	0	5			38	- 36	15	7		0	0										
SAVANNAH	14	1015.2	1017.2	26.7	13.9	20.4	0.8	32.2	3	1.7	30+	1	0	13.9	71	90	24	30	6	4	0	0	0.9	5	12.1	W	24	12	4	15	5.7	70
HAWAII																																
HILO	8	1013.2	1014.4	30.0	20.6	25.1	1.1	31.1	1	18.3	24	0	0	21.1	82	152	-123	35	19	3	0	0	0.9	15	8.9	E	1	8	13	10	5.8	50
HONOLULU	2	1013.2	1013.7	31.1	22.8	27.0	1.3	33.3	14	18.9	25	10	0	21.1	73	54	7	27	15	5	0	0	2.4	7	11.6	NE	20+	12	9	10	5.3	64
KAHULUI	15	1011.2	1013.6	32.2	20.0	26.1	0.9	33.3	11+	16.1	24	20	0	20.6	74	20	- 2	11	6	1	0	0	2.5	6	11.6	NE	21	14	8	9	4.7	79
LIHUE	31	1009.5	1014.5	27.8	21.1	24.6	-0.4	29.4	4+	17.2	26	0	0	22.2	86	252	150	110	14	3	0	0	1.1	6	13.0	SW	1	8	12	11	5.9	60
IDAHO																																
BOISE	865	917.4	1017.5	18.3	4.4	11.3	0.4	25.6	1	- 2.2	8	0	1	0.6	52	18	- 4	8	6	1	0	0	0.8	14	11.6	NW	14	9	9	13	5.7	64
LEWISTON	431			16.1	4.4	10.2	-0.9	22.2	3	0.0	8	0	1			34	3	17	10		0	0						7	7	17	6.7	
POCATELLO	1358	864.9	1018.8	16.7	- 0.6	7.8	-1.7	22.8	4	- 7.8	9	0	19	- 2.8	53	15	- 8	12	3	0	0	0	2.5	22	13.9	SW	12	10	15	6	4.9	69
ILLINOIS																																
CAIRO U	96			21.1	10.6	15.9	-0.7	28.9	15+	1.1	29	0	0			34	- 39	12	7		0	0			14.8	SW	2	12	10	9	4.7	66
CHICAGO O HARE	201	990.5	1015.1	17.8	7.2	12.6	0.9	28.9	15	- 2.8	30	0	3	6.1	66	26	- 43	7	8	3	0	0	2.1	21	13.4	18	17	14	4	13	5.3	
CHICAGO MIDWAY	185	992.6	1015.2	18.3	7.8	13.2	0.3	30.6	15	0.6	30	0	0	5.6	63	18	- 53	6	8	2	0	0	3.2	21	13.0	SW	27+	11	9	11	5.4	58
MOLINE	177	992.9	1014.5	17.8	5.6	11.8	-0.9	29.4	15	- 3.9	29	0	4	5.6	68	28	- 35	17	8	1	T	T	2.7	21	17.4	W	27	10	12	9	5.4	62
PEORIA	199	991.5	1015.4	18.3	6.1	12.2	-0.8	28.9	15	- 2.2	29+	0	3	6.1	69	15	- 50	5	6	3	0	0	2.4	21	17.0	SW	17	12	10	9	5.1	65
ROCKFORD	221	987.1	1014.2	17.2	6.1	11.8	0.4	28.3	15	- 2.2	29	0	5	5.6	68	32	- 37	16	8	1	0	0	2.1	21	14.3	19	17	11	10	10	5.3	
SPRINGFIELD	179	993.6	1015.8	19.4	6.1	12.7	-1.1	30.0	15	- 3.3	29	0	4	5.6	65	36	- 38	26	8	3	0	0	2.8	20	14.3	W	27	14	7	10	4.7	71
INDIANA																																
EVANSVILLE	116	1003.4	1017.7	21.1	6.7	13.8	-1.2	30.0	14	- 2.8	26	0	5	7.8	70	53	- 12	39	5	3	0	0	1.0	23	11.2	S	2	10	10	11	5.1	68
FORT WAYNE	241	986.5	1016.5	17.8	5.6	11.8	0.2	28.3	15+	- 4.4	30	0	5	5.0	68	25	- 47	8	9	2	0	0	2.5	23	16.5	W	27	9	7	15	6.3	60
INDIANAPOLIS	241	987.8	1016.9	18.9	6.1	12.4	-0.6	27.8	15+	- 2.2	30+	0	4	6.1	70	29	- 38	11	8	2	0	0	1.7	22	13.0	W	27	9	8	14	5.7	56
SOUTH BEND	236	987.5	1015.5	16.7	7.2	12.1	0.2	27.8	15	- 1.7	30	0	1	6.1	69	36	- 44	8	9	2	T	T	2.3	22	12.5	26	27	7	9	15	6.2	
IOWA																																
BURLINGTON	211			18.3	6.1	12.3	-0.7	28.9	15	- 4.4	29	0	5	6.1	68	20	- 49		8	4	T		2.2	22	13.0	29	27+	11	11	9	5.2	

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No. of days: Max 32.2 °C or above	Temperature: No. of days: Min. 0 C or lower	Temperature: Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No. of days: 25 mm or more	Precipitation: No. of days: With thunderstorms	Precipitation: Snow, Sleet: Total	Precipitation: Snow, Sleet: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile (1.6 kilometers): Speed	Wind: Fastest mile: Direction	Wind: Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	No. of days: Partly cloudy, 4-7	No. of days: Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	M.	Mb.	Mb.	C.	C.	C	C.	C.		C.				C.	%	Mm	Mm.	Mm			Mm	Mm	M.p.s.		M.p.s.							%
IOWA																																
DES MOINES	286	979.0	1013.8	18.3	6.1	12.1	-0.2	29.4	31	- 3.9	29+	0	6	6.1	69	37	- 15	17	6	5	T	0	2.2	22	15.6	NW	27	10	10	11	5.5	56
DUBUQUE	322	974.6		16.1	5.0	10.4	0.0	26.7	15	- 3.9	29	0	6			34	- 36	9	8		T	0						8	9	14	6.3	
SIOUX CITY	334	972.6	1012.5	17.8	5.6	11.6	-0.6	29.4	15	- 2.8	4	0	7	5.6	71	121	85	67	8	3	T	T	0.7	28	21.0	NW	26	10	7	14	5.9	60
WATERLOO	265	981.4	1013.3	16.7	4.4	10.3	-0.6	27.8	15	- 5.0	29+	0	9	5.6	74	75	22	36	8	5	T	T	1.9	21	14.3	31	27+	7	10	14	6.1	
KANSAS																																
CONCORDIA	448	960.4	1013.3	21.1	7.2	14.2	-0.1	31.1	30+	- 1.7	28	0	1	6.1	64	79	37	67	5	4	0	0	2.1	21	17.0	NW	26	11	12	8	5.0	72
DODGE CITY	787	923.5	1013.8	23.3	7.2	15.3	0.7	35.6	14	0.0	24	3	1	4.4	54	124	88	116	3	6	0	0	1.9	22	18.3	N	26	11	10	10	5.1	81
GOODLAND	1113	886.9	1013.1	22.8	3.3	12.8	1.1	33.3	14	- 4.4	24	1	7	- 1.1	45	11	- 8	11	1	1	0	0	2.0	28	15.6	35	26	11	11	9	4.8	
TOPEKA	267	982.7	1014.5	20.6	7.2	14.1	-0.5	28.9	30+	- 0.6	29	0	3	7.8	69	106	47	55	7	6	0	0	1.8	21	14.3	NW	27	10	12	9	5.4	60
WICHITA	403	966.8	1014.6	21.7	8.3	15.2	-0.3	30.6	30+	0.0	28	0	1	7.8	66	78	17	52	4	4	0	0	2.6	20	18.8	W	8	11	11	9	4.8	69
KENTUCKY																																
COVINGTON	265	985.8	1017.6	19.4	7.2	13.3	-0.1	28.3	15+	- 3.9	30	0	3	7.2	70	34	- 23	15	7	0	0	0	1.3	21	8.9	22	27+	9	8	14	6.0	
LEXINGTON	294	982.7	1018.2	19.4	7.8	13.7	-0.8	28.3	1	- 1.7	30	0	2	7.2	67	65	7	22	8	2	0	0	1.3	20	9.8	23	27	9	11	11	5.5	
LOUISVILLE	145	999.7	1017.4	20.6	7.8	14.1	-0.3	28.9	1	- 1.7	30+	0	2	7.2	66	25	- 32	10	7	1	0	0	0.9	23	13.0	NW	3	10	10	11	5.7	67
LOUISIANA																																
ALEXANDRIA	28	1013.2	1017.4	27.8	12.2	19.9	0.4	32.8	3+	2.2	29+	3	0	13.9	75	8	- 82	6	4	1	0	0	0.8	2	13.0	36	3	14	9	8	4.4	
BATON ROUGE	20	1014.2	1017.0	28.3	14.4	21.3	0.7	33.3	3	2.8	26	8	0	13.9	68	2	- 61	1	2	2	0	0	0.9	5	8.9	32	24	16	9	6	4.3	
LAKE CHARLES	3	1015.6	1016.7	27.2	14.4	20.9	-0.4	32.2	3+	6.7	29	2	0	15.6	79	60	- 17	24	6	5	0	0	0.8	6	13.0	31	6	16	6	9	4.7	
NEW ORLEANS	1	1016.3	1017.1	26.1	14.4	20.3	-1.1	31.7	2	1.7	29	0	0	15.6	77	36	- 37	17	7	1	0	0	1.3	4	9.8	6	1	13	12	6	4.2	
SHREVEPORT	77	1007.8	1017.1	25.6	12.8	19.2	-0.9	31.1	2+	3.3	29	0	0	12.8	71	48	- 23	24	5	2	0	0	0.4	18	9.4	36	9+	12	12	7	4.6	67
MAINE																																
CARIBOU	190	989.8		13.9	4.4	9.1	3.0	26.1	18+	- 1.1	30+	0	6			89	4	51	12		T	0						1	7	23	8.3	
PORTLAND	14	1012.9	1015.1	17.8	5.6	11.6	2.3	29.4	2	- 2.8	31	0	4	6.1	74	51	- 30	23	11	1	T	0	1.2	27	13.9	NW	21	11	7	13	5.6	57
MARYLAND																																
BALTIMORE	45	1012.5	1018.2	20.6	10.0	15.4	1.5	28.9	3+	- 0.6	31	0	1	7.8	63	80	- 1	33	8	2	0	0	1.2	27	14.3	NW	4	7	11	13	5.9	48
MASSACHUSETTS																																
BLUE HILL OBS R	192			17.8	7.8	12.7	1.2	29.4	2	- 1.1	31	0	1			57	- 38	25	6		0	0			19.7	NW	21					61
BOSTON	5	1015.2	1016.2	18.3	10.6	14.4	1.6	29.4	2	3.9	31	0	0	7.2	67	47	- 33	26	6	0	0	0	2.7	28	14.8	NW	21	11	10	10	5.1	64
NANTUCKET	13	1015.9	1016.2	17.2	10.6	13.9	1.5	22.2	17+	3.9	31+	0	0	10.6	83	76	- 18	39	10	1	0	0	2.4	29	15.6	N	8	8	13	10	5.9	56
WORCESTER	301	979.7	1016.7	16.7	6.7	11.7	1.4	27.2	2	- 2.2	31	0	2	5.6	69	48	- 40	22	5	1	0	0	2.2	27	11.2	32	21	8	12	11	5.7	
MICHIGAN																																
ALPENA	210	988.5	1013.8	15.6	4.4	10.0	2.1	28.9	15	- 6.1	31	0	11	5.6	75	50	- 11	20	14	0	38	25	1.7	23	13.4	SW	2	5	10	16	6.7	45
DETROIT	189			17.2	8.9	13.1	1.0	27.8	16+	- 1.1	30	0	2	6.1	64	35	- 32	11	9	2	0		2.3	24	13.0	27	27					
DETROIT M WAYNE CO	193	991.2	1015.4	17.8	6.1	11.9	0.7	28.3	15	- 3.3	31+	0	4	6.1	70	28	- 38	6	9	1	T	T	2.1	23	14.8	SW	27	10	8	13	6.0	57
FLINT	235	986.8	1014.9	15.6	5.6	10.5	-0.3	26.1	15	- 4.4	30	0	4	5.6	73	38	- 22	13	9	2	T	T	2.6	22	13.0	27	3	9	8	14	6.1	
GRAND RAPIDS	239	985.4	1014.7	16.1	6.1	11.0	0.4	27.8	15	- 4.4	30	0	3	5.6	72	103	37	21	11	3	0	0	2.1	21	19.2	SW	27	7	10	14	6.4	52
HOUGHTON LAKE	350	972.2	1014.5	14.4	4.4	9.4	1.1	26.1	16	- 5.6	30	0	9	5.6	79	78	3	28	17	2	25	T	1.9	23	14.3	23	27	4	10	17	7.0	
LANSING	256	983.4	1015.3	16.7	5.0	10.7	0.0	27.8	15	- 5.6	30	0	7	6.1	74	40	- 24	10	12	1	T	T	2.2	22	17.0	SW	27	10	7	14	6.2	47
MARQUETTE U	206			13.9	6.7	10.3	1.4	28.3	15	- 1.1	29	0	3			63	4	19	14		51	51			14.8	SW	15	3	9	19	7.5	48
MUSKEGON	191	991.2	1014.2	15.6	7.2	11.6	0.2	27.2	16	- 1.7	30	0	1	6.1	73	68	3	17	11	3	T	T	2.1	22	12.5	26	27	8	11	12	6.5	
SAULT STE MARIE	220	986.1	1012.7	13.3	4.4	8.9	1.0	26.7	16+	- 2.2	29+	0	7	6.1	84	107	35	25	17	4	30	T	0.7	18	11.2	W	23+	2	7	22	8.0	33
MINNESOTA																																
DULUTH	435	959.4	1011.2	12.2	3.3	7.9	0.9	22.8	15	- 3.9	24	0	9	3.3	76	134	79	46	15	2	T	T	0.6	24	19.2	NW	22	4	5	22	8.0	40
INTERNATIONAL FALLS	359	966.8	1010.3	12.2	1.7	6.9	1.1	22.2	13	- 6.1	24	0	14	2.8	80	82	38	22	14	1	10	T	0.7	30	12.5	5	17	2	9	20	8.0	
MINNEAPOLIS	254	981.0	1011.4	15.6	5.6	10.4	1.0	29.4	15	- 2.8	29	0	4	6.1	76	143	102	50	12	5	T	T	1.6	22	15.2	SW	15	6	8	17	6.9	50
ROCHESTER	395	964.4	1012.4	15.0	4.4	9.7	-0.3	27.8	15	- 2.8	29+	0	7	5.0	74	75	31	35	10	3	5	T	3.1	21	13.0	30	27+	7	9	15	6.6	
ST CLOUD	315	972.9	1010.9	13.9	3.9	8.9	0.4	27.8	15	- 3.3	4	0	9		76	147	106	63	12		T	T						4	11	16	7.2	
MISSISSIPPI																																
JACKSON	94	1005.4	1017.4	26.7	11.1	19.0	-0.4	32.2	3	- 1.1	29	1	1	11.7	68	7	- 45	4	3	1	0	0	0.4	8	8.9	NW	28+	16	5	10	4.4	64
MERIDIAN	88	1006.8	1018.1	25.6	10.6	18.1	-0.6	31.7	3+	- 0.6	29	0	2	12.2	74	51	- 6	26	4	2	0	0	0.4	32	9.4	2	4	12	7	12	5.1	
MISSOURI																																
COLUMBIA	237	987.1	1015.3	20.6	8.3	14.2	-0.6	30.0	15+	- 1.1	29+	0	3	7.2	66	55	- 24	27	8	4	0	0	2.2	20	17.0	NW	27	12	9	10	5.0	65

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	No. of days: Max. 32.2 °C or above	No. of days: Min. 0 C or lower	Average dew point	Average relative humidity
	M.	Mb.	Mb.	°C.	C.	C.	C.	C.		C.				C.	%
MISSOURI															
KANSAS CITY	226	987.8	1014.6	21.7	9.4	15.3	-0.3	31.1	14	1.1	29	0	0	7.8	65
ST JOSEPH	247			22.8	8.3	15.4	1.3	31.1	14	-3.3	29	0	5		
ST LOUIS	163	995.9	1016.5	20.0	7.2	13.8	-0.8	31.1	31	-1.7	25	0	2	7.2	65
SPRINGFIELD	386	971.2	1016.7	20.6	6.1	13.6	-1.8	28.9	30+	-2.2	29+	0	6	6.7	67
MONTANA															
BILLINGS	1087	890.3	1014.0	17.2	5.6	11.2	1.4	26.7	29	-1.1	27	0	2	-2.2	43
GLASGOW	696	930.9	1013.4	15.6	0.0	7.7	0.2	25.0	28	-6.7	17	0	17	-2.2	56
GREAT FALLS	1116	886.9	1014.4	15.6	2.2	8.9	0.3	25.0	29	-6.1	27	0	10	-3.3	45
HAVRE	788	920.8	1013.4	15.0	-1.1	7.1	-0.6	25.0	29	-6.7	27+	0	18	-2.2	56
HELENA	1167	880.5	1016.9	14.4	-0.6	6.9	-0.7	22.8	29	-6.1	17	0	19	-1.7	58
KALISPELL	904	911.3	1017.3	11.1	-1.1	5.0	-1.6	18.3	1	-5.6	17	0	21	0.6	77
MILES CITY	801	920.4	1013.6	17.2	1.7	9.3	-0.2	26.1	28+	-6.1	18	0	11	-0.6	55
MISSOULA	972	905.5	1018.7	11.7	-0.6	5.6	-1.1	18.3	1	-6.7	27	0	20	0.0	72
NEBRASKA															
GRAND ISLAND	561	947.2	1013.1	20.0	5.0	12.3	0.4	30.0	15	-1.7	28	0	5	4.4	64
LINCOLN U	351			20.0	8.3	14.0	0.3	27.8	30+	0.6	28	0	0		
NORFOLK	471			17.8	4.4	11.2	-0.4	26.7	15+	-3.3	4	0	9		
NORTH PLATTE	846	915.7	1013.6	20.6	0.6	10.6	0.1	32.8	14	-5.6	28	1	16	0.6	57
OMAHA	298	977.3	1012.8	19.4	6.7	13.2	0.1	28.9	15	0.0	29+	0	3	7.2	72
SCOTTSBLUFF	1206	878.8	1014.8	19.4	1.1	10.4	0.2	30.6	14	-5.6	18	0	13	-1.1	52
VALENTINE	789			19.4	1.1	10.3	0.7	32.8	14	-5.0	24	1	14		
NEVADA															
ELKO	1539	846.3	1017.3	20.0	0.6	10.3	2.1	27.2	3	-7.8	8	0	17	-1.7	51
ELY	1906	810.4	1017.2	17.8	-1.1	8.2	0.4	25.0	28	-7.8	9	0	23	-4.4	49
LAS VEGAS	659	938.0	1014.0	27.2	11.7	19.4	0.2	31.1	12+	6.1	18	0	0	-2.2	25
RENO	1342	866.9	1016.9	21.1	-0.6	10.3	0.8	27.8	3	-6.1	15+	0	22	-2.2	48
WINNEMUCCA	1311	868.9	1017.1	19.4	-0.6	9.6	0.8	26.1	28	-7.2	31	0	19	-6.1	33
NEW HAMPSHIRE															
CONCORD	104	1003.4	1016.0	17.8	3.9	10.7	1.4	27.8	16+	-5.0	6	0	7	5.6	74
MT WASHINGTON OBS	1909			2.8	-2.8	0.1	0.7	13.3	18	-13.3	31	0	22		
NEW JERSEY															
ATLANTIC CITY	20	1015.2	1017.6	18.9	6.7	12.8	-1.2	28.9	3	-3.9	31	0	5	7.8	72
ATLANTIC CITY U	3			19.4	12.2	15.7	0.9	25.6	1	1.7	31	0	0		
NEWARK	2	1016.3	1017.2	20.0	10.6	15.4	1.7	28.3	3+	0.6	31	0	0	9.4	69
TRENTON U	17			19.4	10.6	14.8	1.0	28.3	2	1.1	31	0	0		
NEW MEXICO															
ALBUQUERQUE	1619	839.8	1015.4	23.3	6.1	14.6	0.2	29.4	14	-3.3	18	0	1	-2.8	34
CLAYTON	1515			22.8	5.6	14.2	1.3	31.1	13	-3.3	18	0	4		
RATON	1944			21.7	0.6	11.0	0.4	27.8	14+	-11.1	18	0	14		
ROSWELL	1102	892.0		27.2	4.4	15.7	0.7	34.4	14+	-3.3	19	9	8	1.7	45
NEW YORK															
ALBANY	84	1006.1	1017.0	18.3	5.6	11.8	1.4	28.9	2	-2.2	27	0	5	6.1	72
BINGHAMTON	485	958.3	1017.5	14.4	5.6	9.9	0.1	26.1	2	-2.2	30	0	4	6.1	79
BUFFALO	215	990.2	1016.0	16.7	7.2	11.9	1.5	26.7	2	-0.6	31	0	1	7.2	77
J.F. KENNEDY	4	1016.6	1017.4	18.3	11.1	14.6	0.3	26.1	1	3.9	31+	0	0	8.9	70
NEW YORK U	40	1013.5	1016.8	20.0	11.7	15.8	1.2	29.4	2	2.2	31	0	0	7.8	63
NEW YORK LA GUARDIA	3	1015.6	1017.3	18.9	11.7	15.4	0.7	28.3	3+	2.8	31	0	0	7.8	62
ROCHESTER	167	995.6	1016.1	17.2	6.7	12.1	1.1	28.3	2	0.6	31+	0	0	7.8	77
SYRACUSE	125	1001.4	1016.4	16.7	6.1	11.4	0.4	27.2	2	-0.6	31	0	1	7.8	79
NORTH CAROLINA															
ASHEVILLE	652	942.1	1018.5	20.0	7.2	13.7	0.5	27.2	1	-3.3	30+	0	6	9.4	82
CAPE HATTERAS R	2	1018.0	1018.2	23.3	15.6	19.2	0.7	28.3	19	3.9	30	0	0	13.3	70

State and Station	Precipitation: Total	Departure from normal	Greatest in 24 hours	No. of days: .25 mm. or more	No. of days: With thunderstorms	Snow, Sleet: Total	Snow, Sleet: Maximum depth on ground	Wind: Resultant speed	Resultant direction	Fastest mile (1.6 kilometers): Speed	Direction	Date	No. of days (sunrise to sunset): Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	Mm.	Mm.	Mm.			Mm.	Mm.	M p.s.		M.p.s.							%
MISSOURI																	
KANSAS CITY	89	17	38	6	4	0	0	2.4	21	14.8	SW	21	10	13	8	5.1	68
ST JOSEPH	84	29		8	4	0		1.7	20	10.7	29	27	12	12	7	4.7	
ST LOUIS	18	-55	8	6	1	0	0	1.9	20	11.6	W	27+	12	10	9	4.9	72
SPRINGFIELD	83	-12	40	9	5	0	0	2.4	19	15.2	NW	23	19	5	7	4.1	73
MONTANA																	
BILLINGS	13	-15	5	6	0	T	0	2.9	26	25.0	NW	20	8	8	15	6.2	54
GLASGOW	3	-14	2	4	0	T	T	1.1	32	19.7	32	26	6	8	17	6.5	
GREAT FALLS	3	-16	1	4	0	5	T	4.2	23	17.0	SW	22+	6	11	14	6.6	56
HAVRE	4	-16	2	6	0	T	0	3.3	26	17.9	NW	10+	4	7	20	7.5	65
HELENA	6	-11	4	3	0	10	T	2.5	27	16.5	W	4	7	9	15	6.6	51
KALISPELL	38	7	14	11	0	T	T	1.1	19	8.9	21	10+	4	5	22	7.8	
MILES CITY	16	-6		6	0	T		1.8	29								
MISSOULA	14	-11	9	8	0	T	0	0.6	29	14.3	W	6	4	4	23	7.6	47
NEBRASKA																	
GRAND ISLAND	92	67	70	4	2	0	0	1.7	26	17.9	34	26	8	14	9	5.6	
LINCOLN U	74	34	45	5		0	0			17.0	NW	27	10	13	8	5.4	62
NORFOLK	116	86	71	6		0	0						10	8	13	5.9	
NORTH PLATTE	38	15	32	4	2	0	0	1.5	31	20.1	NW	23	10	13	8	5.3	70
OMAHA	117	73	80	5	3	0	0	1.1	23	17.9	NW	26	8	12	11	5.8	75
SCOTTSBLUFF	22	4	14	4	1	0	0	2.3	32	17.9	34	26	8	11	12	5.7	
VALENTINE	14	-8	9	3		0	0			20.1	NW	26	10	11	10	5.4	68
NEVADA																	
ELKO	20	1	19	3	0	0	0	0.5	25	11.6	28	20	9	11	11	5.4	
ELY	37	18	28	3	0	89	T	1.8	20	14.3	SE	13	10	13	8	5.2	76
LAS VEGAS	T	-5	T	0	0	0	0	1.2	24	15.6	NW	15	18	7	6	3.4	85
RENO	T	-13	T	1	0	0	0	0.6	23	15.2	S	12+	14	7	10	4.7	84
WINNEMUCCA	12	-8	12	2	0	0	0	0.2	23	14.3	SW	12	9	13	9	5.3	78
NEW HAMPSHIRE																	
CONCORD	57	-11	24	7	1	0	0	1.2	29	13.9	NW	21	8	11	12	6.1	58
MT WASHINGTON OBS	146	-11	33	15	2	483	51			46.9Y	NW	21	5	5	21	7.7	33
NEW JERSEY																	
ATLANTIC CITY	69	-12	28	6	2	0	0	1.7	26	10.7	28	26+	7	13	11	5.9	52
ATLANTIC CITY U	60	-26	21	6						14.8	NW	21+					
NEWARK	51	-28	21	6	0	0	0	2.0	25	11.2	29	26+	8	13	10	5.6	
TRENTON U	49	-23	27	6		0	0			12.1	NW	29	11	8	12	5.4	58
NEW MEXICO																	
ALBUQUERQUE	3	-16	2	4	2	0	0	0.5	36	18.8	E	3	16	9	6	3.6	82
CLAYTON	1	-25	1	1		0	0						16	8	7	4.0	
RATON	2	-25	2	1		15	T						14	7	10	5.0	
ROSWELL	10	-17	5	5	3	0	0	0.2	22	11.6	NW	16	17	9	5	3.4	83
NEW YORK																	
ALBANY	55	-15	16	9	3	0	0	1.5	23	13.4	W	21	2	15	14	7.1	46
BINGHAMTON	80	1	32	12	2	28	25	2.1	24	11.6	W	3	4	5	22	7.7	45
BUFFALO	77	1	20	15	4	T	0	2.3	24	14.3	SW	23	6	8	17	6.7	53
J.F. KENNEDY	47	-35	18	6	1	0	0	1.9	27	13.0	33	21	7	11	13	6.0	
NEW YORK U	56	-24	26	7	0	0	0	1.7	26	10.3	NW	30+					64
NEW YORK LA GUARDIA	50	-36	20	6	0	0	0	2.0	28	13.4	NW	21	8	14	9	5.5	
ROCHESTER	73	8	29	13	1	T	0	2.0	23	13.4	W	3	6	9	16	6.8	47
SYRACUSE	148	67	44	17	2	20	25	1.3	22	11.6	NW	19	6	9	16	6.7	42
NORTH CAROLINA																	
ASHEVILLE	128	48	75	8	2	0	0	0.8	34	11.2	34	29	9	8	14	5.9	52
CAPE HATTERAS R	243	136	77	12	4	0	0	0.8	7	26.8	NNW	20	9	7	15	5.8	75

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure: Station	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Date	Temperature: Lowest	Date	No. of days: Max 32.2 °C or above	No. of days: Min. 0 °C or lower	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Greatest in 24 hours	No. of days: 25 mm or more	No. of days: With thunderstorms	Snow, Sleet: Total	Snow, Sleet: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Fastest mile (1.6 kilometers): Speed	Fastest mile: Direction	Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	M.	Mb.	Mb.	C.	C.	C.	C	C.		C.				C.	%	Mm.	Mm.	Mm			Mm	Mm.	M.p.s.		M.p.s.							%
NORTH CAROLINA																																
CHARLOTTE	224	990.5	1018.1	21.7	10.0	15.9	-1.1	28.3	2	- 0.6	30+	0	3	10.0	74	77	2	25	10	1	0	0	0.5	1	10.7	SW	3	11	6	14	5.6	72
GREENSBORO	273	986.8	1018.5	21.7	9.4	15.7	0.5	30.0	3+	0.0	31+	0	2	8.3	67	117	48	52	11	2	0	0	0.3	32	14.8	W	28	8	10	13	5.9	63
RALEIGH	132	1002.4	1018.0	23.3	10.0	16.7	0.8	31.7	3	- 1.1	27	0	4	10.6	74	131	62	49	10	5	0	0	0.3	8	11.2	29	28	9	11	11	5.6	73
WILMINGTON	9	1016.6	1017.9	24.4	12.8	18.4	-0.1	30.6	3+	2.2	31+	0	0	12.8	73	113	37	40	11	0	0	0	0.7	6	15.6	N	19	13	4	14	5.3	58
NORTH DAKOTA																																
BISMARCK	502	952.6	1012.9	15.0	- 0.6	7.3	-0.9	25.6	12	- 6.1	10	0	19	- 0.6	63	1	- 20	1	4	1	T	T	2.1	32	18.8	N	27	2	14	15	6.9	60
FARGO	273	978.3	1011.4	13.9	2.2	8.2	0.1	26.7	13	- 4.4	28+	0	12	3.3	75	44	16	26	9	0	20	T	1.5	33	17.9	NW	27	6	8	17	7.0	54
WILLISTON	579	944.1	1012.9	14.4	0.6	7.4	-0.2	24.4	12	- 7.2	18	0	16	0.0	65	8	- 11	4	6	0	T	T	2.0	28	17.4	NW	26	7	6	18	6.9	56
OHIO																																
AKRON	368	972.6	1017.2	17.8	7.2	12.6	0.9	27.8	1	- 0.6	31	0	1	6.7	71	35	- 28	19	10	1	5	T	2.1	21	11.2	24	2	10	10	11	5.7	
CINCINNATI OBS	232			19.4	7.8	13.6	-0.8	28.9	15+	- 1.1	30	0	1			35	- 22	16	8		0	0			7.6	W	28+					55
CLEVELAND	237	987.8	1017.0	16.7	5.6	11.2	-0.7	27.2	1	- 2.8	31	0	2	6.1	73	74	12	18	11	1	T	0	2.7	22	12.5	W	29	7	9	15	6.3	54
COLUMBUS	247	987.5	1017.7	18.3	6.7	12.3	-0.1	28.3	17+	- 1.7	30	0	3	5.6	65	66	12	39	7	2	0	0	1.3	21	13.4	SW	2	10	9	12	5.9	57
DAYTON	305	981.0	1017.4	17.8	6.7	12.2	-0.9	26.7	15+	- 1.7	30	0	2	5.6	68	35	- 22	11	8	2	T	0	1.8	21	11.6	NW	3	10	9	12	5.7	58
MANSFIELD	395			17.8	6.7	12.4	1.1	28.3	17	- 1.7	30	0	3	5.6	67	20	- 38	7	10	0	T	0	3.0	22	13.0	19	27	11	7	13	5.5	
TOLEDO	204	991.5	1016.7	17.8	4.4	11.1	-0.1	28.9	15	- 6.1	30	0	7	6.1	73	28	- 33	10	11	1	0	0	2.2	23	13.9	SW	27	10	7	14	6.0	53
YOUNGSTOWN	359	974.3	1017.4	16.7	6.1	11.3	0.3	26.7	1	- 2.2	31+	0	2	6.7	76	125	57	60	15	2	T	0	1.7	22	9.4	33	29	9	8	14	6.1	
OKLAHOMA																																
OKLAHOMA CITY	392	969.5	1015.8	23.9	10.0	16.7	-0.4	31.7	2	2.2	18	0	0	9.4	67	61	- 3	30	4	4	0	0	1.9	18	13.0	SW	31	12	8	11	4.7	76
TULSA	198	991.9	1016.0	23.9	9.4	16.8	-0.3	32.2	2	1.7	25	1	0	8.9	65	67	- 17	25	4	3	0	0	2.6	19	15.2	S	16	13	11	7	4.3	74
OREGON																																
ASTORIA	2	1015.2	1015.9	14.4	6.1	10.3	-1.3	20.0	27	1.1	8+	0	0	7.2	82	204	6	32	21	1	0	0	1.4	17	11.2	18	4+	1	8	22	8.3	
BURNS U	1265	874.4	1018.2	16.1	- 1.1	7.4	-1.7	24.4	3+	- 6.1	9+	0	23	- 1.7	60	19	- 3	9	7		T	T	1.3	30				8	10	13	5.9	
EUGENE	109	1003.7	1017.2	17.2	6.1	11.6	-0.2	23.3	3	2.8	31+	0	0	7.8	82	152	55	42	14	0	0	0	1.4	18	11.2	17	29	0	14	17	7.7	
MEACHAM	1234		1017.3	10.6	1.7	6.2	-1.8	20.0	3	- 2.2	31+	0	12			53	- 19	19	13		89	T			10.3	25	14	8	2	21	7.2	
MEDFORD	396	969.9	1017.6	21.1	6.1	13.7	2.1	31.7	3	1.1	8	0	0	5.6	64	16	- 34	6	9	0	0	0	0.4	29	12.5	14	29	8	7	16	6.3	
PENDLETON	452	963.1	1017.2	16.7	4.4	10.4	-1.6	21.7	23	0.0	28	0	1	2.2	62	26	- 4	10	9	0	0	0	1.8	25	15.6	28	11	6	9	16	6.6	
PORTLAND	6	1015.2	1016.7	16.1	6.1	11.2	-1.2	22.2	3	1.7	31	0	0	7.8	82	128	36	23	19	0	0	0	1.4	14	13.9	S	14	1	7	23	8.2	35
SALEM	60	1009.5	1016.8	16.7	5.0	10.8	-1.4	22.2	2	0.0	31	0	1	7.8	82	156	57	42	19	1	0	0	1.8	19	13.4	18	14	1	13	17	7.6	
SEXTON SUMMIT R	1169	884.5	1016.5	13.3	5.0	9.3	-1.1	23.3	3	- 0.6	14	0	1			97	10	39	9		41	25			17.0	11	26	9	8	14	6.1	
PACIFIC AREA																																
JOHNSTON	2	1010.8	1011.6	30.6	25.6	27.8	0.7	31.7	13	22.8	20	0	0	22.8	75	74	- 9	21	19	0	0	0	4.1	9	15.2	SW	1	3	13	15	6.7	73
KOROR R	29	1006.1	1009.6	31.7	24.4	28.1	0.7	32.8	31+	22.8	19+	18	0	23.9	82	291	- 41	79	17	3	0	0	1.4	28	16.1	SW	16	0	8	23	8.5	66
KWAJALEIN	2	1008.5	1009.4	31.1	25.6	28.3	0.6	32.8	13+	22.8	19+	6	0	23.9	79	375	98	166	16	2	0	0	0.7	10	17.9	20	26	0	3	28	9.5	
MAJURO	3	1009.8	1010.1	30.6	24.4	27.3	0.3	32.2	14+	22.8	26+	3	0	23.9	79	306	- 79	102	17	0	0	0	0.1	14	9.8	W	20	2	10	19	7.6	59
PAGO PAGO	4	1011.5	1011.8	29.4	23.3	26.4		31.7	8	21.1	9	0	0	23.9	86	480		99	24	5	0	0	3.9	10	12.5	E	25	6	6	19	7.1	40
PONAPE R	37	1004.1	1009.4	31.1	22.2	26.6	0.1	32.8	25+	20.6	23	12	0	23.3	85	372	- 34	107	22	3	0	0	1.0	18	9.4	NE	29	4	6	21	8.0	57
TAGUAC GUAM R	110			30.0	21.7	25.8	-0.5	31.1	19+	18.9	19	0	0			338	5	122	23		0	0			19.7	W	22	2	14	15	7.4	46
TRUK MOEN ISLAND	2	1008.5	1008.9	30.6	23.9	27.3	0.3	32.2	23+	22.2	22+	2	0	24.4	83	299	- 42	166	22	2	0	0	1.5	22	15.2	SW	31+	1	7	23	8.5	65
WAKE	3	1010.5	1010.9	31.1	25.6	28.2	0.6	32.2	31+	22.2	3	3	0	23.3	78	181	47	44	21	1	0	0	5.1	9	20.6	S	6	6	15	10	6.1	75
YAP R	13	1007.1	1008.8	30.6	23.3	26.9	-0.7	31.7	26+	21.7	9+	0	0	23.9	84	285	- 50	96	15	1	0	0	1.0	28	11.6	SE	18	1	10	20	7.9	56
PENNSYLVANIA																																
ALLENTOWN	118	1003.7	1017.6	18.9	7.2	13.1	1.0	28.9	2	- 2.2	31	0	3	7.8	73	76	1	34	7	2	0	0	1.7	26	12.5	28	26	8	9	14	6.0	
ERIE	223	989.5	1016.5	17.2	8.3	12.8	1.4	27.2	16	0.0	31	0	1	6.7	68	86	3	25	14	3	T	0	2.9	22	11.2	27	29+	6	7	18	6.6	
HARRISBURG	103	1005.1	1017.9	18.3	8.9	13.4	0.2	28.9	2	- 1.1	31	0	1	7.2	70	59	- 16	26	9	1	0	0	1.3	26	13.0	NW	4	6	9	16	6.5	50
PHILADELPHIA	2	1016.6	1017.5	20.0	8.9	14.5	1.3	29.4	3+	- 2.2	31	0	2	7.8	67	80	9	40	7	0	0	0	1.4	27	11.2	W	29+	7	14	10	6.0	59
PITTSBURGH	347	973.2	1017.6	17.2	5.6	11.2	-0.5	27.2	1	- 5.0	31	0	3	5.0	69	54	- 10	29	13	1	T	0	1.5	24	11.2	24	28+	5	14	12	6.5	59
READING U	81			18.9	10.0	14.6	0.6	28.9	2	0.6	31	0	0			78	6	26	8		0	0			15.6	NW	26	10	8	13	5.9	45
SCRANTON	283	983.7	1018.0	16.7	7.2	11.9	1.3	27.8	2	- 1.7	31+	0	2	7.2	74	42	- 47	19	10	1	T	0	1.6	23	9.8	S	3+	7	10	14	6.7	42
WILLIAMSPORT	160	998.6	1017.8	17.8	6.7	12.2	0.4	26.7	2+	- 3.9	31	0	3	8.9	83	94	10	43	10	2	0	0	1.1	26	11.6	29	4	4	10	17	7.2	
RHODE ISLAND																																
BLOCK ISLAND	34			17.2	11.1	14.1	1.2	23.3	1	3.9	31	0	0			70	- 7	39	6		0	0						10	8	13	5.7	
PROVIDENCE	16	1013.9	1016.3	18.9	7.8	13.3	1.5	29.4	2	0.6	31	0	0	7.2	71	45	- 33	18	6	0	0	0	2.1	29	11.6	34	21	11	9	11	5.3	62

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Date	Temperature: Lowest	Date	No. of days: Max. 32.2 °C or above	No. of days: Min. 0 °C or lower	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	No. of days: .25 mm. or more	No. of days: With thunderstorms	Snow, Sleet: Total	Snow, Sleet: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Fastest mile (1.6 kilometers): Speed	Fastest mile: Direction	Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	M.	Mb.	Mb.	C.	°C.	°C.	C.	°C.		°C.				°C.	%	Mm.	Mm.	Mm.			Mm.	Mm.	M.p.s.		M.p.s.							%
SOUTH CAROLINA																																
CHARLESTON	12	1015.6	1017.3	25.6	13.9	19.5	0.5	31.7	3	2.8	31+	0	0	13.3	72	174	102	61	9	4	0	0	0.8	5	14.8Y	SW	28	11	6	14	5.7	50
CHARLESTON U	3			24.4	16.7	20.4	0.3	30.0	3+	6.1	29	0	0			189	119	55	10		0	0			15.2	SE	17					
COLUMBIA	65	1009.8	1018.0	24.4	11.1	17.8	-0.4	31.7	3+	-0.6	30	0	3	11.7	75	109	49	66	7	1	0	0	0.5	36	12.1	21	7+	13	6	12	5.3	57
GNVLE-SPARTANBURG	292	983.7	1018.4	22.2	10.0	16.1	-0.8	28.9	2	-1.1	30	0	1	9.4	71	72	-14	36	7	1	0	0	0.8	36	10.7	SW	3	10	8	13	5.5	55
SOUTH DAKOTA																																
ABERDEEN	395	964.8	1011.9	15.6	1.1	8.2	-0.8	27.2	13	-6.1	4	0	16	2.2	71	15	-15	10	7	0	8	T	1.6	33	16.5	33	27	7	11	13	6.5	
HURON	391	965.1	1011.9	16.1	2.2	9.1	-0.2	26.7	14+	-4.4	24	0	11	3.9	74	49	20	20	7	0	T	T	1.2	29	19.2	NW	27	6	10	15	6.6	60
RAPID CITY	964	902.8	1013.6	19.4	2.2	10.6	0.6	28.9	13+	-6.7	18	0	13	-3.3	43	4	-17	4	1	0	0	0	3.4	32	24.1	NW	26+	9	8	14	5.8	61
SIOUX FALLS	432	960.0	1011.8	16.1	2.8	9.7	-0.5	25.6	13	-5.6	4	0	13	3.9	71	116	84	49	9	2	18	T	1.6	29	15.6	36	17	9	10	12	6.0	
TENNESSEE																																
BRISTOL	459	964.8	1019.0	21.1	7.8	14.2	-0.2	28.3	13+	-2.8	30	0	4	7.2	68	64	9	28	11	2	T	0	0.3	33	7.6	28	28+	9	8	14	5.8	
CHATTANOOGA	203	993.2	1018.0	22.8	10.0	16.6	-0.1	30.0	13+	-1.7	26	0	3	11.1	76	64	-13	34	6	0	0	0	0.4	28	9.4	NW	28	10	8	13	5.7	54
KNOXVILLE	299	982.7	1017.7	20.6	8.9	14.9	-1.2	28.9	1	-1.7	30	0	2	8.9	71	86	20	35	9	2	0	0	0.4	34	10.7	SW	3	10	8	13	5.6	62
MEMPHIS	79	1007.5	1017.6	22.8	10.6	16.8	-0.5	30.0	1	0.6	29	0	0	10.6	68	73	4	63	4	3	0	0	0.5	21	9.4	SW	27	12	10	9	4.6	69
NASHVILLE	180	995.9	1017.8	22.2	8.3	15.3	-1.1	30.0	1	-2.8	26	0	5	9.4	72	100	41	61	9	3	0	0	0.8	21	10.3	SW	27+	8	9	14	5.7	55
OAK RIDGE R	276			21.1	8.9	14.8	-0.7	28.9	1	-1.7	30	0	2			57	-11	20	8		0	0			17.0Y		27	10	6	15	6.0	
TEXAS																																
ABILENE	537	954.3	1015.1	28.3	13.9	20.8	1.8	36.7	2	2.2	18	4	0	8.3	49	4	-69	3	2	0	0	0	2.3	19	16.5	S	16	15	7	9	4.6	74
AMARILLO	1098	891.3	1013.4	25.0	8.3	16.7	0.9	34.4	14	0.6	18	3	0	3.9	49	23	-22	18	4	2	0	0	2.3	22	17.9	SW	15	17	6	8	4.1	80
AUSTIN	182	994.2	1016.2	28.3	16.1	22.2	0.7	33.3	2	6.7	25	2	0	14.4	66	15	-57	7	6	3	0	0	1.0	15	10.7	NW	16	8	15	8	5.4	57
BROWNSVILLE	6	1014.2	1014.8	30.6	20.6	25.4	1.0	32.8	9+	11.7	26	5	0	20.0	76	86	-4	63	8	3	0	0	2.1	12	13.0	NE	6	13	9	9	4.7	66
CORPUS CHRISTI	12	1014.2	1015.6	28.3	18.9	23.6	0.0	32.2	3	10.0	25	1	0	19.4	80	93	23	49	8	4	0	0	2.3	11	13.0	NE	6	8	16	7	5.3	68
DALLAS	147	999.0	1016.4	26.7	14.4	20.5	0.6	33.3	2	6.1	28	1	0	11.7	61	69	1	66	7	4	0	0	1.9	15	12.5	NE	9	14	9	8	4.4	73
DEL RIO	313	979.0	1014.8	28.9	16.7	22.8	0.9	34.4	2	9.4	25	3	0	15.0	66	47	-4	37	4	2	0	0	2.9	12	9.8	12	15	9	10	12	5.8	
EL PASO	1194	882.5	1013.2	27.8	8.9	18.3	0.3	33.3	14	2.8	18	3	0	2.8	39	3	-19	3	2	1	0	0	0.3	20	17.0	NW	15	22	6	3	2.3	93
FORT WORTH	164	995.9	1016.5	26.7	13.3	19.9	-0.1	33.3	2	5.0	28+	1	0	12.8	68	55	-10	49	6	3	0	0	1.6	18	9.4	18	31+	14	9	8	4.6	
GALVESTON U	2			26.1	21.1	23.4	0.4	29.4	13+	12.8	25	0	0			58	-15	35	5		0	0			13.4	NW	6					65
HOUSTON	15	1014.6	1016.6	28.9	17.2	23.1	1.2	33.9	3	8.3	25	5	0	16.1	70	99	4	42	7	4	0	0	1.3	10	13.0	2	9	10	12	9	5.2	62
LUBBOCK	992	904.2	1014.7	25.0	8.3	16.6	0.4	31.7	14+	0.0	18	0	1	5.6	54	21	-30	17	5	6	0	0	1.4	20	13.9	29	16	14	11	6	4.3	
MIDLAND	869	917.0	1014.4	27.8	11.1	19.4	0.6	34.4	13+	2.8	18	5	0	6.1	47	5	-37	3	4	3	0	0	1.6	17	12.5	17	16+	15	11	5	3.8	
PORT ARTHUR	5	1016.6	1017.1	27.2	15.6	21.3	0.1	31.1	9+	6.1	25	0	0	15.0	70	79	6	36	6	3	0	0	1.0	7	13.4	N	9	14	8	9	4.6	69
SAN ANGELO	580	948.9	1014.7	28.9	12.8	20.8	0.6	36.7	2	2.2	28+	10	0	11.1	59	3	-44	2	4	0	0	0	2.3	18	13.4	19	16	10	14	7	4.5	
SAN ANTONIO	240	988.5	1016.1	28.3	16.1	22.3	0.9	33.3	3+	5.0	25	5	0	15.0	68	18	-46	6	7	3	0	0	1.0	13	13.9	N	24	5	17	9	6.1	58
VICTORIA	32	1011.9	1016.0	28.9	17.8	23.4	0.8	33.3	3	8.3	25	4	0	17.2	74	49	-40	27	4	5	0	0	1.7	11	15.6Y	N	24	9	11	11	5.6	
WACO	153	998.3	1016.3	27.8	15.6	21.5	0.7	32.2	2	5.6	28	1	0	12.8	62	37	-28	36	4	2	0	0	1.7	15	10.3	14	15	13	11	7	4.9	
WICHITA FALLS	303	979.0	1015.4	27.2	11.1	19.1	0.0	34.4	2	3.3	28+	4	0	10.6	64	61	-12	33	5	5	0	0	2.1	14	14.3	22	16	13	7	11	4.8	
UTAH																																
MILFORD	1533	848.0		19.4	1.1	10.5	0.1	25.6	2	-5.0	9	0	14			24	4	22	4		T	0						11	9	11	5.2	
SALT LAKE CITY	1286	873.4	1017.8	18.3	3.3	10.9	0.0	25.6	29	-2.8	17	0	9	0.0	54	42	12	29	5	0	T	0	1.2	17	15.2	S	14	13	7	11	5.0	88
WENDOVER	1291	873.0	1018.6	16.1	4.4	10.4	-1.4	25.0	12	-1.1	9	0	3			9	-3	6	3		0	0										
VERMONT																																
BURLINGTON	101	1003.1	1015.5	15.0	5.0	9.9	1.2	26.7	2	-5.0	31	0	4	5.6	73	69	-6	26	14	1	T	0	1.3	22	12.1	S	3	6	8	17	7.0	56
VIRGINIA																																
LYNCHBURG	279			20.6	8.3	14.3	-0.2	29.4	2	-1.7	27+	0	4			93	26	35	9		0	0			9.8	W	26	10	8	13	5.6	51
NORFOLK	7	1017.3	1018.3	21.7	12.8	17.3	0.6	30.6	3	3.3	31+	0	0	11.7	72	113	39	73	9	3	0	0	0.2	3	15.2	SW	28	11	11	9	5.2	63
RICHMOND	50	1012.5	1018.5	23.9	9.4	16.6	1.8	32.8	3	-2.2	31	1	2	9.4	67	40	-36	14	7	2	0	0	0.0	28	9.4	NW	26	8	11	12	5.5	59
ROANOKE	350	976.3	1018.5	20.0	8.3	14.1	-0.4	28.3	2	-2.2	31	0	3	7.2	68	205	123	163	8	2	T	0	0.8	29	12.1	30	28	9	9	13	5.7	
WALLOPS ISLAND	3			20.0	12.2	16.1		25.6	3	0.6	31	0	0			54		20	9		0	0			17.0Y	NW	4					
WASHINGTON																																
OLYMPIA	59	1008.5	1015.7	15.0	3.9	9.2	-1.6	22.8	3	-1.1	18	0	3	6.1	83	154	20	21	19	0	0	0	1.9	21	9.4	19	29+	0	7	24	8.6	
QUILLAYUTE	55	1006.8	1014.3	13.3	5.6	9.4	-1.3	20.0	27	0.6	2	0	0	7.8	89	443	176	79	23	0	0	0	1.7	16	11.6	SE	29	0	5	26	8.8	13
SEATTLE TACOMA	122	999.3	1015.7	13.9	7.8	10.8	-0.5	20.0	3	4.4	31	0	0	7.2	81	110	8	24	16	0	0	0	2.2	18	12.5	SW	29	0	4	27	8.9	44
SPOKANE	718	931.6	1016.0	12.8	1.7	7.3	-2.2	20.0	3	-2.2	16	0	9	1.1	70	57	17	16	14	0	0	0	2.3	18	13.4	SW	15+	4	9	18	7.5	41

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	No. of days: Max 32.2 °C or above	No. of days: Min. 0 °C or lower	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	No. of days: 25 mm. or more	No. of days: With thunderstorms	Snow, Sleet: Total	Snow, Sleet: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Fastest mile (1.6 kilometers): Speed	Fastest mile: Direction	Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	M.	Mb.	Mb.	C.	C.	C.	C	°C.		C.				C.	%	Mm.	Mm.	Mm.			Mm	Mm.	M.p.s		M.p.s.							%
WASHINGTON																																
STAMPEDE PASS R	1206	878.1		5.6	1.1	3.3	-2.5	11.7	24+	- 1.7	31	0	17			224	1	36	21		970	178						1	2	28	9.0	
WALLA WALLA U	289			16.1	6.1	11.3	-1.6	20.6	1	2.2	29+	0	0			41	2	16	11		0	0			11.6	W	11	6	5	20	7.4	48
YAKIMA	321	978.0	1016.8	15.6	0.6	7.9	-2.3	21.1	1	- 5.6	31	0	13	0.6	65	24	9	14	6	0	0	0	1.8	28	13.4	28	6	5	12	14	6.6	
WEST INDIES																																
SAN JUAN P.R.	4	1011.9	1014.4	31.1	23.9	27.6	0.9	33.3	14	22.8	18+	5	0	22.8	77	59	- 89	15	12	8	0	0	2.1	9	11.2	E	28	10	16	5	4.7	80
SWAN ISLAND	9			30.0	24.4	27.2	-0.4	31.1	15+	22.2	30	0	0			249	3	38	28		0	0						1	11	19	8.0	
WEST VIRGINIA																																
BECKLEY	763	929.9	1018.6	16.1	6.1	11.2	-0.8	25.0	1	- 2.8	5	0	8	6.1	73	67	- 2	35	11	1	T	T	1.4	21	10.3	21	27+	12	2	17	6.0	
CHARLESTON	286	983.7	1017.9	19.4	7.2	13.3	-0.7	27.2	17+	- 3.3	31	0	2	8.9	78	80	15	27	13	3	T	0	0.9	21	9.8	24	28	9	8	14	6.2	
ELKINS	600	947.2		17.8	3.9	10.7	-0.4	25.6	14	- 6.7	31	0	8			82	5	27	11		13	0			10.3	14	18	8	7	16	6.5	
HUNTINGTON	252	988.2	1018.3	19.4	7.8	13.7	-0.3	28.9	17+	0.0	31	0	1	7.8	73	73	26	24	10	2	0	0	0.9	21	10.3	25	28	10	7	14	6.0	
PARKERSBURG U	187			19.4	7.8	13.6	-0.3	27.8	17+	- 1.1	31	0	2			70	18	37	11		0	0			10.7	W	3					54
WISCONSIN																																
GREEN BAY	208	987.5	1012.9	15.6	5.0	10.3	0.6	28.9	15	- 6.7	30	0	7	4.4	70	26	- 23	13	5	1	0	0	2.5	23	13.0	NW	2	6	12	13	6.1	53
LA CROSSE	198	988.2	1012.9	16.1	6.1	11.1	0.5	27.8	15	- 2.8	25	0	5	6.1	74	66	10		10	3	0		2.1	19								
MADISON	262	982.1	1013.5	16.1	5.0	10.4	0.4	28.9	15	- 3.9	25	0	8	5.6	71	22	- 35	8	11	2	0	0	2.5	22	14.3	SW	17	7	10	14	6.0	51
MILWAUKEE	205	988.8	1014.0	16.1	6.7	11.5	1.5	28.9	15	- 2.2	30	0	3	5.6	69	24	- 29	9	10	3	0	0	2.4	22	16.1	SW	27	11	10	10	5.3	59
WYOMING																																
CASPER	1627	837.1	1014.9	17.2	0.6	8.8	-0.2	23.9	29+	- 7.8	27	0	16	- 4.4	46	15	- 7	7	6	0	18	T	3.6	24	15.6	23	10	9	8	14	6.0	
CHEYENNE	1867	812.4	1014.9	17.8	1.7	9.6	0.9	26.1	29+	- 6.7	27	0	13	- 5.0	40	22	1	11	4	2	13	T	3.4	30	24.1	NW	26	9	12	10	5.3	64
LANDER	1696	829.0	1014.9	16.7	1.1	8.8	0.4	24.4	28	- 5.6	17	0	14	- 5.0	42	4	- 27	2	2	1	13	25	1.0	26	18.8	NW	26	8	8	15	5.6	73
SHERIDAN	1208	878.1	1015.6	16.7	- 0.6	8.2	-0.6	28.3	29	- 5.0	18+	0	20	- 2.2	53	16	- 13	9	7	0	T	0	1.6	30	13.9	NW	4	7	8	16	6.3	59

Data from airport unless otherwise specified. U indicates Urban, R indicates Rural, sites.

Precipitation data in column headed "Greatest in 24 hours" are computed on a 24-hour basis without regard to calendar day - data may include precipitation with a measurable amount from the last day of the previous month or the first day of the following month.

Wind directions under resultant direction are in tens of degrees.

Value entered in column "Fastest Mile" is the highest observed 1-minute wind speed when the direction is in tens of degrees. These stations are not equipped with a recording anemometer from which "Fastest Mile" data can be evaluated.

B Number of days maximum 21.1°C. or above for Alaskan Stations.
Y Peak Gust.
\+ And also on an earlier date or dates.
Ø Station pressures apply to elevations shown in the "Elevations - Station Pressure" table of the annual issue of this publication.

Data in this table are obtained by conversion from data in the English Units table.

HEATING DEGREE DAYS

(Base 65°F.)

State and station	Current season: This month	Current season: Period July through this month	Normals July through this month
ALABAMA			
BIRMINGHAM	148	149	99
HUNTSVILLE	161	168	139
MOBILE	50	50	22
MONTGOMERY	102	102	68
ALASKA			
ANCHORAGE	982	1873	1908
ANNETTE	565	1204	1344
BARROW	1478	3851	4178
BARTER ISLAND	1465	3861	3979
BETHEL	1102	2347	2367
COLD BAY	804	2104	2196
FAIRBANKS	1320	2235	2348
JUNEAU	802	1847	1847
KING SALMON	1128	2375	2056
KOTZEBUE	1299	2581	2799
MC GRATH	1331	2483	2363
NOME	1137	2628	2764
ST. PAUL ISLAND	858	2638	2618
SHEMYA	761	2390	2337
YAKUTAT	896	2218	1875
ARIZONA			
FLAGSTAFF	554	1023	873
PHOENIX	0	0	22
TUCSON	4	4	25
WINSLOW	253	299	251
YUMA	0	0	0
ARKANSAS			
FORT SMITH	161	161	139
LITTLE ROCK	124	127	136
CALIFORNIA			
BAKERSFIELD	34	37	37
BISHOP	194	256	290
BLUE CANYON	326	588	551
EUREKA U	354	1013	1114
FRESNO	73	85	78
LONG BEACH	17	17	52
LOS ANGELES	26	30	133
LOS ANGELES U	4	4	37
MT SHASTA R	454	744	588
OAKLAND	123	228	275
RED BLUFF	87	91	53
SACRAMENTO	97	102	93
SANDBERG R	241	427	232
SAN DIEGO	9	9	58
SAN FRANCISCO	167	373	362
SAN FRANCISCO U	148	551	586
SANTA MARIA	116	229	434
STOCKTON	75	81	77
COLORADO			
ALAMOSA	616	1169	1082
COLORADO SPRINGS	409	632	622
DENVER	399	589	560
GRAND JUNCTION	346	444	343
PUEBLO	228	265	380
CONNECTICUT			
BRIDGEPORT	209	222	373
HARTFORD	326	398	477
NEW HAVEN	247	293	446
DELAWARE			
WILMINGTON	205	212	321
DIST.OF COLUMBIA			
WASH NATL AP	162	162	250
FLORIDA			
APALACHICOLA U	42	42	16
DAYTONA BEACH	27	27	0
FORT MYERS	5	5	0
JACKSONVILLE	41	41	12
KEY WEST	0	0	0
LAKELAND U	18	18	0
MIAMI	0	0	0
ORLANDO	19	19	0
PENSACOLA	57	57	19
TALLAHASSEE	75	75	28
TAMPA	27	27	0
WEST PALM BEACH	6	6	0
GEORGIA			
ATHENS	152	155	127
ATLANTA	157	159	145
AUGUSTA	113	113	78
COLUMBUS	104	104	87
MACON	128	128	71
ROME	188	196	185
SAVANNAH	73	73	47
IDAHO			
BOISE	382	560	547
LEWISTON	444	589	526
POCATELLO	581	993	665
ILLINOIS			
CAIRO U	197	200	200
CHICAGO O HARE	355	440	510
CHICAGO MIDWAY	331	385	407
MOLINE	404	523	443
PEORIA	377	457	419
ROCKFORD	393	524	529
SPRINGFIELD	353	387	363
INDIANA			
EVANSVILLE	292	307	286
FORT WAYNE	393	505	492
INDIANAPOLIS	354	420	406
SOUTH BEND	372	479	489
IOWA			
BURLINGTON	367	436	415
DES MOINES	378	483	471
DUBUQUE	463	647	649
SIOUX CITY	388	497	486
WATERLOO	464	676	597
KANSAS			
CONCORDIA	267	320	333
DODGE CITY	225	243	284
GOODLAND	314	423	468
TOPEKA	282	318	327
WICHITA	224	251	262
KENTUCKY			
COVINGTON	316	352	366
LEXINGTON	296	321	293
LOUISVILLE	276	287	302
LOUISIANA			
ALEXANDRIA	50	50	56
BATON ROUGE	44	44	31
LAKE CHARLES	28	28	19
NEW ORLEANS	55	55	19
SHREVEPORT	57	57	47
MAINE			
CARIBOU	515	953	1211
PORTLAND	375	539	768
MARYLAND			
BALTIMORE	197	202	312
MASSACHUSETTS			
BLUE HILL OBS R	330	434	511
BOSTON	247	303	385
NANTUCKET	247	373	459
WORCESTER	375	493	637
MICHIGAN			
ALPENA	484	828	1026
DETROIT	331	381	447
DETROIT M WAYNE CO	384	475	527
FLINT	447	653	593
GRAND RAPIDS	434	590	605
HOUGHTON LAKE	510	840	940
LANSING	451	643	597
MARQUETTE U	465	818	907
MUSKEGON	402	580	560
SAULT STE MARIE	527	1013	1060
MINNESOTA			
DULUTH	576	1060	1142
INTERNATIONAL FALLS	630	1121	1247
MINNEAPOLIS	451	632	747
ROCHESTER	494	809	719
ST CLOUD	529	801	849
MISSISSIPPI			
JACKSON	93	93	59
MERIDIAN	116	116	81
MISSOURI			
COLUMBIA	269	285	305
KANSAS CITY	224	238	259
ST JOSEPH	225	265	351
ST LOUIS	293	309	311
SPRINGFIELD	296	329	268
MONTANA			
BILLINGS	394	599	694
GLASGOW	589	940	956
GREAT FALLS	520	912	882
HAVRE	620	1004	982
HELENA	633	1052	985
KALISPELL	737	1304	1124
MILES CITY	498	702	698
MISSOULA	705	1117	1062
NEBRASKA			
GRAND ISLAND	346	440	495
LINCOLN U	275	327	382
NORFOLK	407	546	517
NORTH PLATTE	428	613	569
OMAHA	313	376	422
SCOTTSBLUFF	434	651	597
VALENTINE	451	669	679
NEVADA			
ELKO	438	730	829
ELY	559	1036	897
LAS VEGAS	28	29	78
RENO	441	712	824
WINNEMUCCA	483	821	780
NEW HAMPSHIRE			
CONCORD	424	667	738
MT WASHINGTON OBS	1011	2786	2806
NEW JERSEY			
ATLANTIC CITY	314	377	290
ATLANTIC CITY U	180	181	259
NEWARK	193	199	315
TRENTON U	[illegible]	230	321
NEW MEXICO			
ALBUQUERQUE	208	222	241
CLAYTON	247	339	382
RATON	401	624	594
ROSWELL	171	197	220
NEW YORK			
ALBANY	359	487	597
BINGHAMTON	465	662	759
BUFFALO	374	472	637
J.F. KENNEDY	221	224	284
NEW YORK LA GUARDIA	196	199	250
NEW YORK U	183	186	263
ROCHESTER	369	487	581
SYRACUSE	391	513	581
NORTH CAROLINA			
ASHEVILLE	258	320	369
CAPE HATTERAS R	73	73	78
CHARLOTTE	175	175	130
GREENSBORO	180	181	225
RALEIGH	151	151	185
WILMINGTON	103	103	74
NORTH DAKOTA			
BISMARCK	612	966	861
FARGO	565	863	858
WILLISTON	603	944	936
OHIO			
AKRON	338	414	486
CINCINNATI OBS	300	338	302
CLEVELAND	414	567	481
COLUMBUS	362	445	437
DAYTON	366	442	394
MANSFIELD	354	428	542
TOLEDO	424	520	539
YOUNGSTOWN	400	544	557
OKLAHOMA			
OKLAHOMA CITY	152	152	179
TULSA	160	161	176
OREGON			
ASTORIA	438	929	861
BURNS U	598	1005	774
EUGENE	366	514	563
MEACHAM	670	1283	1076
MEDFORD	252	339	450
PENDLETON	434	522	461
PORTLAND	395	578	[illegible]
SALEM	413	651	517
SEXTON SUMMIT R	498	961	776
PENNSYLVANIA			
ALLENTOWN	293	333	443
ERIE	333	434	518
HARRISBURG	277	298	361
PHILADELPHIA	234	248	351
PITTSBURGH	400	493	489
PITTSBURGH U	308	343	[illegible]
READING U	227	236	311
SCRANTON	359	442	595
WILLIAMSPORT	337	409	495
RHODE ISLAND			
BLOCK ISLAND	239	296	401
PROVIDENCE	295	372	484
SOUTH CAROLINA			
CHARLESTON	80	80	59
CHARLESTON U	60	60	34
COLUMBIA	121	121	84
GNVLE-SPARTANBURG	168	170	139
SOUTH DAKOTA			
ABERDEEN	562	850	766
HURON	511	749	694
RAPID CITY	428	676	680
SIOUX FALLS	489	669	674
TENNESSEE			
BRISTOL	245	268	287
CHATTANOOGA	169	170	161
KNOXVILLE	215	220	201
MEMPHIS	149	150	148
NASHVILLE	220	224	188
OAK RIDGE R	219	230	231
TEXAS			
ABILENE	42	42	[illegible]
AMARILLO	159	165	[illegible]
AUSTIN	7	7	31
BROWNSVILLE	0		0
CORPUS CHRISTI	3	3	[illegible]
DALLAS	36	36	62
DEL RIO	0	0	31
EL PASO	61	61	84
FORT WORTH	47	47	65
GALVESTON U	4	4	
HOUSTON	5	5	6
LUBBOCK	151	183	[illegible]
MIDLAND	60	60	87
PORT ARTHUR	20	20	22
SAN ANGELO	38	38	68
SAN ANTONIO	9	9	[illegible]
VICTORIA	6	6	6
WACO	22	22	[illegible]
WICHITA FALLS	68	68	[illegible]
UTAH			
MILFORD	429	644	[illegible]
SALT LAKE CITY	407	625	[illegible]
WENDOVER	439	599	[illegible]
VERMONT			
BURLINGTON	472	735	839
VIRGINIA			
LYNCHBURG	233	242	274
NORFOLK	124	124	136
RICHMOND	161	161	250
ROANOKE	244	267	[illegible]
WALLOPS ISLAND	155	155	
WASHINGTON			
OLYMPIA	503	894	759
QUILLAYUTE	487	[illegible]	[illegible]
SEATTLE TACOMA	415	697	671
SPOKANE	607	914	695
STAMPEDE PASS R	833	1828	1658
WALLA WALLA U	384	463	397
YAKIMA	572	788	606
WEST VIRGINIA			
BECKLEY	392	579	513
CHARLESTON	298	346	317
ELKINS	425	609	569
HUNTINGTON	290	327	320
PARKERSBURG U	287	321	324
WISCONSIN			
GREEN BAY	467	718	736
LA CROSSE	423	565	621
MADISON	460	719	713
MILWAUKEE	403	539	735
WYOMING			
CASPER	520	882	738
CHEYENNE	481	824	803
LANDER	522	880	784
SHERIDAN	557	934	814

Data from airport unless otherwise specified.
U indicates Urban, R indicates Rural, sites.

HURRICANE GLADYS

OCTOBER 13-21, 1968

Gladys was spawned from a late season depression in the western Caribbean Sea. This depression developed from the third disturbance in several days in the area. On the 14th it was centered 100 miles southeast of Swan Island and the rain shield extended over Jamaica and western Cuba. Early on the 15th the Navy reconnaissance found that the depression had reached tropical storm strength (winds 52 m.p.h. and surface pressure 999 mbs.) and was moving northward toward western Cuba. The tropical storm was given the name Gladys.

Already soaked by 2 days of rain, Cuba felt the brunt of the storm on the 16th when Gladys became a hurricane shortly before moving ashore, south of Pinar Del Rio. The western part of the island was lashed by 80 m.p.h. winds, storm tides, and flash floods, forcing thousands of persons to flee low-lying areas.

Gladys left Cuba and headed for Florida. Early on the 17th the storm, located 180 miles south-southwest of Tampa, was generating 90 m.p.h. winds around a 986-mb. center. The Florida Keys and the lower west coast of Florida were already being whipped by gales and soaked by torrential rains. The hurricane stalled for several hours before resuming her northward journey. It was then apparent that Gladys would turn northeastward and move inland north of Cedar Key late on the 18th.

Hurricane Gladys, her 75 m.p.h. winds battering Florida's west coast and leaving 3 to 7 ft. tides in her wake, moved ashore between Bayport and Crystal River shortly after midnight on the 19th. The storm moved northeastward about 15 m.p.h. across the peninsula and pushed offshore south of St. Augustine later that morning. After losing some of her punch over land, Gladys began to reintensify as she paralleled the southeastern U. S. coastline. By late on the 19th the violent storm was generating 90-m.p.h. winds aroung a 965-mb. center (extremes for the storm) and was moving northeastward about 25 m.p.h. The hurricane brushed North Carolina's Outer Banks early on the 20th, then continued northeastward out to sea. When Gladys crossed the major shipping lanes on the 21st, she was still generating 85-m.p.h. winds near the center. Later in the day the storm completed her extratropical transformation and moved across Cape Breton Island. She was still a potent storm with winds up to 75 m.p.h.

Most of Gladys' wrath was spent in Cuba and Florida. Total death figures for the storm stand at five. Several areas actually benefited from the storm's rainfall.

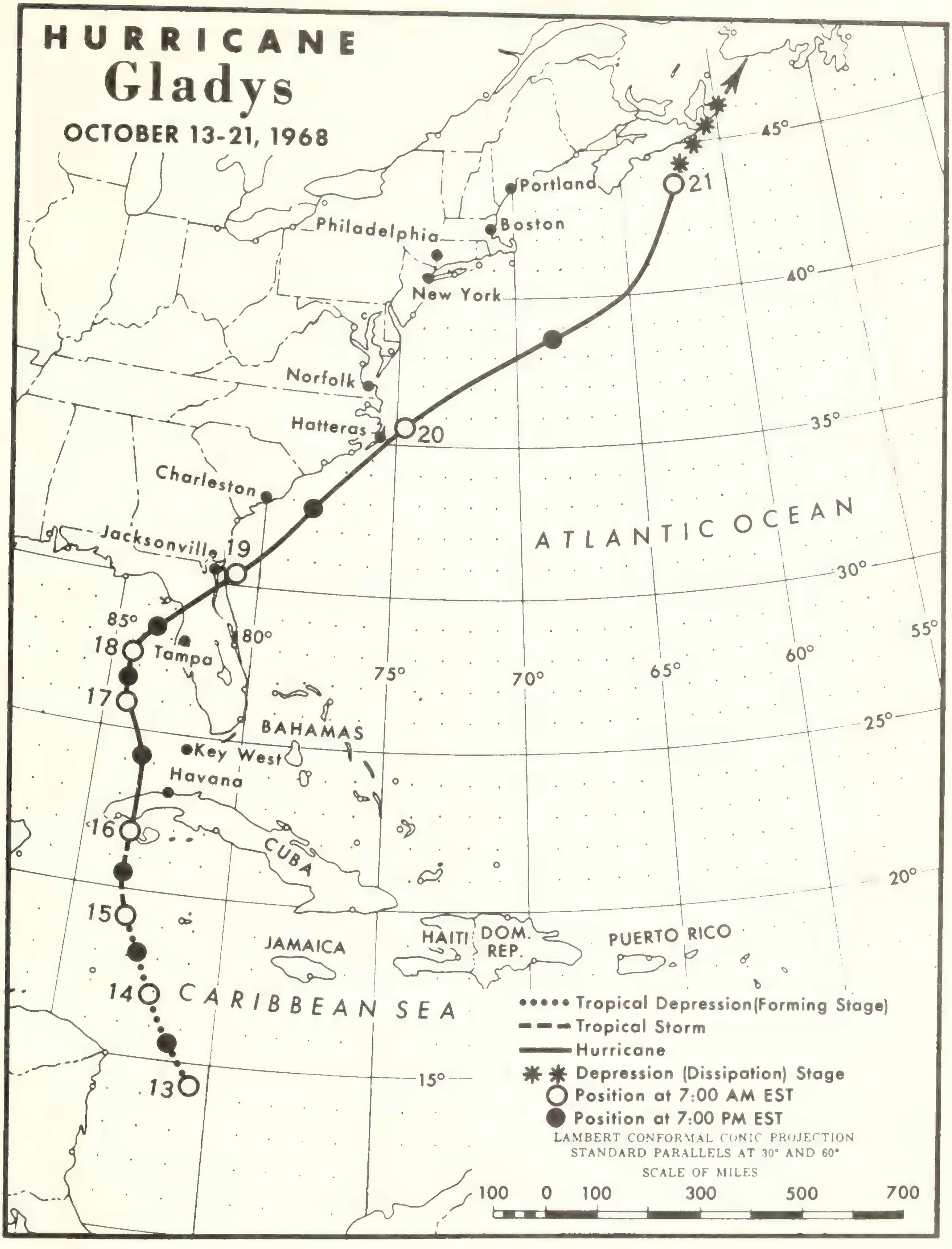
Western Cuba suffered when the rains from Gladys caused serious flash flooding. The heaviest damage was incurred by industrial installations and crops. The rich tobacco crop was virtually wiped out. One death was reported in Cuba.

Damage in Florida, which is estimated at $5 million, was concentrated primarily in Pinellas, Pasco, Hernando, Citrus, Marion, and Hillsborough Counties. In her path Gladys left a trail of uprooted trees, fallen power lines, and unroofed houses. There were three deaths indirectly related to the storm, and she was responsible for two tornadoes in Boca Raton and Manatee Counties.

Pinellas County, owing to its population density, suffered the most damage (estimated as high as $2.5 million). Along the county beaches there was flooding from storm tides in several areas. The Meteorologist in Charge of Weather Bureau Office at Tampa, after a tour of the area, reported that although trailers were rolled over, boat houses were demolished, and billboards were torn apart, no buildings of substantial construction were visibly damaged. The Cooperative Hurricane Reporting Network observer at Bayport reported that the wind reached 84 m.p.h. from the southeast when the anemometer, together with the roof of his house, blew away. In the Ocala area a great number of trees were uprooted, blocking roads and damaging power and telephone lines. Wind damage along the east coast was minor, even though Jacksonville Beach recorded a gust of 74 m.p.h. Since Gladys rode an outgoing tide off the east coast, there was no flooding damage. Rainfall from the storm averaged 2 to 4 inches in most areas with a few localities recording 6 inches, and this caused negligible flooding damage. The major portion of the State's citrus producing area received only minor damage from Gladys. In Pinellas and West Pasco Counties some individuals suffered a 75 percent loss of grapefruit crop, but the overall orange loss in this area was less than 10 percent.

North Carolina benefited the most from Hurricane Gladys. The Meteorologists in Charge of Weather Bureau Offices at Wilmington and Cape Hatteras describe damage as light, and there were no deaths or injuries reported in the State. Rainfall was beneficial throughout the State. For most of the 2-day period moderate rain soaked into previously dry soil. Total amounts over the eastern portion of the State ranged from 2 to 5 inches with a few reports close to 8 inches. Winds were highest along the exposed Outer Banks; they reached a peak at Cape Hatteras and Ocracoke Coast Guard stations where 98 m.p.h. gusts were reported. Despite the high winds along the coast, tides ran only 2 to 3 feet above normal, causing minor beach erosion.

Despite one storm-associated death in Nova Scotia, this area benefited from the 2- to 4-inch rains produced by the extratropical stage of Gladys.


HURRICANE
Gladys
OCTOBER 13-21, 1968
Portland
Boston
Philadelphia
New York
Norfolk
Hatteras
Charleston
Jacksonville
Tampa
Key West
Havana
BAHAMAS
CUBA
JAMAICA
HAITI
DOM. REP.
PUERTO RICO
ATLANTIC OCEAN
CARIBBEAN SEA
13
14
15
16
17
18
19
20
21
45°
40°
35°
30°
25°
20°
15°
85°
80°
75°
70°
65°
60°
55°
Tropical Depression (Forming Stage)
Tropical Storm
Hurricane
Depression (Dissipation) Stage
Position at 7:00 AM EST
Position at 7:00 PM EST
LAMBERT CONFORMAL CONIC PROJECTION
STANDARD PARALLELS AT 30° AND 60°
SCALE OF MILES
100 0 100 300 500 700

STORM SUMMARY

OCTOBER 1968

STATE	TORNADOES					HAILSTORMS				WINDSTORMS				LIGHTNING				‡ HEAVY SNOWSTORMS AND BLIZZARDS				# ICE STORMS				ø ALL OTHER			
								†DAMAGE				†DAMAGE				†DAMAGE				†DAMAGE				†DAMAGE				†DAMAGE	
	NUMBER	DAYS	DEATHS	INJURIES	†DAMAGE	DEATHS	INJURIES	PROPERTY	CROPS	DEATHS	INJURIES	PROPERTY	CROPS	DEATHS	INJURIES	PROPERTY	CROPS	DEATHS	INJURIES	PROPERTY	CROPS	DEATHS	INJURIES	PROPERTY	CROPS	DEATHS	INJURIES	PROPERTY	CROPS
Alabama *																													
Alaska *																													
Arizona	1	1	0	3	5																								
Arkansas																										0	0	4	0
California *																													
Colorado *																													
Connecticut *																													
Delaware *																													
Florida	2	2	0	0	4					0	12	°7	C													0	0	4	0
Georgia *																													
Hawaii																										0	0	°6	C
Idaho *																													
Illinois *																													
Indiana *																													
Iowa *																													
Kansas	1	1	0	0	0	0	0	3	4	0	3	5	4	0	0	5	0									0	0	5	4
Kentucky *																													
Louisiana *																													
Maine *																													
Maryland *																													
Massachusetts *																													
Michigan										0	0	3	0	0	5	3	0												
Minnesota						0	0	0	5					0	1	0	0									0	0	6	?
Mississippi *																													
Missouri														0	0	?	0									1	0	0	0
Montana *																													
Nebraska						0	0	0	5	0	5	4	4													0	1	4	0
Nevada *																													
New Hampshire *																													
New Jersey								1		1		3				1													
New Mexico *																													
New York																4													
North Carolina										0	0	4	4	0	1	4	0												
North Dakota *																													
Ohio														2	2														
Oklahoma						0	0	4	4	0	4	5	4	0	0	4	0									0	0	5	5
Oregon	1	1	0	0	0																								
Pacific Area																										0	0	?	C
Pennsylvania										0	0	3	0	0	0	4	0									0	0	2	0
Puerto Rico																										0	0	6	0
Rhode Island *																													
South Carolina *																													
South Dakota *																													
Tennessee *																													
Texas	8	5	0	0	4	0	0	6	6	0	0	3	0	1	0	0	0									0	0	0	5
Utah *																													
Vermont *																													
U. S. Virgin Is. *																													
Virginia *																													
Washington *																													
West Virginia N																													
Wisconsin *																													
Wyoming *																													

° Includes crop damage
C Crop damage
N No report received by printing deadline

* No occurrence of storms or unusual weather phenomena.
‡ Includes heavy sleet storm.
\# Freezing drizzle and freezing rain, commonly known as glaze.
ø For breakdown of "All Others", and for detailed listing of other storms, see the Environmental Data Service, ESSA, monthly publication STORM DATA.

† Storm damages are placed in categories varying from 1 to 9 as follows:
1 Less than $50
2 $50 to $500
3 $500 to $5,000
4 $5,000 to $50,000
5 $50,000 to $500,000
6 $500,000 to $5,000,000
7 $5,000,000 to $50,000,000
8 $50,000,000 to $500,000,000
9 $500,000,000 to $5,000,000,000

GENERAL SUMMARY OF RIVER AND FLOOD CONDITIONS
OCTOBER 1968

Elmer R. Nelson, Office of Hydrology

There was no major flooding in conterminous United States during October. Flooding reported was mostly minor and damages resulting were very light.

Drought conditions in eastern North Carolina continued into October.

ATLANTIC SLOPE DRAINAGE

New low water records were established in eastern North Carolina for the 3d consecutive month. During October, low water records were set in the Tar and Cape Fear River Basins. Fishing Creek at Enfield, N. C., reached a new low record of 0.0 foot which was the lowest stage since 1954 when it reached 0.1 foot. The Cape Fear River at Fort Bragg, N. C., reached a new low record of -0.5 foot which is the lowest stage since 1963 when it reached a stage of 1.0 foot. Heavy to excessive rains on the 18th and 19th in connection with Hurricane Gladys caused the Roanoke River at Roanoke, Va., to rise 9 feet, cresting 0.2 foot below flood stage on the afternoon of the 19th. The rainfall ranged from 4 to 7 inches over the headwaters of the Dan and Roanoke Rivers. An unofficial report of nearly 10 inches was measured at Peaks of Otter, 20 miles northeast of Roanoke, Va. A rise of about 6 feet occurred along the Dan River while minor crests of 2 to 5 feet moved down the Cape Fear, Neuse, and Tar Rivers.

Very light flooding occurred on the lower reaches of the Yadkin River at Yadkin College, N. C., on the 20th and 21st. The Lumber River at Lumberton, N. C., was above flood stage during the last week in October, cresting on the 26th, 2.5 feet above flood stage. Both streams remained at low levels until midmonth when an almost continuous 5-day rain began. The Lumber Basin above Lumberton, N. C., received about 2.7 inches during the first 4 days and an additional 2.5 to 4 inches on the morning of the 20th. About 2.5 inches occurred in the upper Yadkin Basin on the 16th through the morning of the 18th with Glendale Springs reporting 6.2 inches. An additional 3.8 inches occurred during the afternoon of the 18th and 19th. There was no flood damage or loss in the valleys along the main streams and only minor inconvenience in the Lumberton reach of the Lumber. Flash flooding within the city of Mt. Airy, N. C., in the Yadkin Drainage, caused damage to streets and water mains.

MISSISSIPPI SYSTEM

Upper Mississippi Basin.--High water developed on the upper reaches of the Des Moines River during the last decade of the month. The West Fork of the Des Moines River at Estherville, Iowa, exceeded flood stage by 2.6 feet on the 25th. Flooding of cropland was minor and no damage was reported to urban property.

Missouri Basin.--Minor flooding occurred on the Little Sioux River at Spencer, Iowa, on the 18-20th. The crest on the 18-19th was 0.7 foot above flood stage. This overflow was due to 2 to 3 inches of rain on the 16-17th.

Light to moderate overflows occurred on tributary streams in the Kansas and Big Blue River Basins on the 16-18th. Local flooding developed on the upper Marais des Cygnes at Reading, Kans., on the 17th and in the upper Republican Basin on Sappa Creek at Oberlin, Kans., on the 16th. The overflows resulted from 2 to 5 inches of rain during the 36-hour period ending on the morning of the 17th. Minor damage occurred in the upper Marais des Cygnes. Little, if any, loss was sustained elsewhere.

White Basin.--The Cache River at Patterson, Ark., exceeded flood stage from September 21 to October 4. The crest on September 23 and 24 was 0.6 foot above flood stage. This minor overflow was due to 3 to 6 inches of rain on September 15-17. No damages were reported.

Arkansas Basin.--Minor flooding occurred on the Little Arkansas, Ninnescah, and Whitewater Rivers in Kansas on the 16-18th. Backwater from the Whitewater River produced 3.3 feet of overflow on the Walnut River at Augusta, Kans., on the 18th. This flooding was due to 3 to 5-1/2 inches of rain on the 16th and 17th.

Heavy rains on the 15th over the North Canadian River Basin above Woodward, Okla., caused minor flooding along the North Canadian at Woodward and Seiling, Okla., on the 17th-21st.

Runoff from the storm on the 16-17th produced rises on all streams in the Chikaskia and upper Cimarron Basins. The Chikaskia River at Blackwell, Okla., crested about 1.5 feet below flood stage. The Cimarron River at Dover, Okla., crested 1 foot below flood stage. Precipitation in the headwaters of the Chikaskia Basin averaged 3.62 inches during this storm.

The only flooding along the main stem of the Arkansas occurred at Arkansas City, Kans., on the 18-19th. The crest on the 18th was 2.3 feet above flood stage. Downstream at Ponca City, Okla., the river approached within 1.6 feet of flood stage. At Ralston, Okla., the Arkansas crested 4 feet below flood stage.

Red Basin.--Three to 6-inch rains during the night of the 8-9th over the North Fork of the Red River Basin above Carter and Headrick, Okla., resulted in a rise to flood stage at Headrick on the 11th. Some damage to cotton and to newly-seeded wheat crops resulted from the heavy rain in about five western Oklahoma counties. Some damage to erosion-control dams was experienced in Roger Mills County.

The Sulphur River in northeast Texas exceeded flood stage at Hagansport on the 10th. The crest was 4.9 feet above flood stage.

WEST GULF OF MEXICO DRAINAGE

The San Jacinto at Lake Houston, Tex., exceeded the spillway elevation on the 7th-21st and again on the 24th. The crest on the 12th was 45.01 feet, 0.51 foot above the spillway. No damage was reported from this slight overflow.

Minor flooding occurred on the lower Turkey River at Crystal City, Texas, on the 6-8th. The crest on the 7th was 1.7 feet above flood stage. This overflow was due to heavy rains ranging up to 9 inches over a limited area 10 to 20 miles west of Crystal City during the night of the 4th. Damage to crops in the Turkey Creek area was due to the heavy rainfall rather than stream flooding.

Heavy rains up to 8 inches in the Sinton, Tex., area during the afternoon of the 7th caused flooding of streets and roads with water entering some homes. Brief street and road flooding occurred on the 11th due to heavy rains up to 5 inches north and west of Corpus Christi.

FLOOD STAGE DATA

(All dates in October unless otherwise specified)

River and station	Flood stage	Above flood stages -dates		Crest *	
		From—	To—	Stage	Date
ATLANTIC SLOPE DRAINAGE	*Ft.*			*Ft.*	
Yadkin: Yadkin College, N. C.	18	20	21	#18.4	20
Lumber: Lumberton, N. C.	8	24	31	#10.5	26
MISSISSIPPI SYSTEM					
Upper Mississippi Basin					
West Fork Des Moines: Estherville, Iowa	7	25	25	9.6	25
Missouri Basin					
Little Sioux: Spencer, Iowa	10	18	20	10.7	18-19
Sappa Creek: Oberlin, Kans.	11	16	16	12.35	16
Black Vermillion Creek: Frankfort, Kans.	19	17	17	18.75	17
Fancy Creek: Winkler, Kans.	11	16	17	14.0	16-17
Big Blue: Barneston, Nebr.	18	17	17	19.5	17
Blue Rapids, Kans.	1101	17	18	1102.4	17
Vermillion Creek: Wamego 11NE, Kans.	24	17	17	26.7	17
Mill Creek: Paxico, Kans.	19	16	17	23.3	17
Soldier Creek: Delia 6SE, Kans.	17	17	17	#20.4	17
Topeka 4NW, Kans.	12	17	17	12.15	17
Marais des Cygnes: Reading, Kans.	18	17	17	21.85	17
MISSISSIPPI SYSTEM	*Ft.*			*Ft.*	
White Basin					
Cache: Patterson, Ark.	7	Sep. 21	4	7.6	Sep. 23,24
Arkansas Basin					
Little Arkansas: Sedgwick, Kans.	18	16	18	23.5	17
Ninnescah: Peck 3WSW, Kans.	17	17	17	19.8	17
Whitewater: Towanda, Kans.	22	16	18	25.3	17
Walnut: Augusta, Kans.	23	17	18	26.3	18
North Canadian: Woodward, Okla.	10	17	20	11.45	19
Seiling, Okla.	11	18	21	11.95	21
Arkansas: Arkansas City, Kans.	16	18	19	18.3	18
Red Basin					
North Fork of Red: Headrick, Okla.	7	11	11	7.0	11
Sulphur: Hagansport, Tex.	38	10	10	42.9	10
WEST GULF OF MEXICO DRAINAGE					
San Jacinto: Lake Houston, Tex.	44.5	7 24	21 24	45.01	12
Turkey Creek: Crystal City, Tex.	8	6	8	9.7	7

* Provisional
\# Highest stage observed

ALBANY, N. Y. 1007 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	86	7.7	5.8	24	1.5
1000	31	146			24	1.5
950	31	572	8.5	4.1	27	4.3
900	31	1,018	6.7	1.4	28	5.8
850	31	1,486	4.5	-3.1	28	6.4
800	31	1,978	2.9	-7.8	28	8.1
750	31	2,499	.8	-11.9	27	9.4
700	31	3,051	-1.7	-14.6	27	9.5
650	31	3,634	-4.7	-17.1	27	10.8
600	31	4,265	-8.3	-21.3	27	11.7
550	31	4,930	-12.3	-26.4	26	13.3
500	31	5,658	-17.0	-31.1	26	14.5
450	31	6,438	-22.2	-36.4	27	16.0
400	31	7,297	-28.2	-41.1	27	17.6
350	31	8,242	-34.7	-46.2	27	18.5
300	31	9,303	-41.7	-51.5	27	20.8
250	31	10,520	-48.7		26	23.3
200	31	11,965	-55.4		27	21.5
175	31	12,811	-57.6		28	20.9
150	31	13,784	-58.0		28	19.1
125	31	14,928	-59.5		27	16.0
100	31	16,321	-60.4		27	13.7
80	31	17,715	-58.9		27	9.2
70	31	18,553	-58.3		26	8.1
60	31	19,524	-57.5		27	7.2
[illegible]0	30	20,680	-56.7		27	5.6
40	30	22,096	-55.9		28	6.1
30	28	23,934	-54.8		28	6.0
25	28	25,100	-54.2		28	6.5
20	28	26,534	-53.1		28	7.8
15	24	28,408	-51.0		28	9.3
10	20	31,049	-48.4		27	15.0
7	7	33,404	-46.6			

ALBUQUERQUE, N. MEX. 840 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1,619	8.5	-2.6	09	1.6
1000	31	148				
950	31	584				
900	31	1,041				
850	31	1,520				
800	31	2,026	11.5	-5.3	29	1.8
750	31	2,559	8.7	-7.3	28	5.7
700	31	3,130	5.1	-10.0	28	8.0
650	31	3,730	1.4	-14.9	28	[illegible].2
600	31	4,372	-2.5	-20.0	27	9.0
550	31	5,050	-6.4	-23.8	28	10.9
500	31	5,798	-10.9	-28.7	27	12.4
450	31	6,593	-16.3	-33.6	27	12.3
400	31	7,477	-23.0	-38.6	27	13.6
350	31	8,442	-30.6	-44.8	27	14.2
300	31	9,519	-39.3	-49.5	27	15.2
250	31	10,745	-48.2		27	16.3
200	31	12,186	-56.8		27	18.2
175	31	13,025	-60.8		27	19.2
150	31	13,976	-64.2		27	18.7
125	31	15,083	-66.9		28	17.8
100	31	16,430	-66.6		28	14.5
80	31	17,781	-65.9		28	8.0
70	31	18,594	-64.1		28	5.6
60	31	19,543	-61.8		28	4.3
[illegible]0	31	20,679	-59.1		28	3.5
40	31	22,084	-57.2		27	2.3
30	31	23,911	-54.[illegible]		28	3.0
25	31	25,079	-54.1		27	2.5
20	31	26,514	-52.8		29	[illegible].2
15	31	28,376	-50.9		28	5.[illegible]
10	28	31,048	-47.4		27	[illegible].7
7	16	33,466	-43.1		27	9.5

AMARILLO, TEXAS 892 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1,095	9.9	3.4	24	2.6
1000	31	128				
950	31	563				
900	31	1,025				
850	31	1,497	13.6	1.2	25	6.1
800	31	2,008	12.5	-1.7	26	5.6
750	31	2,544	[illegible].5	-4.4	27	6.7
700	31	3,116	5.9	-7.7	27	7.5
650	31	3,717	1.9	-11.8	27	8.5
600	31	4,361	-2.4	-16.6	27	8.9
550	31	5,042	-6.4	-21.6	27	[illegible].7
500	31	5,786	-11.4	-26.5	27	11.0
450	31	6,582	-17.0	-31.5	27	13.5
400	31	7,461	-23.4	-36.9	28	14.5
350	31	8,424	-30.9	-42.4	28	15.6
300	31	9,499	-39.3	-48.0	28	17.6
250	31	10,726	-48.1		28	19.9
200	31	12,168	-56.9		28	21.7
175	31	13,007	-60.9		28	21.5
150	31	13,956	-64.5		28	21.2
125	30	15,062	-66.3		28	18.5
100	30	16,409	-67.2		28	14.7
80	29	17,758	-64.9		28	9.0
70	28	18,573	-63.2		28	5.6
60	28	19,527	-61.2		28	4.1
[illegible]0	26	20,664	-59.3		28	3.6
40	28	22,066	-57.6		27	2.8
30	27	23,889	-55.7		27	[illegible].4
25	27	25,052	-54.7		28	3.2
20	27	26,483	-53.3		28	[illegible].5
15	26	28,349	-51.1		28	[illegible].5
10	16	31,009	-47.2		26	[illegible].1
7						

*** ANCHORAGE, ALASKA 995 MB**

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	45	.1	-3.4	02	1.4
1000	31	3				
950	31	417	.3	-4.6	03	2.3
900	31	847	-1.7	-6.1	05	1.8
850	31	1,299	-4.5	-7.4	13	2.0
800	31	1,774	-7.1	-10.0	14	[illegible].5
750	31	2,274	-10.2	-13.2	16	5.1
700	31	2,803	-13.3	-18.0	16	5.2
650	31	3,358	-17.0	-22.6	17	4.1
600	31	3,959	-21.1	-26.9	18	4.8
550	31	4,591	-25.4	-32.6	19	5.7
500	31	5,281	-30.1	-37.3	20	5.9
450	31	6,018	-35.2	-41.9	20	[illegible].4
400	31	6,835	-40.7	-47.2	21	7.7
350	31	7,732	-46.6		21	8.8
300	31	8,741	-52.3		22	9.[illegible]
250	31	9,914	-53.9		24	9.9
200	31	11,357	-50.8		25	[illegible].9
175	31	12,229	-50.0		25	10.6
150	31	13,237	-49.6		25	10.7
125	31	14,431	-49.5		25	10.9
100	31	15,892	-49.9		25	11.6
80	31	17,350	-50.0		25	12.3
70	31	18,222	-50.0		25	12.1
60	31	19,229	-50.5		25	12.3
[illegible]0	31	20,416	-50.8		25	12.2
40	31	21,867	-51.2		25	11.4
30	30	23,733	-51.3		25	12.0
25	30	24,917	-51.0		26	12.0
20	30	26,370	-50.4		27	12.6
15	30	28,246	-50.2		27	13.5
10	23	30,914	-49.9		29	13.3
7	10	33,267	-47.3			

*** ANNETTE, ALASKA 1001 MB**

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	37	7.1	3.9	12	3.1
1000	30	44			13	4.5
950	30	461	4.6	1.4	14	5.9
900	30	903	1.6	-1.1	16	7.6
850	30	1,362	-1.1	-3.9	17	7.5
800	30	1,844	-3.7	-7.2	19	8.0
750	30	2,352	-6.5	-9.7	20	8.9
700	30	2,889	-9.8	-13.2	21	9.0
650	30	3,456	-13.4	-17.1	21	9.9
600	30	4,063	-17.5	-22.2	21	10.0
550	30	4,704	-21.9	-27.8	21	12.4
500	30	5,406	-26.7	-33.6	21	13.9
450	30	6,154	-32.2	-39.7	23	14.6
400	30	6,981	-38.2	-42.1	23	15.2
350	30	7,888	-44.3		24	14.1
300	30	8,909	-49.8		25	14.3
250	30	10,093	-52.1		25	16.2
200	30	11,540	-51.0		26	17.9
175	30	12,410	-50.8		26	16.1
150	30	13,413	-50.9		26	15.4
125	30	14,597	-51.6		26	13.3
100	30	16,043	-51.9		26	11.2
80	30	17,485	-52.8		26	9.5
70	30	18,345	-53.0		26	9.5
60	30	19,339	-53.6		27	7.0
[illegible]0	29	20,512	-54.2		26	6.4
40	29	21,942	-54.2		27	6.1
30	28	23,786	-54.4		28	5.7
25	27	24,957	-54.1		31	4.9
20	26	26,394	-53.6		30	6.0
15	22	28,255	-52.9		32	8.0
10	19	30,879	-52.0		32	10.3
7	11	33,198	-50.8		33	13.2

ATHENS, GEORGIA 989 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	246	11.7	9.4	36	1.1
1000	31	156				
950	31	586	14.9	9.2	01	1.0
900	31	1,045	12.8	6.4	26	.8
850	31	1,524	10.3	3.6	25	2.4
800	31	2,028	8.9	-2.1	27	4.2
750	31	2,558	6.2	-5.0	26	5.2
700	31	3,123	3.7	-9.5	26	5.6
650	31	3,716	.8	-14.8	27	6.5
600	31	4,362	-2.6	-19.8	27	7.9
550	31	5,040	-6.5	-23.5	27	9.8
500	31	5,786	-11.3	-27.6	27	11.4
450	31	6,581	-17.1	-32.4	27	13.8
400	31	7,459	-23.7	-38.1	26	15.7
350	31	8,421	-30.8	-44.6	27	18.1
300	31	9,498	-38.8	-50.8	26	21.5
250	31	10,726	-47.7		26	24.8
200	31	12,171	-56.2		27	25.4
175	31	13,011	-60.4		27	25.4
150	31	13,965	-63.4		27	22.9
125	31	15,077	-65.7		27	18.2
100	31	16,429	-66.4		27	13.7
80	31	17,783	-65.4		28	8.2
70	31	18,599	-63.2		27	5.5
60	31	19,553	-60.5		26	4.3
50	31	20,696	-57.8		27	3.1
40	31	22,106	-56.8		29	1.5
30	31	23,937	-54.7		28	.6
25	31	25,107	-53.1		27	1.0
20	31	26,552	-50.9		26	2.5
15	29	28,424	-49.1		27	5.2
10	26	31,098	-45.8		27	10.7
7	14	33,462	-42.2			
5						

*** BARROW, ALASKA 1007 MB**

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	8	-7.[illegible]	-10.0	11	3.0
1000	31	65			10	4.0
950	31	468	-7.1	-11.3	09	4.[illegible]
900	31	886	-9.4	-13.7	11	4.6
850	31	1,326	-11.6	-16.8	12	4.0
800	31	1,789	-13.8	-20.6	12	[illegible].6
750	31	2,282	-16.1	-24.3	13	2.9
700	31	2,794	-18.[illegible]	-27.0	14	2.0
650	31	3,344	-21.[illegible]	-30.1	17	2.3
600	31	3,929	-25.5	-33.8	19	2.9
550	31	4,555	-29.7	-38.4	19	3.1
500	31	5,229	-34.[illegible]	-42.5	20	3.3
450	31	5,960	-39.3	-45.6	21	3.0
400	30	6,750	-45.1		22	3.3
350	30	7,631	-50.9		22	4.[illegible]
300	30	8,622	-56.1		22	5.7
250	30	9,777	-56.[illegible]		22	6.9
200	30	11,204	-53.2		22	6.[illegible]
175	30	12,066	-52.[illegible]		22	7.1
150	29	13,060	-52.5		22	7.[illegible]
125	29	14,240	-52.3		23	7.9
100	29	15,681	-52.6		23	[illegible].2
80	29	17,121	-53.1		23	10.4
70	29	17,980	-53.3		24	11.5
60	29	18,970	-53.[illegible]		24	12.6
50	28	20,147	-54.2		24	13.8
40	25	21,587	-54.7		25	15.2
30	22	23,454	-54.8		26	16.7
25	17	24,668	-54.[illegible]		26	18.[illegible]
20	13	26,109	-54.5		27	20.5
15	[illegible]	27,972	-55.5			
10						
7						
5						

BARTER IS., ALASKA 1006 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	15	-8.3	-10.5	17	1.8
1000	30	62			13	2.5
950	30	466	-6.6	-8.7	09	2.[illegible]
900	30	884	-8.0	-12.5	09	[illegible].5
850	30	1,327	-10.1	-15.2	09	[illegible].3
800	30	1,793	-12.1	-18.2	08	1.[illegible]
750	29	2,284	-14.2	-21.5	10	1.9
700	29	2,809	-16.4	-24.4	11	1.5
650	29	3,358	-19.8	-27.3	14	1.3
600	29	3,953	-23.4	-31.3	18	[illegible].6
550	29	4,579	-27.5	-35.4	20	[illegible].2
500	29	5,265	-32.[illegible]	-39.1	21	2.[illegible]
450	29	5,996	-36.[illegible]	-43.3	22	4.4
400	29	6,809	-42.[illegible]		22	5.5
350	28	7,701	-48.[illegible]		22	7.9
300	28	8,705	-53.9		21	8.5
250	28	9,869	-56.0		22	8.9
200	28	11,300	-52.2		22	8.7
175	28	12,166	-51.[illegible]		22	[illegible].1
150	28	13,168	-51.[illegible]		23	[illegible].1
125	28	14,354	-50.8		23	9.6
100	28	15,807	-50.[illegible]		23	10.8
80	28	17,256	-51.7		24	11.[illegible]
70	28	18,121	-51.9		24	13.0
60	28	19,120	-52.2		25	13.8
50	27	20,292	-53.0		25	14.5
40	27	21,728	-53.7		25	16.1
30	27	23,573	-54.7		25	17.1
25	27	24,738	-55.[illegible]		26	18.[illegible]
20	25	26,151	-55.3		26	20.1
15	17	27,993	-55.7		27	22.0
10	[illegible]	30,641	-54.[illegible]			

BETHEL, ALASKA 996 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	39	-2.8	-4.1	13	.7
1000	31	9			22	1.9
950	31	419	-1.9	-4.8	19	2.1
900	31	846	-4.0	-7.4	21	[illegible].8
850	31	1,295	-6.5	-10.4	23	3.2
800	31	1,766	-9.7	-13.9	23	3.[illegible]
750	31	2,260	-12.8	-17.3	23	3.8
700	31	2,786	-15.7	-22.4	23	4.[illegible]
650	31	3,340	-19.0	-26.4	23	4.8
600	31	3,933	-22.7	-30.2	22	[illegible].8
550	31	4,560	-26.9	-34.3	23	[illegible].7
500	31	5,248	-31.5	-37.9	23	6.2
450	31	5,983	-36.2	-42.5	24	7.0
400	31	6,796	-41.5	-45.3	25	9.[illegible]
350	31	7,691	-47.1		26	10.7
300	31	8,700	-51.8		26	12.6
250	31	9,876	-52.9		25	11.[illegible]
200	31	11,321	-50.6		25	13.5
175	31	12,192	-50.0		25	13.0
150	31	13,199	-49.8		25	12.2
125	31	14,390	-49.9		25	12.6
100	31	15,846	-50.5		25	13.1
80	31	17,299	-50.7		25	12.4
70	31	18,168	-50.3		25	13.2
60	31	19,174	-50.5		25	13.5
50	31	20,363	-50.5		25	14.0
40	30	21,813	-50.[illegible]		25	12.5
30	30	23,684	-50.8		25	12.5
25	30	24,872	-50.2		25	13.2
20	29	26,330	-49.3		25	13.4
15	27	28,221	-48.5		26	13.5
10	10	30,900	-49.3			

*** BISMARCK, N. DAK. 953 MB**

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	505	2.0	-1.3	33	2.1
1000	31	110				
950	31	529			33	2.6
900	31	971	7.1	-1.5	32	6.5
850	31	1,440	5.8	-5.5	32	8.1
800	31	1,934	3.4	-8.6	31	9.2
750	31	2,451	1.0	-11.1	31	10.0
700	31	3,007	-2.2	-14.1	30	11.5
650	31	3,586	-5.4	-17.0	29	11.0
600	31	4,216	-9.1	-19.6	29	13.4
550	31	4,881	-13.0	-23.9	29	14.4
500	31	5,605	-17.5	-27.6	29	16.2
450	31	6,379	-22.9	-32.8	28	17.5
400	31	7,240	-29.0	-37.8	28	20.0
350	31	8,182	-35.7	-42.9	27	22.1
300	31	9,238	-43.2	-45.8	27	23.5
250	31	10,445	-51.2		27	25.4
200	31	11,877	-56.2		28	26.6
175	31	12,724	-56.9		28	24.2
150	31	13,700	-57.3		28	20.6
125	31	14,849	-58.[illegible]		28	17.2
100	30	16,248	-58.8		29	11.3
80	30	17,648	-58.[illegible]		29	8.1
70	30	18,486	-58.5		29	6.7
60	30	19,456	-57.9		29	5.9
50	29	20,609	-57.7		30	4.9
40	29	22,018	-56.[illegible]		30	3.9
30	29	23,843	-56.0		31	4.0
25	28	25,006	-55.2		30	3.9
20	27	26,440	-54.2		30	4.9
15	27	28,287	-53.[illegible]		31	5.3
10	25	30,896	-51.2		30	8.0
7	22	33,233	-48.0		29	10.2
5	11	35,460	-44.7			

BOISE, IDAHO 917 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	867	7.0	-.2	13	2.4
1000	31	152				
950	31	577				
900	31	1,026	9.5	-.8	12	1.7
850	31	1,500	8.9	-3.3	18	1.2
800	31	2,000	6.0	-6.0	25	2.9
750	31	2,524	3.0	-9.1	27	5.9
700	31	3,082	-.3	-12.2	26	7.6
650	31	3,671	-3.8	-14.7	26	10.2
600	31	4,300	-7.4	-18.1	27	11.9
550	31	4,965	-11.4	-22.4	27	13.7
500	31	5,699	-15.8	-27.6	26	15.7
450	31	6,484	-21.0	-32.5	26	17.2
400	31	7,348	-27.1	-37.6	26	18.5
350	31	8,295	-34.4	-42.9	26	19.5
300	31	9,356	-42.2	-49.9	26	21.2
250	31	10,567	-50.4		27	21.6
200	31	11,998	-57.6		27	20.8
175	30	12,841	-59.6		27	20.9
150	29	13,805	-61.7		27	20.1
125	29	14,933	-62.0		27	17.1
100	29	16,311	-62.5		28	13.0
80	29	17,691	-61.2		28	9.4
70	29	18,521	-60.5		28	7.4
60	27	19,491	-59.4		28	5.3
50	27	20,634	-58.9		29	3.6
40	27	22,037	-57.8		30	3.2
30	25	23,862	-56.5		32	2.8
25	25	25,021	-55.6		31	2.9
20	25	26,449	-54.0		32	2.7
15	23	28,297	-52.2		33	2.6
10	12	30,944	-49.6		34	3.3
7						

BOOTHVILLE, LA. 1016 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1	20.[illegible]	18.0	03	1.8
1000	31	138	21.6	16.9	04	2.[illegible]
950	31	584	18.8	13.4	07	2.7
900	31	1,046	16.1	10.1	09	1.8
850	31	1,530	13.9	5.1	35	.[illegible]
800	31	2,040	11.7	-.4	31	2.1
750	31	2,577	9.2	-2.2	30	3.2
700	31	3,147	[illegible].4	-6.5	30	4.3
650	31	3,747	[illegible].3	-11.9	30	4.[illegible]
600	31	4,396	-.2	-16.5	30	5.6
550	31	5,082	-4.1	-20.7	29	[illegible].9
500	31	5,832	-8.[illegible]	-25.1	28	7.4
450	31	6,637	-14.[illegible]	-31.1	[illegible]	[illegible].5
400	31	7,523	-20.6	-36.5	28	11.5
350	31	8,497	-27.8	-42.0	28	13.3
300	31	9,586	-36.[illegible]	-47.4	28	14.[illegible]
250	31	10,826	-45.7		27	17.7
200	31	12,278	-56.0		27	19.[illegible]
175	31	13,117	-61.0		27	21.0
150	31	14,064	-65.[illegible]		27	20.6
125	31	15,162	-69.2		27	17.8
100	31	16,488	-70.8		28	11.[illegible]
80	31	17,818	-67.[illegible]		28	4.[illegible]
70	31	18,626	-64.6		27	2.[illegible]
60	31	19,574	-61.6		24	[illegible].7
50	31	20,710	-58.8		27	[illegible].1
40	31	22,118	-56.6		33	1.[illegible]
30	31	23,955	-53.7		05	.7
25	31	25,129	-52.3		15	.3
20	31	26,579	-50.2		04	.1
15	31	28,469	-47.5		34	[illegible].1
10	26	31,168	-43.1		28	[illegible].0
7	12	33,529	-40.2			

*** BROWNSVILLE, TEXAS 1014 MB**

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	7	21.3	19.3	11	.8
1000	31	126	23.9	21.3	13	2.4
950	31	575	21.0	18.2	15	[illegible]
900	31	1,042	18.4	13.7	15	4.[illegible]
850	31	1,532	15.[illegible]	9.5	16	3.3
800	31	2,046	13.4	6.3	15	1.4
750	31	2,588	10.[illegible]	-.9	13	.7
700	31	3,161	7.[illegible]	-4.9	35	1.[illegible]
650	31	3,767	4.3	-8.3	32	2.2
600	31	4,417	.6	-13.8	32	2.4
550	31	5,105	-3.3	-19.2	31	2.[illegible]
500	31	5,859	-7.[illegible]	-24.7	30	3.2
450	31	6,665	-13.4	-31.6	29	4.5
400	31	7,557	-19.8	-37.3	28	5.3
350	31	8,534	-27.[illegible]	-42.2	28	7.7
300	31	9,626	-35.5	-48.5	27	10.2
250	31	10,871	-44.[illegible]		28	13.5
200	31	12,328	-55.4		27	16.1
175	31	13,169	-60.8		27	18.[illegible]
150	31	14,115	-66.4		27	17.5
125	31	15,204	-71.6		27	13.[illegible]
100	31	16,508	-74.2		27	8.7
80	30	17,815	-70.[illegible]		29	3.5
70	30	18,614	-66.7		33	1.[illegible]
60	30	19,556	-62.8		10	1.4
50	30	20,687	-60.2		14	2.0
40	29	22,090	-57.2		08	2.1
30	27	23,913	-55.1		07	4.[illegible]
25	27	25,083	-53.1		09	4.6
20	26	26,528	-51.7		09	4.4
15	26	28,409	-48.1		07	4.0
10	24	31,120	-43.0		09	.7
7	19	33,564	-37.3		24	6.[illegible]

BUFFALO, N. Y. 990 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	218	9.1	6.9	22	2.2
1000	31	136				
950	31	565	9.7	5.6	25	6.5
900	31	1,011	7.5	2.4	26	8.4
850	31	1,480	4.9	-1.6	26	8.6
800	31	1,973	2.[illegible]	-5.9	27	8.[illegible]
750	31	2,494	-.1	-10.0	27	[illegible]
700	31	3,042	-2.7	-13.6	27	10.[illegible]
650	31	3,627	-5.6	-17.7	27	11.0
600	31	4,251	-9.[illegible]	-21.5	27	12.[illegible]
550	31	4,917	-13.[illegible]	-26.1	27	14.[illegible]
500	31	5,640	-17.[illegible]	-30.3	27	15.2
450	31	6,416	-22.9	-34.3	27	16.[illegible]
400	31	7,274	-29.0	-38.[illegible]	27	17.[illegible]
350	31	8,216	-35.8	-44.0	27	19.6
300	31	9,273	-42.9		27	20.[illegible]
250	31	10,485	-49.3		27	22.7
200	31	11,928	-54.9		26	23.7
175	31	12,778	-57.0		27	22.[illegible]
150	31	13,751	-58.4		27	20.0
125	31	14,893	-60.1		27	15.[illegible]
100	31	16,283	-60.4		27	13.2
80	31	17,677	-59.[illegible]		27	7.7
70	30	18,516	-58.9		28	7.1
60	30	19,485	-58.1		28	6.2
50	30	20,636	-57.[illegible]		29	4.1
40	29	22,058	-55.9		29	4.[illegible]
30	29	23,895	-54.7		29	5.5
25	28	25,036	-54.4		29	5.6
20	28	26,489	-53.0		29	7.1
15	28	28,352	-51.[illegible]		28	9.8
10	19	31,031	-48.0		28	12.[illegible]
7	[illegible]	33,312	-46.2			

CAPE HATTERAS, N. C. 1017 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	4	17.7	13.8	02	1.2
1000	31	148	18.3	12.6	04	1.1
950	31	583	15.4	9.8	35	1.0
900	31	1,044	12.5	6.1	24	1.1
850	31	1,522	9.6	3.2	27	3.3
800	31	2,024	7.[illegible]	-2.0	26	5.1
750	31	2,554	6.0	-7.1	27	6.2
700	31	3,118	3.7	-10.6	27	8.2
650	31	3,714	.5	-13.7	27	9.2
600	31	4,356	-2.[illegible]	-17.9	26	10.8
550	31	5,032	-6.5	-22.4	26	12.7
500	31	5,781	-11.2	-27.2	26	14.5
450	31	6,575	-16.9	-30.9	25	16.0
400	31	7,457	-22.[illegible]	-36.1	25	17.9
350	31	8,421	-30.2	-42.7	26	20.6
300	31	9,501	-38.1	-48.3	25	24.1
250	31	10,734	-46.4		26	26.3
200	31	12,187	-55.[illegible]		27	26.8
175	30	13,033	-59.0		27	22.6
150	30	13,992	-62.2		27	21.9
125	30	15,110	-64.8		27	17.8
100	30	16,468	-65.2		27	14.4
80	29	17,832	-62.[illegible]		28	9.5
70	29	18,658	-61.1		26	7.9
60	29	19,619	-58.[illegible]		27	5.6
50	29	20,768	-57.0		27	3.8
40	28	22,182	-55.4		28	2.2
30	26	24,026	-53.4		28	2.9
25	25	25,208	-52.1		28	3.3
20	23	26,657	-49.[illegible]		26	4.9
15	18	28,520	-48.8		27	7.0
10	13	31,215	-45.3		28	10.3
7						

See reference note at end of table

RAWINSONDE DATA

Average monthly values

* CARIBOU, MAINE 990 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	191	6.2	4.1	26	2.0
1000	31	109				
950	31	534	6.4	3.2	28	4.9
900	31	974	4.7	1.2	29	7.1
850	31	1,439	2.2	-1.7	30	7.8
800	31	1,927	.6	-6.6	29	8.6
750	31	2,446	-1.6	-9.9	28	8.9
700	31	2,992	-4.2	-12.8	28	10.3
650	31	3,575	-7.2	-16.1	28	11.2
600	31	4,194	-10.4	-20.3	28	12.1
550	31	4,860	-14.2	-24.1	28	13.7
500	31	5,577	-18.9	-29.2	27	15.0
450	31	6,351	-24.3	-34.4	27	15.0
400	31	7,203	-30.5	-38.9	27	15.0
350	31	8,139	-36.9	-44.8	27	17.0
300	31	9,191	-43.7	-49.8	28	20.1
250	31	10,400	-49.5		28	22.2
200	30	11,843	-54.0		28	21.2
175	30	12,697	-55.3		27	19.5
150	30	13,678	-56.2		27	16.8
125	30	14,833	-57.4		28	14.7
100	30	16,242	-57.6		27	10.4
80	30	17,650	-57.6		28	8.8
70	30	18,494	-57.0		28	7.3
60	30	19,470	-56.6		28	5.9
50	30	20,625	-56.8		28	5.9
40	30	22,039	-56.5		29	5.9
30	30	23,865	-55.9		29	5.7
25	30	25,026	-55.2		29	7.9
20	28	26,453	-54.3		28	7.7
15	26	28,314	-52.6		28	11.5
10	24	30,964	-49.0		28	15.2
7	17	33,300	-46.0		27	17.4
5						
4						

CHARLESTON, S. C. 1016 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	13	14.9	12.5	02	1.0
1000	30	149	17.6	13.9	03	1.4
950	30	586	16.6	9.5	07	1.1
900	30	1,048	14.1	6.2	19	.9
850	30	1,529	11.7	3.3	26	2.2
800	30	2,034	9.3	.4	25	3.4
750	30	2,566	7.2	-4.9	26	4.8
700	30	3,133	4.4	-10.0	27	6.6
650	30	3,732	1.7	-13.9	26	7.8
600	30	4,377	-1.3	-18.5	26	9.1
550	30	5,061	-5.4	-23.0	26	10.3
500	30	5,808	-10.1	-27.3	26	11.8
450	30	6,606	-15.6	-32.1	26	13.0
400	30	7,493	-22.1	-39.0	27	14.9
350	30	8,460	-29.2	-43.8	27	16.6
300	30	9,543	-37.4	-50.2	27	18.8
250	30	10,779	-46.0		27	22.4
200	30	12,231	-55.9		27	25.8
175	30	13,072	-60.2		27	25.3
150	29	14,026	-63.8		27	23.4
125	29	15,135	-66.9		27	19.2
100	29	16,480	-67.1		27	13.7
80	29	17,830	-65.6		27	7.8
70	28	18,645	-63.2		26	6.8
60	28	19,599	-60.4		27	5.0
50	27	20,744	-58.2		28	2.1
40	27	22,155	-55.8		28	.7
30	27	23,994	-53.7		06	1.0
25	26	25,170	-52.1		31	.2
20	25	26,612	-50.8		21	1.6
15	23	28,495	-48.2		27	4.8
10	19	31,178	-44.0		28	8.1
7	6	33,528	-40.6			

* COLD BAY, ALASKA 1000 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	30	3.2	-.5	25	2.6
1000	31	26			26	4.7
950	31	440	1.4	-2.1	27	5.3
900	31	874	-1.7	-4.5	27	5.9
850	31	1,327	-4.8	-7.9	27	6.7
800	31	1,801	-7.2	-13.4	27	8.4
750	31	2,303	-9.5	-18.0	27	8.8
700	31	2,833	-12.5	-21.7	27	9.2
650	31	3,391	-15.9	-25.1	27	10.2
600	31	3,994	-19.8	-28.3	27	11.2
550	31	4,629	-23.8	-32.2	27	13.3
500	31	5,325	-28.2	-36.4	27	14.1
450	31	6,067	-33.4	-40.6	27	15.0
400	31	6,892	-38.8	-42.7	26	14.3
350	31	7,798	-44.5	-44.3	25	13.2
300	31	8,819	-49.2		25	15.5
250	31	10,007	-51.4		25	14.8
200	31	11,458	-50.9		26	17.2
175	31	12,328	-50.5		26	16.7
150	31	13,333	-50.8		26	16.6
125	29	14,528	-51.4		26	15.7
100	29	15,977	-51.3		26	14.2
80	29	17,425	-51.8		25	13.8
70	28	18,282	-51.7		25	13.7
60	28	19,281	-51.9		25	12.0
50	28	20,463	-51.7		25	10.1
40	28	21,911	-51.5		24	9.4
30	26	23,785	-51.3		25	9.1
25	25	24,968	-50.7		25	9.1
20	25	26,424	-50.1		26	7.7
15	23	28,299	-48.8		26	6.9
10	23	30,969	-47.6		29	6.7
7	17	33,337	-46.9		30	11.9
5	14	35,574	-45.3			
4	6	37,136	-43.6			

COLUMBIA, MO. 987 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	238	10.0	6.9	20	2.3
1000	31	130				
950	31	559	11.8	5.0	24	5.8
900	31	1,010	10.2	.9	26	7.2
850	31	1,484	8.6	-4.2	27	8.3
800	31	1,984	5.5	-7.0	27	9.1
750	31	2,510	4.0	-9.8	27	9.9
700	31	3,070	1.3	-13.2	27	10.0
650	31	3,658	-1.8	-17.0	27	11.3
600	31	4,297	-5.3	-20.8	27	13.2
550	31	4,965	-9.4	-24.6	28	14.4
500	31	5,706	-13.9	-29.4	28	16.1
450	31	6,489	-19.4	-33.3	28	17.7
400	31	7,365	-25.7	-39.0	28	19.2
350	31	8,319	-32.9	-45.7	28	21.0
300	31	9,386	-41.1	-50.2	28	22.3
250	31	10,603	-49.2		28	24.1
200	30	12,047	-56.5		28	22.4
175	30	12,888	-59.4		28	22.4
150	30	13,849	-61.4		28	20.9
125	30	14,974	-63.5		28	17.4
100	30	16,342	-63.6		28	13.4
80	30	17,714	-62.9		28	10.8
70	30	18,537	-61.9		28	8.0
60	30	19,493	-60.2		27	5.8
50	30	20,633	-58.7		28	5.4
40	30	22,038	-57.3		29	5.0
30	29	23,866	-55.8		28	4.8
25	28	25,033	-54.6		28	4.5
20	27	26,464	-53.4		28	5.8
15	25	28,317	-51.7		28	7.7
10	20	30,975	-47.9		29	7.9
7	8	33,327	-44.9			

DAYTON, OHIO 982 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	297	8.5	6.0	18	1.4
1000	31	149				
950	31	576	10.6	4.5	23	4.5
900	31	1,026	8.4	1.6	26	6.7
850	31	1,497	6.4	-3.0	26	7.1
800	31	1,993	4.8	-8.0	26	7.9
750	31	2,515	2.3	-10.7	26	8.3
700	31	3,072	-.3	-13.8	26	9.3
650	31	3,661	-3.3	-16.7	26	10.6
600	31	4,292	-7.0	-20.2	27	11.8
550	31	4,961	-11.2	-25.1	27	12.2
500	31	5,691	-15.5	-29.5	27	13.9
450	31	6,475	-20.8	-35.1	27	14.7
400	31	7,341	-26.9	-40.0	27	16.0
350	31	8,290	-34.0	-45.2	27	17.2
300	31	9,352	-41.9	-50.9	27	18.8
250	31	10,565	-49.6		27	20.1
200	31	12,003	-56.0		27	20.6
175	30	12,854	-58.2		26	20.2
150	30	13,820	-60.0		26	18.1
125	30	14,952	-62.3		27	17.0
100	30	16,328	-62.6		27	13.7
80	30	17,706	-61.8		27	10.2
70	30	18,534	-60.7		28	8.5
60	30	19,495	-59.0		28	6.8
50	30	20,644	-57.5		27	5.3
40	30	22,057	-56.4		27	6.1
30	30	23,889	-55.1		28	5.2
25	29	25,052	-54.2		28	5.7
20	28	26,486	-52.6		28	6.1
15	26	28,358	-50.7		27	7.9
10	22	31,015	-47.6		27	11.0
7	10	33,386	-44.5			

DEL RIO, TEXAS 979 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	314	18.6	15.5	11	3.1
1000	30	129				
950	30	574	19.0	15.1	15	5.7
900	30	1,035	17.6	12.5	17	7.5
850	30	1,524	15.9	7.7	18	6.7
800	30	2,037	13.7	3.2	20	4.9
750	30	2,580	11.6	-3.5	25	3.6
700	30	3,154	8.0	-8.0	27	4.4
650	30	3,760	4.2	-12.2	27	4.3
600	30	4,408	.3	-17.7	27	5.5
550	30	5,094	-4.0	-22.1	28	5.6
500	30	5,847	-8.8	-27.2	27	6.5
450	30	6,649	-14.3	-32.7	28	7.4
400	30	7,539	-20.9	-38.3	28	8.8
350	30	8,512	-28.5	-45.1	28	9.6
300	30	9,597	-37.3	-51.0	28	12.8
250	30	10,833	-46.3		27	16.1
200	30	12,284	-56.0		27	18.2
175	30	13,124	-60.8		27	19.3
150	30	14,071	-66.8		27	20.2
125	30	15,166	-69.8		28	17.2
100	29	16,484	-71.3		28	11.7
80	29	17,812	-68.1		29	5.7
70	29	18,618	-65.2		30	2.7
60	28	19,565	-61.8		32	.6
50	28	20,701	-59.3		20	1.5
40	28	22,108	-56.8		02	.1
30	28	23,940	-54.6		04	2.0
25	28	25,110	-53.0		07	1.8
20	28	26,559	-50.0		22	.2
15	26	28,432	-48.1		33	1.2
10	18	31,156	-42.3		30	2.9
7	8	33,541	-40.5			

DENVER, COLO. 838 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1,611	5.4	-2.4	20	2.1
1000	31	137				
950	31	562				
900	31	1,016				
850	31	1,490				
800	31	1,991	10.1	-4.1	27	3.1
750	31	2,528	7.6	-7.0	30	5.8
700	31	3,091	3.9	-10.5	30	6.9
650	31	3,686	-.4	-13.7	30	9.2
600	31	4,325	-4.5	-18.2	30	10.9
550	31	5,000	-8.9	-22.5	30	11.7
500	31	5,737	-13.7	-26.4	29	11.8
450	31	6,524	-19.6	-31.1	29	13.7
400	31	7,394	-25.6	-37.0	28	14.5
350	31	8,348	-32.6	-43.1	28	15.8
300	31	9,416	-40.7	-49.6	28	17.1
250	31	10,632	-49.8		28	20.9
200	31	12,062	-58.1		28	23.7
175	31	12,897	-60.8		28	23.5
150	31	13,852	-62.0		28	21.5
125	31	14,975	-63.6		28	16.4
100	31	16,340	-64.8		28	12.5
80	31	17,705	-62.8		28	8.3
70	31	18,529	-62.0		27	5.2
60	31	19,485	-60.8		28	4.3
50	31	20,624	-58.6		28	3.4
40	31	22,030	-57.6		29	4.2
30	30	23,854	-55.8		28	3.6
25	28	25,024	-54.6		28	4.3
20	25	26,470	-53.1		28	5.4
15	24	28,337	-51.0		28	6.5
10	22	31,002	-47.9		27	10.9
7	8	33,352	-44.9			

DODGE CITY, KANS. 924 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	791	9.4	4.0	22	2.7
1000	31	122				
950	31	551				
900	31	1,006	13.5	1.7	23	4.8
850	31	1,488	13.7	-2.3	25	7.1
800	31	1,997	11.2	-6.0	27	7.4
750	31	2,530	8.0	-8.0	28	8.1
700	31	3,099	4.6	-11.3	29	9.7
650	31	3,694	.7	-15.4	29	11.1
600	31	4,337	-3.8	-19.3	28	11.3
550	31	5,013	-7.9	-23.9	28	12.7
500	31	5,754	-12.6	-28.6	28	13.9
450	31	6,544	-18.2	-33.1	28	15.7
400	31	7,421	-24.3	-38.5	28	16.9
350	31	8,380	-31.8	-43.5	28	16.7
300	31	9,453	-40.0	-49.7	28	18.5
250	31	10,675	-49.1		28	20.8
200	31	12,111	-57.1		28	23.2
175	31	12,950	-60.3		28	23.4
150	31	13,906	-62.6		28	20.4
125	31	15,025	-64.4		28	17.0
100	31	16,385	-65.2		28	12.5
80	31	17,748	-63.6		27	9.2
70	30	18,568	-62.2		28	6.8
60	30	19,523	-60.7		28	5.0
50	30	20,661	-59.0		27	4.7
40	29	22,065	-57.0		27	4.1
30	29	23,894	-55.2		27	4.3
25	29	25,060	-54.1		27	3.7
20	28	26,502	-52.5		27	5.5
15	26	28,376	-50.3		27	6.2
10	19	31,076	-46.6		27	12.1
7	10	33,456	-42.4			

EL PASO, TEXAS 883 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1,193	11.6	2.9	34	.9
1000	31	135				
950	31	568				
900	31	1,030				
850	31	1,514	16.6	1.7	01	.9
800	31	2,029	14.4	-.9	30	1.3
750	31	2,567	11.4	-4.1	26	3.0
700	31	3,144	7.3	-6.9	25	4.5
650	31	3,746	3.3	-10.7	25	5.0
600	31	4,395	-.2	-16.9	25	7.1
550	31	5,079	-4.4	-22.1	26	8.1
500	31	5,831	-9.4	-26.7	27	9.0
450	31	6,634	-15.3	-31.7	27	9.7
400	31	7,518	-21.9	-37.5	27	11.1
350	31	8,487	-29.5	-43.7	27	11.4
300	31	9,569	-38.2	-49.4	27	12.6
250	31	10,800	-47.4		27	15.1
200	31	12,246	-56.5		27	18.6
175	31	13,085	-60.7		27	18.5
150	31	14,034	-65.1		27	19.5
125	31	15,135	-68.4		27	18.7
100	31	16,467	-69.7		28	13.1
80	31	17,802	-67.5		29	8.1
70	31	18,610	-64.7		30	5.2
60	31	19,555	-62.6		30	3.3
50	30	20,690	-59.5		28	2.3
40	30	22,093	-57.6		28	2.0
30	29	23,919	-55.6		27	1.6
25	28	25,080	-54.1		28	2.8
20	28	26,517	-52.5		30	3.4
15	26	28,390	-50.2		29	2.4
10	18	31,093	-44.5		30	4.7
7	8	33,529	-40.7			

ELY, NEV. 811 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1,908	1.5	-4.9	20	3.9
1000	31	178				
950	31	598				
900	31	1,050				
850	31	1,521				
800	31	2,014	5.2	-2.4	19	3.1
750	31	2,543	6.0	-5.7	21	1.5
700	31	3,107	3.0	-9.6	27	3.9
650	31	3,699	-.8	-13.5	27	5.0
600	31	4,340	-3.7	-17.3	27	6.7
550	31	5,012	-7.9	-20.6	27	7.5
500	31	5,757	-12.8	-25.3	27	9.5
450	31	6,543	-18.5	-30.1	27	10.2
400	31	7,422	-25.0	-36.3	27	10.8
350	31	8,380	-32.3	-43.8	26	13.0
300	31	9,449	-40.7	-49.1	27	14.3
250	31	10,668	-49.7		28	15.7
200	30	12,103	-57.5		28	16.0
175	30	12,942	-60.4		27	16.0
150	30	13,895	-63.2		27	17.4
125	30	15,014	-63.9		28	16.3
100	30	16,378	-64.7		28	12.3
80	30	17,742	-63.9		28	9.0
70	30	18,563	-62.4		28	7.9
60	30	19,516	-60.9		28	4.7
50	30	20,653	-59.5		28	3.7
40	30	22,054	-57.7		29	3.6
30	30	23,878	-55.5		28	4.3
25	27	25,047	-54.5		29	4.0
20	27	26,481	-53.1		27	4.7
15	27	28,339	-51.7		28	5.3
10	21	31,000	-48.1		28	8.2
7	10	33,266	-47.7			

* FAIRBANKS, ALASKA 987 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	135	-6.5	-9.7	02	1.1
1000	31	35				
950	31	439	-4.9	-9.0	08	2.4
900	31	862	-6.2	-9.4	11	2.6
850	31	1,308	-7.6	-11.6	13	1.8
800	31	1,778	-9.7	-14.6	17	1.9
750	31	2,275	-12.4	-17.4	19	3.2
700	31	2,799	-15.3	-21.0	20	4.3
650	31	3,352	-18.7	-24.7	20	4.0
600	31	3,949	-22.4	-29.8	21	4.6
550	31	4,581	-26.3	-33.8	22	5.7
500	31	5,265	-31.2	-38.4	22	6.4
450	31	6,006	-36.4	-43.1	22	6.7
400	31	6,814	-41.9	-45.9	22	7.2
350	31	7,707	-48.1		22	8.1
300	31	8,710	-54.4		22	8.3
250	31	9,871	-56.3		23	9.0
200	31	11,302	-52.1		23	10.4
175	31	12,169	-51.2		23	10.3
150	31	13,172	-50.6		24	9.7
125	30	14,362	-50.4		24	11.6
100	30	15,818	-50.4		24	11.8
80	30	17,273	-50.5		24	12.3
70	30	18,142	-50.8		24	12.9
60	30	19,146	-51.4		24	14.9
50	30	20,327	-51.8		25	15.0
40	29	21,775	-52.3		25	14.9
30	29	23,634	-52.6		26	15.6
25	28	24,808	-52.7		26	16.8
20	28	26,248	-52.5		27	17.7
15	28	28,106	-52.5		27	20.5
10	22	30,724	-52.0		28	23.0
7	8	33,049	-52.1			

FLINT, MICH. 987 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	234	7.4	4.6	20	2.4
1000	31	127				
950	31	551	9.0	3.9	24	8.7
900	31	999	7.0	1.0	26	7.0
850	31	1,468	4.4	-2.0	26	7.8
800	31	1,960	2.4	-6.5	26	8.2
750	31	2,479	.3	-11.1	26	9.5
700	31	3,031	-2.5	-14.5	26	10.5
650	31	3,614	-5.5	-17.9	26	11.7
600	31	4,240	-8.9	-21.1	26	13.3
550	31	4,904	-13.1	-25.5	26	14.1
500	31	5,629	-17.5	-31.2	26	14.8
450	31	6,404	-22.8	-36.4	26	15.9
400	31	7,265	-28.6	-41.5	26	16.1
350	31	8,209	-35.4	-47.3	27	17.7
300	31	9,266	-42.6	-52.5	27	19.9
250	31	10,478	-49.6		27	21.4
200	31	11,919	-55.0		27	20.7
175	31	12,769	-56.4		27	20.3
150	31	13,744	-57.8		27	19.1
125	31	14,889	-59.5		27	16.4
100	31	16,282	-60.2		27	11.6
80	31	17,675	-59.6		28	8.9
70	31	18,511	-58.6		27	7.6
60	31	19,483	-57.5		27	6.9
50	30	20,641	-56.7		27	5.6
40	28	22,052	-55.8		28	5.4
30	27	23,888	-54.4		27	5.1
25	26	25,056	-53.7		28	4.7
20	22	26,476	-52.9		28	6.2
15	19	28,340	-51.3		29	8.3
10	15	31,006	-49.1		28	10.8
7	8	33,313	-46.1			

FORT WORTH, TEXAS 996 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	180	15.5	12.0	17	.9
1000	31	143				
950	31	582	16.8	9.1	20	4.5
900	31	1,041	15.8	6.3	23	5.2
850	31	1,526	14.1	3.2	24	4.8
800	31	2,035	11.5	-1.1	26	4.6
750	31	2,573	9.0	-5.8	27	4.6
700	31	3,141	5.8	-10.5	28	5.4
650	31	3,743	2.7	-15.5	28	6.7
600	31	4,387	-1.1	-19.5	28	7.2
550	31	5,069	-5.4	-23.2	27	8.5
500	31	5,817	-10.3	-27.9	28	9.6
450	31	6,615	-16.0	-32.6	28	12.1
400	31	7,498	-22.5	-37.4	28	13.6
350	31	8,464	-30.1	-44.0	28	15.9
300	31	9,543	-38.2	-50.7	28	16.7
250	31	10,772	-47.5		28	18.8
200	31	12,216	-57.0		28	21.2
175	31	13,052	-61.3		28	21.3
150	31	13,999	-65.2		28	22.1
125	31	15,102	-67.9		28	18.5
100	30	16,438	-68.3		28	13.1
80	30	17,781	-66.5		28	7.7
70	30	18,592	-64.2		28	5.1
60	30	19,543	-61.3		27	2.4
50	29	20,683	-58.9		26	2.4
40	28	22,090	-57.1		29	1.5
30	27	23,923	-54.6		31	1.1
25	26	25,098	-52.6		32	2.1
20	25	26,540	-50.9		30	2.7
15	22	28,424	-49.0		25	4.2
10	16	31,105	-44.1		28	10.0

GLASGOW, MONT. 932 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	696	2.7	-2.2	34	1.2
1000	31	118				
950	31	536				
900	31	978	6.6	-2.8	30	4.7
850	31	1,448	5.8	-5.3	30	9.2
800	31	1,942	3.1	-8.1	30	10.5
750	31	2,460	.1	-11.2	30	11.6
700	31	3,012	-3.2	-14.2	29	12.3
650	31	3,591	-6.3	-17.3	29	13.9
600	31	4,217	-9.9	-20.4	29	15.0
550	31	4,877	-14.2	-25.3	29	16.3
500	31	5,600	-19.0	-29.4	29	17.4
450	31	6,367	-24.2	-33.6	29	19.4
400	31	7,226	-30.1	-38.8	29	20.0
350	31	8,164	-36.9	-42.7	28	22.3
300	31	9,214	-44.3		29	24.2
250	31	10,419	-50.4		28	26.5
200	31	11,857	-55.7		28	25.3
175	31	12,704	-57.0		28	22.9
150	31	13,678	-57.6		28	20.6
125	31	14,828	-57.9		28	16.7
100	31	16,232	-58.6		28	11.5
80	31	17,635	-58.2		28	8.9
70	31	18,475	-58.3		29	7.0
60	31	19,444	-58.2		29	5.3
50	31	20,593	-57.8		30	4.0
40	31	22,003	-56.9		31	3.0
30	30	23,829	-56.1		31	3.8
25	29	24,991	-55.5		31	3.7
20	28	26,417	-54.5		31	4.4
15	23	28,272	-53.7		30	6.5
10	17	30,910	-50.6		28	9.6
7	9	33,295	-46.7			

GRAND JUNCTION, COLO. 854 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1,474	7.3	-1.4	13	2.6
1000	31	151				
950	31	577				
900	31	1,034				
850	31	1,511			12	2.6
800	31	2,016	9.6	-3.7	15	2.4
750	31	2,547	6.8	-5.7	23	2.2
700	31	3,112	3.0	-8.2	26	4.0
650	31	3,708	-.6	-11.9	27	6.3
600	31	4,345	-4.4	-16.9	27	7.4
550	31	5,018	-8.5	-21.2	28	9.4
500	31	5,758	-13.1	-26.0	28	11.4
450	31	6,548	-18.6	-31.2	28	13.0
400	31	7,422	-24.7	-36.9	28	14.6
350	31	8,379	-32.1	-42.6	28	15.9
300	31	9,449	-40.3	-49.1	28	17.4
250	31	10,670	-49.2		28	17.6
200	31	12,105	-57.2		28	20.2
175	30	12,943	-60.4		27	19.3
150	30	13,897	-62.7		27	17.8
125	30	15,016	-64.6		27	15.3
100	30	16,376	-64.8		28	12.7
80	30	17,742	-63.5		27	8.5
70	30	18,564	-61.8		28	6.5
60	30	19,521	-60.8		28	4.2
50	30	20,660	-59.3		28	4.2
40	29	22,065	-57.5		28	3.5
30	28	23,889	-55.6		28	3.7
25	27	25,052	-54.4		28	4.8
20	21	26,476	-53.5		28	6.3
15	14	28,324	-52.7		26	7.8

See reference note at end of table

RAWINSONDE DATA

Average monthly values

OCTOBER 1968

* GREAT FALLS, MONT. 885 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1,123	6.2	-4.3	22	4.6
1000	31	114				
950	31	538				
900	31	992				
850	31	1,460	7.3	-6.7	24	10.8
800	31	1,956	4.1	-9.0	26	9.9
750	31	2,477	1.1	-11.7	27	10.6
700	31	3,029	-2.4	-12.9	28	11.6
650	31	3,612	-6.2	-14.9	28	13.2
600	31	4,236	-9.8	-18.8	28	15.1
550	31	4,900	-13.9	-23.3	27	17.0
500	31	5,621	-18.6	-27.6	27	17.8
450	31	6,392	-23.9	-33.0	27	19.2
400	31	7,248	-30.2	-37.9	27	20.8
350	31	8,185	-36.8	-41.7	27	22.5
300	31	9,236	-43.9		27	23.9
250	31	10,441	-50.5		27	25.8
200	31	11,876	-55.9		27	25.2
175	30	12,725	-57.6		27	23.1
150	29	13,690	-58.1		27	20.6
125	28	14,835	-58.1		27	16.6
100	28	16,238	-58.4		27	11.6
80	27	17,642	-58.5		27	7.9
70	26	18,482	-57.9		27	6.7
60	26	19,454	-57.8		28	4.8
50	26	20,603	-57.8		27	5.2
40	26	22,013	-57.1		30	4.7
30	25	23,835	-56.1		32	3.8
25	22	25,002	-54.7		32	4.0
20	21	26,427	-53.9		32	4.0
15	20	28,282	-53.1		33	3.9
10	15	30,901	-50.8		34	4.5
7	8	33,240	-49.3			
5						
4						

GREEN BAY, WIS. 987 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	210	6.8	4.1	22	2.0
1000	31	104				
950	31	527	7.9	3.8	24	5.5
900	31	972	6.1	1.3	25	6.3
850	31	1,440	4.1	-2.6	25	6.3
800	31	1,931	2.0	-6.6	25	7.3
750	31	2,447	-.3	-10.4	26	8.7
700	31	3,001	-3.2	-13.8	26	10.0
650	31	3,580	-6.1	-17.7	26	11.6
600	31	4,208	-9.2	-21.0	27	12.1
550	31	4,873	-13.3	-24.9	27	12.7
500	31	5,597	-17.9	-30.6	27	13.1
450	31	6,371	-23.5	-35.3	27	13.9
400	31	7,230	-29.3	-39.7	27	15.3
350	31	8,172	-35.9	-43.7	28	17.5
300	31	9,228	-43.1	-50.4	28	19.0
250	31	10,439	-49.8		28	19.8
200	30	11,887	-54.4		28	19.4
175	30	12,741	-55.8		28	19.2
150	30	13,719	-57.4		28	18.2
125	30	14,867	-59.0		28	15.1
100	30	16,263	-59.7		27	12.3
80	30	17,663	-58.5		28	8.6
70	30	18,502	-57.9		28	7.2
60	30	19,476	-57.5		28	6.7
50	30	20,629	-56.9		28	5.2
40	29	22,045	-56.4		28	4.7
30	29	23,877	-54.6		29	5.7
25	29	25,044	-54.2		28	6.0
20	28	26,481	-53.2		28	7.3
15	27	28,338	-52.1		29	9.6
10	22	30,996	-48.8		28	12.6
7	12	33,366	-45.6			
5						
4						

GREENSBORO, N. C. 987 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	273	10.8	7.6	01	.2
1000	31	162				
950	31	595	13.2	6.4	27	1.5
900	31	1,047	11.0	4.2	27	2.1
850	31	1,522	8.9	1.4	27	3.6
800	31	2,023	6.8	-2.0	26	5.4
750	31	2,550	4.3	-5.5	26	7.1
700	31	3,111	2.0	-12.1	26	7.7
650	31	3,706	-.3	-17.5	27	7.7
600	31	4,343	-3.8	-21.1	27	8.1
550	31	5,020	-8.0	-25.8	27	9.8
500	31	5,759	-12.8	-28.5	27	12.3
450	31	6,552	-18.3	-33.9	27	14.2
400	31	7,424	-24.7	-39.5	27	16.1
350	31	8,382	-31.9	-45.3	27	17.4
300	31	9,454	-39.6	-50.0	27	19.2
250	31	10,679	-48.0		27	22.3
200	31	12,124	-55.9		27	23.4
175	31	12,968	-59.0		27	23.2
150	31	13,928	-62.0		27	21.4
125	31	15,049	-64.2		27	17.9
100	31	16,408	-64.8		27	15.4
80	30	17,775	-62.9		27	9.7
70	29	18,597	-61.7		27	7.6
60	29	19,555	-59.6		28	6.5
50	29	20,701	-57.6		28	4.5
40	29	22,114	-56.1		28	3.7
30	26	23,955	-54.0		29	3.3
25	23	25,124	-53.0		27	3.1
20	19	26,583	-51.0		28	3.8
15	19	28,460	-49.1		27	6.5
10	13	31,112	-46.2		28	10.5
7	8	33,484	-42.0			
5						
4						

* GUAM, MARIANA IS. 997 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	111	24.9	23.7	08	1.5
1000	31	86				
950	31	538	23.6	21.1	07	3.5
900	31	1,010	21.0	17.1	08	2.8
850	31	1,504	18.3	13.9	08	1.7
800	31	2,022	15.7	10.1	08	1.2
750	31	2,565	12.9	6.1	09	2.3
700	31	3,146	9.8	2.6	10	2.4
650	31	3,757	6.4	-2.9	11	2.7
600	31	4,412	2.7	-8.1	11	3.2
550	31	5,110	-1.1	-13.4	11	2.2
500	31	5,867	-5.5	-17.6	10	2.4
450	31	6,685	-10.2	-22.3	10	2.6
400	31	7,586	-15.7	-28.7	08	2.3
350	31	8,580	-22.3	-35.3	08	2.6
300	31	9,694	-30.8	-41.9	08	3.7
250	31	10,960	-41.2	-47.6	08	3.7
200	31	12,435	-53.6		10	2.9
175	28	13,280	-60.7		10	3.7
150	28	14,221	-68.3		09	5.6
125	28	15,293	-76.1		09	9.3
100	25	16,563	-81.0		09	10.6
80	24	17,829	-76.6		10	13.5
70	24	18,605	-72.3		10	13.1
60	24	19,523	-68.4		09	14.2
50	24	20,629	-63.6		09	16.9
40	24	22,010	-60.2		09	20.8
30	24	23,824	-55.9		09	22.9
25	23	24,991	-54.5		09	20.7
20	22	26,429	-51.7		09	17.1
15	20	28,319	-46.0		06	6.9
10	18	31,041	-41.5		07	2.7
7	17	33,480	-37.5		10	3.7
5	13	35,838	-34.3		10	7.9
4	9	37,393	-32.4			

HILO, HAWAII 1014 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	11	22.3	20.0	22	2.1
1000	31	129	23.6	20.5	22	2.1
950	31	578	20.9	18.2	15	2.4
900	31	1,044	17.8	15.3	13	3.1
850	31	1,532	14.8	12.1	11	2.9
800	31	2,044	12.8	6.9	10	2.9
750	31	2,589	11.1	-2.0	10	2.8
700	31	3,160	8.6	-5.4	08	2.9
650	31	3,768	5.8	-9.6	07	3.3
600	31	4,422	2.1	-12.8	06	3.6
550	31	5,114	-2.1	-16.9	04	3.3
500	31	5,871	-6.6	-21.6	03	3.0
450	31	6,684	-11.9	-26.3	03	3.8
400	31	7,579	-17.9	-32.5	02	3.3
350	31	8,565	-24.9	-40.0	33	3.0
300	31	9,669	-32.9	-46.6	31	5.1
250	31	10,926	-42.9		30	7.2
200	31	12,394	-54.2		31	8.6
175	31	13,238	-60.3		30	8.6
150	31	14,185	-67.0		31	6.5
125	31	15,268	-73.2		33	5.3
100	31	16,565	-75.2		35	2.8
80	31	17,866	-72.3		07	3.5
70	30	18,656	-69.5		09	6.1
60	30	19,583	-65.3		09	9.0
50	30	20,704	-61.3		09	9.9
40	30	22,099	-58.3		09	11.3
30	30	23,922	-55.5		09	12.6
25	28	25,091	-54.2		09	12.7
20	28	26,529	-51.8		10	11.5
15	27	28,406	-48.4		10	6.8
10	20	31,103	-41.9		27	2.5
7	11	33,541	-38.4			
5						
4						

HUNTINGTON W. VA. 990 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	246	9.3	7.2	19	.8
1000	31	159				
950	31	587	11.8	5.9	24	3.7
900	31	1,039	9.5	3.1	26	5.5
850	31	1,511	7.0	-.8	26	7.1
800	31	2,008	4.8	-4.4	26	8.4
750	31	2,528	3.3	-8.2	27	8.0
700	31	3,091	.5	-11.6	27	9.1
650	31	3,679	-2.7	-15.5	27	9.8
600	30	4,320	-5.9	-18.5	26	11.2
550	30	4,989	-9.5	-22.9	26	12.6
500	30	5,729	-14.1	-27.0	26	13.6
450	30	6,514	-19.2	-32.9	27	14.4
400	30	7,388	-25.6	-39.2	27	15.7
350	30	8,343	-33.0	-45.3	26	17.0
300	30	9,409	-41.2	-50.6	27	18.4
250	30	10,626	-48.8		27	21.2
200	30	12,068	-55.9		27	22.5
175	30	12,914	-58.1		27	21.1
150	30	13,879	-60.5		27	19.6
125	30	15,009	-62.5		27	15.9
100	30	16,381	-63.4		27	13.8
80	30	17,758	-61.4		27	10.2
70	30	18,588	-60.0		27	8.8
60	29	19,555	-58.6		28	6.8
50	28	20,706	-57.1		28	4.8
40	26	22,123	-55.7		28	4.7
30	24	23,966	-53.8		28	3.3
25	24	25,140	-52.7		29	4.0
20	20	26,596	-51.0		27	3.9
15	18	28,491	-48.8		27	5.2
10	14	31,207	-45.1			
7						
5						

* INTERNATIONAL FALLS, MINN. 967 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	360	3.9	1.7	32	.5
1000	31	83				
950	31	503	4.6	2.0	27	.8
900	31	942	3.7	-.1	28	3.4
850	31	1,405	2.1	-3.6	29	4.4
800	31	1,893	.3	-6.7	29	5.9
750	31	2,407	-2.1	-9.8	29	7.3
700	31	2,955	-4.5	-13.6	29	8.8
650	31	3,531	-7.6	-16.3	29	9.5
600	31	4,154	-11.0	-19.8	29	10.9
550	31	4,810	-14.9	-24.3	29	12.0
500	31	5,534	-19.4	-28.9	28	12.7
450	31	6,299	-24.8	-34.1	28	14.6
400	31	7,156	-30.7	-39.3	29	17.1
350	31	8,092	-37.1	-43.9	29	19.4
300	31	9,142	-44.0	-50.7	28	21.4
250	31	10,348	-50.3		28	23.8
200	31	11,789	-54.6		28	22.2
175	31	12,642	-55.3		28	20.3
150	31	13,624	-55.5		28	17.4
125	31	14,781	-57.2		28	13.3
100	31	16,189	-58.1		29	10.2
80	31	17,597	-57.4		29	7.7
70	31	18,439	-57.4		29	6.2
60	31	19,415	-57.0		29	5.3
50	31	20,569	-57.1		29	4.8
40	31	21,981	-56.9		29	4.9
30	31	23,804	-56.1		29	4.3
25	31	24,965	-55.3		28	4.7
20	30	26,383	-55.0		29	6.3
15	30	28,223	-53.9		29	8.4
10	28	30,830	-51.9		29	9.9
7	21	33,130	-49.4		29	15.0
5	8	35,339	-45.8			

JACKSON, MISS. 1006 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	94	13.2	10.9	12	.4
1000	29	152	14.4	10.5	12	.4
950	29	590	15.6	6.7	24	1.3
900	29	1,047	13.5	3.7	26	2.9
850	29	1,527	11.7	.4	27	4.7
800	29	2,033	9.7	-4.4	28	5.1
750	29	2,563	7.1	-7.0	29	6.0
700	29	3,132	4.3	-10.8	29	6.6
650	29	3,730	1.5	-15.4	29	7.2
600	29	4,374	-1.9	-19.6	29	8.3
550	29	5,054	-6.1	-23.8	29	9.9
500	29	5,802	-11.0	-28.4	28	11.0
450	29	6,600	-16.6	-32.6	28	12.6
400	29	7,481	-22.9	-38.4	28	14.8
350	29	8,446	-30.2	-44.6	28	17.0
300	29	9,524	-38.7	-50.0	28	19.2
250	29	10,752	-47.7		28	22.6
200	29	12,194	-56.9		28	23.5
175	29	13,031	-61.0		28	23.7
150	29	13,979	-64.8		27	21.7
125	29	15,084	-67.5		28	18.7
100	29	16,425	-68.1		27	12.6
80	29	17,769	-66.4		28	7.6
70	29	18,582	-63.9		27	4.7
60	29	19,533	-61.0		25	2.7
50	29	20,671	-59.0		27	3.0
40	29	22,077	-57.1		30	1.5
30	27	23,904	-54.6		30	1.2
25	27	25,076	-52.7		25	1.3
20	27	26,521	-51.0		26	1.9
15	26	28,398	-48.6		27	4.5
10	19	31,049	-44.6		29	3.9
7	5	33,585	-39.3			
5						

JACKSONVILLE, FLA. 1016 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	5	17.2	15.8	35	1.7
1000	31	144	19.3	15.2	02	2.0
950	31	586	17.9	12.9	07	3.2
900	31	1,048	15.6	8.5	10	2.2
850	31	1,532	13.4	4.4	15	1.0
800	31	2,041	11.3	.1	23	.9
750	31	2,575	8.9	-3.5	25	1.0
700	31	3,147	5.9	-6.4	27	2.6
650	31	3,747	3.1	-11.8	26	3.9
600	31	4,396	-.2	-16.4	26	4.9
550	31	5,078	-4.0	-20.4	26	6.0
500	31	5,834	-9.1	-24.9	26	8.4
450	31	6,634	-14.7	-29.7	27	10.3
400	31	7,523	-21.0	-34.7	26	11.7
350	31	8,496	-28.1	-40.1	27	14.9
300	31	9,584	-36.1	-46.8	27	16.9
250	31	10,825	-45.3		26	19.2
200	31	12,279	-55.5		27	22.3
175	31	13,120	-60.5		27	22.6
150	29	14,073	-64.9		27	20.8
125	29	15,175	-68.8		27	18.1
100	29	16,504	-70.0		28	12.5
80	29	17,843	-66.1		28	5.6
70	29	18,655	-64.2		27	4.0
60	29	19,605	-61.0		27	3.2
50	29	20,746	-58.2		27	.7
40	28	22,155	-56.2		11	.8
30	28	23,993	-53.6		04	.8
25	28	25,169	-52.1		08	1.5
20	27	26,617	-50.6		13	.4
15	26	28,505	-47.9		22	1.0
10	22	31,196	-43.5		27	3.1
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JOHN F. KENNEDY INT. AP NY 1018 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	5	12.4	7.5	29	2.1
1000	31	152	12.4	7.3	29	3.1
950	31	585	10.4	4.9	29	5.2
900	31	1,031	8.5	2.1	29	5.4
850	31	1,502	6.3	-1.2	29	6.0
800	31	1,998	4.6	-7.2	27	7.4
750	31	2,524	2.3	-10.9	26	9.2
700	31	3,078	-.3	-14.3	27	10.4
650	31	3,670	-3.2	-17.0	27	11.6
600	31	4,297	-6.5	-20.8	27	13.9
550	31	4,969	-10.5	-24.8	27	14.9
500	31	5,700	-15.2	-29.2	27	16.3
450	31	6,486	-20.5	-33.2	27	18.9
400	31	7,351	-26.5	-39.7	27	20.6
350	31	8,302	-33.4	-43.5	27	20.7
300	31	9,368	-41.1	-48.4	27	23.7
250	31	10,586	-48.9		27	22.1
200	31	12,025	-56.1		27	23.4
175	31	12,870	-58.3		28	22.4
150	31	13,835	-59.9		27	21.2
125	31	14,969	-61.2		28	18.0
100	30	16,351	-61.8		28	12.5
80	29	17,742	-60.0		27	9.0
70	29	18,577	-59.0		27	6.8
60	29	19,547	-57.8		27	5.1
50	29	20,699	-56.7		28	4.2
40	29	22,116	-55.7		28	4.1
30	28	23,949	-54.4		28	4.1
25	26	25,123	-53.3		28	5.5
20	23	26,561	-51.7		29	6.5
15	22	28,439	-49.1		27	8.5
10	11	31,127	-45.3			
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JOHNSTON IS., PACIFIC AREA 1012 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	3	27.1	23.2	10	3.8
1000	31	105	26.2	22.8	10	4.2
950	31	556	22.8	20.5	11	4.6
900	31	1,027	20.0	16.3	11	4.4
850	31	1,520	17.4	12.4	11	4.0
800	31	2,037	14.8	8.1	11	3.4
750	31	2,582	12.0	5.5	11	3.2
700	31	3,158	9.6	-3.7	11	3.7
650	31	3,768	6.5	-7.3	12	3.5
600	31	4,423	2.5	-11.6	11	3.4
550	31	5,114	-1.8	-15.7	12	2.7
500	31	5,875	-6.2	-20.2	12	2.5
450	31	6,687	-11.3	-26.5	13	1.0
400	31	7,587	-17.3	-30.8	25	2.0
350	31	8,576	-23.8	-37.3	25	4.9
300	31	9,684	-32.0	-44.8	26	6.3
250	31	10,947	-41.8		26	6.8
200	31	12,421	-53.7		28	7.0
175	31	13,267	-60.3		29	6.4
150	31	14,212	-67.3		31	3.4
125	31	15,292	-74.5		35	1.6
100	30	16,575	-77.6		05	3.5
80	28	17,858	-74.8		08	6.6
70	26	18,640	-71.1		08	8.9
60	26	19,560	-66.8		09	11.8
50	25	20,675	-62.6		09	13.4
40	24	22,063	-59.0		09	14.8
30	24	23,884	-55.4		09	15.5
25	22	25,047	-53.7		09	14.9
20	22	26,488	-51.2		09	12.3
15	18	28,372	-47.1		09	6.7
10	15	31,088	-40.9		25	4.5
7	8	33,488	-39.3			
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KEY WEST, FLA. 1013 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	3	24.8	22.0	08	1.9
1000	29	117	24.0	21.4	09	2.7
950	29	565	21.0	18.7	10	3.7
900	29	1,033	18.3	15.1	13	3.3
850	29	1,521	15.6	10.2	15	3.5
800	29	2,035	13.2	7.5	18	3.0
750	29	2,572	10.8	2.1	18	2.8
700	29	3,149	8.1	-3.3	20	2.7
650	29	3,752	4.8	-7.1	21	2.4
600	29	4,406	1.2	-12.6	23	1.9
550	29	5,096	-2.8	-16.7	24	2.0
500	29	5,850	-7.3	-21.1	27	2.7
450	29	6,655	-12.8	-25.4	26	3.8
400	29	7,552	-18.9	-31.4	26	6.3
350	29	8,532	-26.0	-37.8	25	8.8
300	29	9,630	-34.0	-45.6	25	11.1
250	29	10,880	-43.9		24	15.2
200	29	12,338	-55.8		25	19.2
175	29	13,175	-62.0		25	17.5
150	29	14,115	-67.7		25	16.5
125	29	15,196	-73.3		26	14.0
100	29	16,495	-74.0		27	8.3
80	27	17,810	-70.1		29	.7
70	27	18,609	-66.7		07	1.7
60	27	19,551	-62.7		10	3.1
50	27	20,684	-59.8		10	3.4
40	27	22,086	-57.3		07	4.8
30	27	23,917	-54.7		09	5.9
25	27	25,087	-53.7		08	6.7
20	27	26,528	-51.6		09	6.1
15	25	28,413	-48.2		09	6.6
10	21	31,123	-42.6		15	.4
7	19	33,550	-38.7		25	6.6
5	9	35,893	-32.7			

KING SALMON, ALASKA 999 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	15	-3.7	-6.2	07	.3
1000	31	5			27	.9
950	31	415	-1.1	-5.3	34	2.7
900	31	844	-3.3	-7.9	31	2.5
850	31	1,295	-5.6	-12.3	30	3.3
800	31	1,769	-8.1	-16.0	29	4.0
750	31	2,267	-11.0	-20.9	29	5.1
700	31	2,795	-13.9	-24.6	29	5.3
650	31	3,352	-17.2	-27.8	28	5.5
600	31	3,951	-21.0	-30.8	28	5.8
550	31	4,582	-25.3	-34.8	28	6.2
500	31	5,275	-29.8	-38.4	27	6.9
450	31	6,013	-34.9	-42.8	27	8.4
400	31	6,832	-40.0	-45.1	27	9.4
350	31	7,733	-45.6		27	11.0
300	31	8,749	-50.3		27	12.3
250	31	9,932	-52.2		27	13.6
200	31	11,385	-49.8		27	14.5
175	31	12,259	-49.3		27	14.5
150	31	13,270	-49.2		26	13.8
125	31	14,464	-49.5		26	12.6
100	31	15,925	-49.6		26	13.2
80	31	17,385	-49.8		25	11.6
70	31	18,258	-49.8		25	11.6
60	31	19,266	-50.2		25	12.0
50	31	20,455	-50.3		25	11.0
40	31	21,910	-50.8		25	9.3
30	31	23,785	-50.2		25	9.2
25	31	24,978	-49.6		26	9.7
20	29	26,431	-48.9		26	9.3
15	26	28,323	-48.5		27	8.6
10	11	31,014	-47.9			
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* KOROR, CAROLINE IS. 1007 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	30	28.4	24.3	27	1.1
1000	31	93	27.7	23.6	28	1.1
950	31	545	23.9	19.8	28	2.4
900	31	1,019	20.9	15.7	28	3.7
850	31	1,512	17.8	12.3	27	5.0
800	31	2,030	15.4	8.9	27	5.0
750	31	2,572	12.8	4.0	26	4.2
700	31	3,153	9.9	-.3	25	3.6
650	31	3,763	6.6	-4.7	25	2.6
600	31	4,420	3.0	-8.9	25	1.8
550	31	5,115	-.8	-13.2	19	1.3
500	31	5,876	-5.2	-18.5	15	1.0
450	31	6,694	-9.8	-24.2	12	2.0
400	31	7,599	-15.3	-31.7	12	2.4
350	31	8,595	-22.0	-37.9	11	3.1
300	31	9,710	-30.5	-45.4	10	4.4
250	31	10,978	-40.8	-53.0	10	5.6
200	31	12,456	-53.4		10	8.2
175	31	13,301	-60.4		09	10.2
150	31	14,245	-67.8		08	13.1
125	31	15,320	-75.3		08	15.1
100	31	16,595	-79.7		09	14.2
80	31	17,873	-74.7		09	10.6
70	31	18,656	-70.9		09	9.3
60	31	19,577	-67.1		09	11.2
50	29	20,687	-63.4		09	17.6
40	29	22,070	-59.7		09	25.8
30	28	23,894	-53.6		09	30.1
25	26	25,076	-49.0		10	18.7
20	26	26,550	-46.1		10	4.8
15	22	28,475	-43.2		26	5.3
10	18	31,243	-38.2		25	5.4
7	12	33,705	-35.5			
5	5	36,026	-31.9			

KOTZEBUE, ALASKA 1001 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	24	5	-6.0	-8.9	10	7.1
1000	24	15			09	5.7
950	24	413	-5.5	-9.4	12	8.6
900	24	840	-7.3	-10.2	14	7.0
850	24	1,284	-9.2	-12.9	14	5.8
800	24	1,751	-11.3	-17.0	15	5.2
750	24	2,242	-13.8	-21.0	16	5.2
700	24	2,766	-16.7	-25.2	15	4.7
650	24	3,316	-19.8	-28.7	17	4.4
600	24	3,909	-23.6	-32.2	18	4.4
550	24	4,536	-27.8	-36.5	16	5.9
500	24	5,218	-32.7	-40.8	17	5.8
450	24	5,950	-38.1	-42.9	19	5.4
400	24	6,754	-43.9		19	6.5
350	24	7,638	-49.9		19	8.3
300	24	8,633	-55.5		20	9.2
250	24	9,787	-57.3		20	9.6
200	23	11,217	-53.4		21	8.7
175	23	12,079	-52.1		21	8.4
150	23	13,077	-51.6		22	9.6
125	23	14,259	-51.6		23	9.7
100	23	15,708	-51.5		22	10.6
80	23	17,155	-52.1		23	12.7
70	23	18,018	-52.4		23	14.1
60	23	19,014	-52.6		24	14.7
50	23	20,200	-52.7		24	15.4
40	21	21,636	-52.5		24	17.5
30	19	23,486	-52.5		24	22.0
25	19	24,664	-52.0		25	22.6
20	19	26,110	-51.3		25	25.6
15	18	27,972	-50.9		25	30.4
10	7	30,568	-48.7			
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See reference note at end of table

KWAJALEIN, MARSHALL IS. 1010 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	4	27.3	23.5	06	1.4
1000	31	94	26.7	22.7	07	1.3
950	31	546	23.3	20.1	07	1.5
900	31	1,017	20.4	15.9	07	1.5
850	31	1,510	17.7	12.8	08	1.8
800	31	2,028	15.2	10.6	08	2.6
750	31	2,573	12.6	6.2	08	3.2
700	31	3,150	[illegible].6	1.9	09	3.7
650	31	3,763	6.3	-3.1	09	4.3
600	31	4,416	2.7	-7.2	10	4.9
550	31	5,116	-1.1	-11.7	10	5.1
500	31	5,870	-5.4	-18.0	10	4.2
450	31	6,690	-10.1	-23.0	10	3.9
400	31	7,588	-15.9	-27.8	10	3.9
350	31	8,581	-22.6	-34.0	11	2.7
300	31	9,694	-31.1	-42.9	10	3.5
250	31	10,959	-41.3	-50.2	09	5.[illegible]
200	31	12,433	-53.7	-61.2	08	[illegible].2
175	31	13,278	-60.4	-68.2	08	5.8
150	30	14,221	-67.8		07	[illegible].9
125	30	15,297	-75.2		08	5.1
100	27	16,568	-80.[illegible]		09	9.4
80	25	17,841	-75.8		09	8.5
70	23	18,620	-72.1		09	10.3
60	23	19,538	-67.8		09	12.9
50	23	20,644	-63.9		09	16.3
40	23	22,021	-60.[illegible]		09	23.4
30	22	23,830	-55.2		09	28.7
25	22	25,002	-52.3		09	24.[illegible]
20	21	26,465	-48.2		09	7.1
15	19	28,381	-44.5		28	2.1
10	19	31,124	-40.0		31	1.6
7	17	33,583	-36.3		17	3.6
5	7	35,940	-32.5			
4						

LAKE CHARLES, LA. 1016 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	5	15.6	14.3	05	1.4
1000	31	143	18.9	13.5	07	2.6
950	31	583	17.6	11.1	11	1.4
900	31	1,045	15.3	7.6	22	.[illegible]
850	31	1,528	13.6	2.0	28	1.9
800	31	2,038	11.4	-2.3	29	2.7
750	31	2,574	8.9	-6.0	29	4.3
700	31	3,143	5.9	-8.2	30	4.9
650	31	3,741	2.8	-12.8	30	4.8
600	31	4,391	-.6	-17.1	30	5.7
550	31	5,076	-4.4	-23.1	30	7.0
500	31	5,827	-9.3	-27.5	29	8.1
450	31	6,628	-14.9	-32.8	29	9.4
400	31	7,515	-21.4	-37.7	28	11.7
350	31	8,485	-28.7	-43.7	28	14.0
300	31	9,570	-37.1	-49.0	28	15.7
250	31	10,805	-46.[illegible]		28	19.2
200	31	12,255	-56.2		28	20.6
175	31	13,094	-60.7		28	21.1
150	31	14,043	-65.1		27	21.[illegible]
125	31	15,143	-68.5		28	17.5
100	31	16,475	-70.0		27	11.8
80	31	17,808	-67.[illegible]		29	5.4
70	31	18,617	-64.7		29	2.4
60	31	19,566	-61.6		27	1.1
50	31	20,703	-59.0		23	1.2
40	31	22,110	-56.[illegible]		36	.5
30	29	23,948	-54.3		05	1.3
25	27	25,119	-52.7		08	1.5
20	25	26,568	-50.3		10	1.7
15	22	28,461	-47.[illegible]		35	1.3
10	17	31,163	-43.[illegible]		30	1.0
7	11	33,600	-38.6			
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LANDER, WYO. 829 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1,696	4.3	-5.2	23	1.3
1000	31	139				
950	31	568				
900	31	1,014				
850	31	1,490				
800	31	1,987	7.0	-7.4	22	1.2
750	31	2,515	4.3	-9.7	28	2.8
700	31	3,074	1.0	-12.9	28	6.9
650	31	3,661	-2.9	-15.9	28	10.0
600	31	4,296	-6.5	-19.7	29	11.7
550	31	4,963	-10.7	-24.0	29	12.9
500	31	5,698	-15.5	-28.7	29	14.7
450	31	6,478	-21.1	-33.2	29	16.6
400	31	7,346	-27.2	-39.2	28	18.8
350	31	8,294	-34.5	-44.6	28	19.3
300	31	9,354	-42.4	-48.6	27	21.0
250	31	10,565	-50.7		27	23.8
200	31	11,993	-58.1		27	23.9
175	30	12,834	-59.1		27	22.1
150	30	13,796	-61.0		28	19.2
125	30	14,925	-62.3		27	17.7
100	30	16,299	-63.4		27	12.1
80	30	17,677	-61.7		28	8.8
70	30	18,505	-60.7		27	7.2
60	30	19,466	-60.1		28	5.5
50	30	20,605	-59.3		29	4.[illegible]
40	30	22,008	-57.[illegible]		27	4.0
30	30	23,827	-56.4		29	3.3
25	29	24,989	-55.5		29	3.2
20	28	26,414	-54.3		28	3.7
15	26	28,258	-53.0		31	5.1
10	13	30,927	-48.4			
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*** LIHUE KAUAI, HAWAII 1011 MB**

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	36	23.1	20.9	36	.2
1000	31	129	24.0	21.0	05	1.2
950	31	578	21.7	19.0	09	3.3
900	31	1,048	18.6	15.6	10	3.6
850	31	1,537	16.0	10.7	10	3.4
800	31	2,052	13.9	5.9	11	3.1
750	31	2,592	11.5	-2.2	10	2.9
700	31	3,170	9.1	-4.6	09	1.7
650	31	3,777	5.7	-7.4	09	.8
600	31	4,431	1.9	-10.8	27	.4
550	31	5,123	-2.2	-14.9	28	.8
500	31	5,881	-6.6	-19.7	30	.9
450	31	6,693	-11.8	-25.4	27	1.6
400	31	7,590	-17.9	-32.7	28	1.6
350	31	8,574	-25.4	-38.7	28	2.7
300	31	9,673	-33.8	-46.1	29	4.7
250	31	10,925	-43.4		28	[illegible]
200	31	12,390	-54.7		29	8.3
175	31	13,232	-60.8		29	7.9
150	31	14,176	-67.0		30	7.[illegible]
125	31	15,259	-73.2		31	[illegible].4
100	31	16,552	-76.0		33	[illegible].9
80	30	17,850	-72.0		06	3.1
70	30	18,642	-68.6		09	[illegible].0
60	30	19,574	-64.[illegible]		08	6.0
50	[illegible]	20,695	-61.7		09	8.0
40	30	22,088	-58.8		09	[illegible].0
30	30	23,905	-56.3		08	9.0
25	30	25,067	-54.8		09	[illegible].6
20	30	26,502	-52.7		09	[illegible].8
15	29	28,369	-50.2		09	8.6
10	28	31,058	-43.8		12	2.0
7	23	33,481	-39.7		28	5.2
5	15	35,788	-37.1		28	11.3
4	6	37,335	-36.4			

LITTLE ROCK, ARK. 1008 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	79	12.2	9.5	30	1.0
1000	31	146	13.3	9.0	28	1.0
950	31	582	14.3	7.2	24	3.2
900	31	1,036	12.5	3.4	27	4.3
850	31	1,515	11.2	-1.6	28	5.8
800	31	2,020	9.3	-4.4	28	6.9
750	31	2,553	7.0	-7.9	28	7.7
700	31	3,119	4.3	-11.0	28	8.2
650	31	3,717	.9	-14.5	28	8.2
600	31	4,359	-2.7	-18.0	29	10.1
550	31	5,039	-6.8	-23.1	28	11.2
500	31	5,783	-11.7	-28.0	28	12.5
450	31	6,575	-17.0	-33.2	28	13.4
400	31	7,457	-23.5	-38.7	28	15.3
350	31	8,420	-30.7	-43.5	28	16.9
300	31	9,497	-38.9	-49.7	28	19.[illegible]
250	31	10,724	-47.9		28	21.1
200	31	12,167	-56.6		28	23.7
175	31	13,006	-60.4		28	24.4
150	30	13,958	-63.0		27	22.0
125	30	15,073	-65.1		28	16.2
100	29	16,426	-66.[illegible]		27	12.6
80	29	17,783	-64.9		28	8.1
70	29	18,601	-62.5		28	5.9
60	29	19,559	-59.[illegible]		28	[illegible].5
50	29	20,704	-57.[illegible]		27	[illegible].4
40	29	22,114	-56.6		28	3.[illegible]
30	29	23,947	-54.5		28	[illegible].7
25	29	25,117	-53.3		[illegible]	3.[illegible]
20	29	26,558	-51.8		28	4.0
15	28	28,430	-49.[illegible]		28	[illegible].4
10	23	31,097	-46.1		28	9.[illegible]
7	8	33,492	-43.2			

MCGRATH, ALASKA 991 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	20	103	-8.5	-11.7	04	.4
1000	20	30				
950	20	435	-6.0	-8.6	07	2.0
900	20	854	-6.4	-8.9	09	2.0
850	20	1,300	-7.2	-11.7	13	1.8
800	20	1,771	-9.1	-15.7	17	2.3
750	20	2,266	-11.[illegible]	-18.7	19	1.2
700	20	2,794	-14.9	-22.1	20	1.[illegible]
650	20	3,345	-18.5	-26.[illegible]	20	2.6
600	20	3,943	-22.8	-30.2	21	3.0
550	20	4,572	-27.2	-34.4	21	3.3
500	20	5,255	-31.[illegible]	-39.3	21	3.[illegible]
450	20	5,990	-36.9	-43.4	21	4.1
400	20	6,796	-42.[illegible]		21	4.5
350	20	7,686	-48.3		24	4.[illegible]
300	20	8,689	-53.3		24	5.2
250	19	9,853	-55.0		23	7.7
200	19	11,286	-51.9		23	9.3
175	19	12,153	-51.[illegible]		23	9.8
150	19	13,155	-50.7		23	10.8
125	19	14,343	-50.6		23	11.4
100	19	15,797	-50.3		23	12.5
80	19	17,253	-50.6		24	12.[illegible]
70	19	18,122	-50.7		24	13.1
60	19	19,127	-50.7		23	15.1
50	19	20,314	-50.9		24	14.8
40	19	21,767	-50.6		24	15.4
30	19	23,644	-50.5		24	15.0
25	18	24,836	-50.6		24	14.4
20	17	26,296	-49.8		25	16.4
15	16	28,184	-49.0		26	17.[illegible]
10	[illegible]	30,833	-48.7			
7						
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• MAJURO, MARSHALL IS. 1011 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	3	28.8	24.6	16	.2
1000	31	100	27.2	21.9	15	.5
950	31	547	23.4	18.7	14	1.2
900	31	1,023	20.[illegible]	15.3	14	1.4
850	31	1,516	18.[illegible]	11.7	12	1.6
800	31	2,034	15.4	7.8	11	2.6
750	31	2,578	12.8	3.7	10	3.3
700	31	3,157	9.[illegible]	-.7	10	3.3
650	31	3,767	6.3	-4.5	10	3.6
600	31	4,422	2.7	-9.4	09	4.1
550	30	5,112	-1.0	-13.8	08	4.5
500	30	5,878	-5.1	-18.0	09	4.8
450	30	6,692	-9.7	-22.9	09	4.8
400	30	7,602	-15.1	-28.4	08	3.7
350	30	8,598	-21.9	-35.9	08	4.0
300	30	9,715	-30.1	-44.1	09	3.8
250	30	10,987	-40.1	-50.7	10	4.3
200	30	12,472	-52.2		09	5.6
175	30	13,322	-59.3		08	5.9
150	30	14,271	-66.4		08	5.8
125	30	15,356	-73.6		08	4.3
100	29	16,638	-78.[illegible]		08	7.9
80	29	17,922	-74.3		08	8.2
70	28	18,705	-70.5		08	8.7
60	27	19,626	-66.9		08	11.6
50	27	20,739	-62.[illegible]		09	17.1
40	27	22,130	-58.2		09	25.4
30	25	23,960	-53.0		09	27.7
25	24	25,145	-48.4		09	16.7
20	22	26,635	-44.0		13	2.7
15	19	28,576	-41.5		27	2.7
10	14	31,313	-38.7		25	3.4
7	6	33,753	-35.5			
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*** MEDFORD, OREG. 971 MB**

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	401	8.7	4.6	16	.6
1000	31	152				
950	31	583	9.4	4.6	18	.7
900	31	1,028	9.[illegible]	2.0	18	2.0
850	31	1,502	8.1	-2.4	20	2.8
800	31	2,001	5.6	-6.0	23	4.8
750	31	2,527	3.1	-10.2	25	7.0
700	31	3,084	.4	-14.2	26	8.3
650	31	3,674	-2.[illegible]	-18.4	27	10.1
600	31	4,305	-6.3	-20.8	27	13.2
550	31	4,974	-10.[illegible]	-23.7	27	14.6
500	31	5,709	-15.0	-27.8	27	15.9
450	31	6,493	-20.4	-31.9	27	16.9
400	31	7,362	-26.5	-37.4	27	18.7
350	31	8,314	-33.5	-43.9	27	20.9
300	31	9,380	-41.3	-50.5	27	22.3
250	31	10,595	-50.[illegible]		27	22.7
200	31	12,026	-58.1		27	24.6
175	31	12,863	-60.3		27	23.0
150	31	13,821	-61.7		27	21.0
125	31	14,948	-62.2		27	19.5
100	31	16,324	-62.6		27	15.4
80	31	17,704	-61.6		27	11.2
70	31	18,532	-60.4		27	8.6
60	31	19,492	-59.[illegible]		27	6.6
50	30	20,637	-58.[illegible]		28	5.2
40	30	22,039	-58.4		30	3.6
30	29	23,851	-56.8		30	2.7
25	28	25,011	-55.4		30	3.0
20	28	26,439	-54.0		31	2.9
15	27	28,293	-52.1		33	3.0
10	25	30,933	-49.8		32	4.4
7	17	33,289	-47.0		28	8.3
5	6	35,702	-41.4			

MERIDA, MEXICO 1013 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	11	20.7	20.2	06	1.7
1000	31	125	23.4	21.6	07	3.1
950	31	572	21.9	18.5	08	4.6
900	31	1,044	19.5	14.2	07	4.0
850	31	1,534	16.8	9.6	06	3.2
800	31	2,050	14.3	5.1	08	2.6
750	31	2,588	11.6	2.0	08	2.5
700	31	3,167	8.6	-3.5	08	1.9
650	31	3,773	5.4	-8.4	09	1.3
600	31	4,428	1.7	-11.8	05	1.5
550	31	5,115	-2.[illegible]	-16.7	03	1.8
500	31	5,876	-6.7	-21.7	04	1.1
450	31	6,689	-11.6	-28.2	31	.8
400	30	7,588	-17.5	-33.1	27	2.0
350	30	8,573	-24.[illegible]	-39.5	27	4.2
300	30	9,678	-32.7	-46.7	25	7.[illegible]
250	30	10,936	-42.4		26	9.0
200	30	12,405	-54.2		28	8.4
175	30	13,248	-60.[illegible]		28	8.9
150	30	14,191	-67.2		29	7.5
125	30	15,272	-73.5		30	6.2
100	30	16,564	-75.7		33	3.5
80	30	17,870	-70.3		04	2.2
70	30	18,670	-66.7		08	4.1
60	30	19,609	-64.3		09	6.1
50	30	20,735	-60.0		08	7.9
40	30	22,140	-56.[illegible]		08	10.2
30	29	23,980	-54.0		08	12.0
25	26	25,158	-53.3		08	12.9
20	24	26,602	-51.1		08	11.9
15	18	28,486	-46.[illegible]		09	9.1

MIAMI, FLA. 1014 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	4	23.0	20.4	05	1.0
1000	31	123	23.4	20.5	06	2.0
950	31	574	20.8	17.9	10	2.8
900	31	1,038	18.3	14.6	14	3.1
850	31	1,527	15.9	9.7	17	3.2
800	31	2,041	13.3	6.9	19	4.0
750	31	2,584	11.0	2.0	21	4.3
700	31	3,156	8.1	-2.5	22	4.1
650	31	3,766	5.0	-6.9	22	3.9
600	31	4,415	1.4	-12.3	23	3.0
550	31	5,105	-2.7	-18.0	25	3.3
500	31	5,862	-7.3	-22.4	26	3.8
450	31	6,672	-12.7	-27.1	27	4.7
400	31	7,566	-18.5	-31.4	26	6.2
350	31	8,549	-25.3	-36.7	26	9.5
300	31	9,651	-33.5	-44.7	[illegible]	12.1
250	31	10,904	-43.4		[illegible]	14.8
200	31	12,370	-54.8		26	18.7
175	31	13,212	-61.1		26	18.8
150	30	14,157	-67.1		26	17.5
125	30	15,243	-72.1		28	14.4
100	30	16,548	-73.3		28	7.4
80	30	17,864	-69.1		29	1.5
70	30	18,668	-65.8		20	.3
60	29	19,609	-62.1		10	1.9
50	29	20,743	-59.2		09	2.1
40	29	22,149	-56.4		07	3.2
30	29	23,985	-53.9		08	4.8
25	27	25,163	-52.2		09	5.3
20	27	26,611	-50.2		09	4.6
15	23	28,501	-47.2		08	4.3
10	15	31,240	-40.6		11	3.1
7	7	33,686	-36.9			

MIDLAND, TEXAS 917 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	874	12.7	8.4	17	1.0
1000	31	135				
950	31	569				
900	31	1,030	15.8	[illegible].2	17	2.4
850	31	1,517	16.3	3.[illegible]	20	4.0
800	31	2,032	14.6	-.5	24	3.[illegible]
750	31	2,572	11.4	-3.8	26	4.3
700	31	3,147	7.3	-7.9	27	4.0
650	31	3,752	3.7	-12.3	26	5.3
600	31	4,399	-.2	-17.[illegible]	27	7.[illegible]
550	31	5,079	-4.4	-22.2	27	8.[illegible]
500	31	5,834	-9.2	-26.[illegible]	28	9.3
450	31	6,635	-15.0	-31.7	27	10.[illegible]
400	31	7,520	-21.9	-36.[illegible]	27	12.3
350	31	8,489	-29.5	-43.8	27	13.7
300	31	9,570	-38.3	-49.6	28	14.8
250	31	10,800	-47.5		27	17.0
200	31	12,244	-56.6		27	19.9
175	31	13,082	-61.2		27	21.5
150	31	14,029	-65.5		28	21.3
125	30	15,133	-68.6		27	18.[illegible]
100	30	16,463	-70.0		28	12.[illegible]
80	30	17,798	-67.5		28	7.5
70	30	18,606	-64.6		28	4.3
60	30	19,552	-61.9		29	2.3
50	29	20,688	-59.5		24	2.1
40	29	22,089	-57.5		31	.5
30	27	23,915	-55.1		34	.2
25	25	25,083	-53.9		16	.1
20	25	26,520	-52.5		33	.[illegible]
15	23	28,395	-49.7		29	1.9
10	15	31,067	-45.5		29	5.[illegible]
7	6	33,439	-43.7			
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MONTGOMERY, ALA. 1011 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	61	12.7	10.2	03	.7
1000	31	151	14.7	11.1	07	1.0
950	31	589	16.1	9.0	09	1.3
900	31	1,048	14.1	5.8	25	.7
850	31	1,529	12.0	2.5	27	2.6
800	31	2,035	10.3	-2.6	28	3.4
750	31	2,568	8.0	-5.9	29	3.6
700	31	3,138	4.7	-9.5	28	4.4
650	31	3,739	1.[illegible]	-14.4	28	5.4
600	31	4,381	-1.3	-19.5	27	7.4
550	31	5,064	-5.[illegible]	-22.9	27	8.9
500	31	5,811	-10.[illegible]	-26.6	27	10.7
450	31	6,615	-15.[illegible]	-32.1	27	12.4
400	31	7,493	-22.[illegible]	-37.5	27	13.2
350	31	8,462	-29.1	-42.5	27	15.9
300	31	9,545	-37.[illegible]	-48.5	27	18.3
250	31	10,779	-46.6		27	21.8
200	31	12,228	-56.0		27	24.0
175	31	13,068	-60.7		27	22.9
150	31	14,020	-64.1		27	21.6
125	31	15,127	-67.2		27	18.4
100	31	16,469	-67.7		27	13.4
80	31	17,817	-65.[illegible]		28	6.8
70	31	18,632	-63.4		27	4.7
60	31	19,585	-61.2		26	3.7
50	31	20,725	-58.[illegible]		28	3.0
40	31	22,136	-56.2		31	1.6
30	30	23,972	-54.1		23	.5
25	30	25,146	-52.3		28	.7
20	30	26,594	-50.3		26	1.5
15	29	28,481	-48.1		28	3.2
10	26	31,187	-43.[illegible]		27	3.4
7	19	33,611	-39.[illegible]		27	8.1
5	[illegible]	35,886	-36.3			

*** NANTUCKET, MASS. 1015 MB**

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	28	14	11.9	10.[illegible]	31	2.4
1000	28	141	12.8	9.1	28	3.4
950	28	569	10.[illegible]	5.2	28	6.2
900	28	1,019	7.9	[illegible].0	28	6.8
850	28	1,489	5.5	-3.7	28	7.6
800	28	1,983	3.4	-8.[illegible]	27	9.2
750	28	2,502	1.2	-11.[illegible]	27	11.1
700	28	3,058	-1.4	-15.6	28	11.6
650	28	3,641	-4.2	-19.1	27	13.0
600	28	4,272	-7.[illegible]	-21.[illegible]	27	14.3
550	28	4,935	-11.5	-25.5	27	14.9
500	28	5,669	-16.2	-29.[illegible]	27	17.2
450	28	6,441	-21.7	-34.2	27	20.1
400	28	7,313	-27.[illegible]	-40.1	26	22.9
350	28	8,262	-33.[illegible]	-44.0	26	25.5
300	28	9,327	-41.[illegible]	-47.0	26	27.8
250	28	10,546	-48.8		26	29.7
200	28	11,987	-56.1		26	28.6
175	28	12,832	-58.0		26	26.1
150	28	13,800	-59.3		27	23.2
125	28	14,939	-60.6		26	17.8
100	28	16,326	-60.8		26	15.2
80	28	17,720	-59.1		26	10.6
70	28	18,558	-58.3		26	9.2
60	28	19,531	-57.5		26	9.1
50	28	20,684	-56.[illegible]		26	7.7
40	27	22,099	-56.5		27	7.2
30	27	23,931	-54.[illegible]		27	6.4
25	27	25,098	-53.[illegible]		28	7.5
20	24	26,510	-52.9		28	9.5
15	22	28,371	-51.3		27	11.9
10	20	31,017	-48.3		27	16.0
7	14	33,318	-46.0		27	21.9
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NASHVILLE, TENN. 998 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	180	10.9	9.3	12	.3
1000	31	159				
950	31	590	12.9	6.8	23	2.8
900	31	1,043	10.7	4.4	25	5.1
850	31	1,518	8.4	.8	26	7.2
800	31	2,018	6.7	-4.3	26	7.3
750	31	2,547	4.7	-8.4	26	7.9
700	31	3,107	1.8	-12.2	27	8.3
650	31	3,700	-1.1	-16.6	27	9.2
600	31	4,336	-4.7	-21.2	27	10.4
550	31	5,012	-8.7	-24.1	27	11.2
500	31	5,749	-13.6	-29.1	27	12.7
450	31	6,540	-19.0	-34.4	27	14.2
400	31	7,410	-25.1	-38.8	27	16.3
350	31	8,367	-32.1	-44.3	27	17.7
300	31	9,438	-39.9	-51.8	28	19.5
250	31	10,661	-48.5		[illegible]	22.2
200	31	12,102	-56.5		27	24.5
175	31	12,943	-59.3		27	25.0
150	31	13,903	-61.7		27	22.3
125	31	15,025	-63.9		27	17.9
100	31	16,390	-64.5		27	14.7
80	31	17,734	-63.6		27	8.7
70	31	18,577	-61.6		26	6.9
60	[illegible]	19,532	-59.4		27	5.6
50	30	20,679	-57.6		29	4.6
40	30	22,092	-56.1		28	3.5
30	28	23,938	-54.0		30	2.2
25	28	25,112	-52.3		30	2.4
20	27	26,560	-50.9		27	3.4
15	26	28,448	-48.5		28	5.9
10	23	31,137	-44.9		27	8.9

*** NOME, ALASKA 999 MB**

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	[illegible]	-2.[illegible]	-6.7	10	3.3
1000	31	-5			10	1.8
950	31	402	-2.9	-6.5	12	5.1
900	31	830	-5.4	-8.2	14	4.8
850	31	1,277	-7.[illegible]	-11.6	14	3.7
800	31	1,747	-10.5	-15.1	15	3.7
750	31	2,241	-13.2	-18.6	17	3.9
700	31	2,764	-16.1	-22.6	18	3.9
650	31	3,316	-19.[illegible]	-26.5	18	4.1
600	31	3,910	-23.4	-31.6	18	4.4
550	31	4,535	-27.8	-35.4	18	4.5
500	31	5,221	-32.7	-40.1	19	4.9
450	31	5,952	-38.0	-44.5	19	5.0
400	31	6,760	-43.2	-47.2	19	5.5
350	31	7,649	-48.5		20	5.7
300	31	8,651	-53.7		22	6.8
250	31	9,819	-54.5		23	7.7
200	31	11,259	-51.0		24	8.7
175	31	12,129	-50.4		25	8.9
150	31	13,135	-50.4		25	9.7
125	30	14,327	-50.[illegible]		25	10.3
100	30	15,782	-50.6		25	10.3
80	30	17,234	-50.9		25	11.7
70	30	18,103	-51.0		25	11.9
60	30	19,106	-51.3		25	12.4
50	[illegible]	20,290	-51.1		25	13.9
40	[illegible]	21,741	-51.[illegible]		25	15.2
30	30	23,613	-50.8		25	17.1
25	29	24,811	-50.7		25	17.7
20	29	26,264	-50.4		26	19.4
15	27	28,130	-49.[illegible]		26	21.4
10	21	30,762	-48.0		26	26.5
7	13	33,147	-48.0			

See reference note at end of table

RAWINSONDE DATA

Average monthly values

NORTH PLATTE, NEBR. 916 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	848	4.0	-.8	29	2.0
1000	31	124				
950	31	547				
900	31	989	[illegible].5	.6	30	4.3
850	31	1,466	11.0	-3.1	32	7.7
800	31	1,970	8.9	-6.2	32	8.5
750	31	2,499	5.7	-9.7	31	9.3
700	31	3,062	2.3	-12.7	31	10.5
650	31	3,651	-1.4	-14.1	30	11.0
600	31	4,290	-5.7	-16.8	29	12.8
550	31	4,958	-9.8	-20.3	29	13.5
500	31	5,696	-14.7	-25.8	29	14.7
450	31	6,480	-20.1	-31.[illegible]	29	16.7
400	31	7,350	-26.3	-37.3	29	17.8
350	31	8,302	-33.4	-43.8	29	18.0
300	31	9,366	-41.2	-48.3	29	19.6
250	31	10,581	-50.0		29	19.7
200	31	12,015	-56.7		28	22.0
175	31	12,856	-59.[illegible]		28	21.0
150	31	13,817	-60.8		28	19.0
125	31	14,946	-62.6		28	16.7
100	31	16,319	-63.[illegible]		28	12.2
80	30	17,694	-62.[illegible]		28	9.6
70	30	18,520	-61.[illegible]		28	7.1
60	30	19,480	-60.[illegible]		29	5.2
50	30	20,621	-58.[illegible]		28	4.4
40	30	22,027	-57.[illegible]		28	4.4
30	28	23,849	-55.9		28	4.5
25	26	25,014	-54.9		28	4.7
20	26	26,443	-53.9		28	5.5
15	24	28,299	-52.2		28	6.8
10	22	30,954	-48.5		28	12.2
7	6	33,461	-43.[illegible]			
5						

OAKLAND, CALIF. 1016 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	6	12.0	9.9	17	.3
1000	31	136	13.1	9.6	25	.3
950	31	571	14.4	4.2	31	1.1
900	31	1,026	14.2	-2.4	31	1.9
850	31	1,507	12.7	-5.9	30	2.5
800	31	2,014	10.9	-9.2	30	3.2
750	31	2,545	7.8	-12.2	28	3.8
700	31	3,115	4.6	-15.5	28	5.0
650	31	3,711	1.3	-18.6	28	6.6
600	31	4,355	-2.6	-21.2	28	7.4
550	31	5,031	-7.2	-25.1	28	8.1
500	31	5,776	-12.3	-29.2	28	8.8
450	31	6,564	-18.1	-32.6	28	9.9
400	31	7,444	-24.5	-38.7	28	10.1
350	31	8,402	-31.8	-44.9	28	10.0
300	31	9,473	-40.1	-51.8	28	9.[illegible]
250	31	10,693	-48.7		28	11.7
200	31	12,131	-56.7		28	13.[illegible]
175	31	12,971	-59.8		28	16.[illegible]
150	31	13,929	-62.2		27	15.[illegible]
125	31	15,050	-63.8		27	15.5
100	30	16,413	-65.2		27	12.2
80	30	17,775	-63.9		28	9.[illegible]
70	30	18,594	-62.7		28	7.3
60	30	19,547	-61.1		28	5.4
50	30	20,684	-59.3		30	4.0
40	29	22,089	-58.[illegible]		30	2.[illegible]
30	29	23,912	-55.6		29	[illegible].1
25	29	25,077	-54.7		28	4.1
20	29	26,509	-53.0		28	4.[illegible]
15	26	28,370	-50.9		28	4.7
10	21	31,027	-47.4		29	7.4
7	7	33,421	-43.[illegible]			
5						

OMAHA, NEBR. 965 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	403	9.0	5.5	22	2.5
1000	31	103				
950	31	526	10.6	4.7	23	4.1
900	31	981	10.8	.8	26	[illegible].1
850	31	1,457	9.1	-2.1	28	8.4
800	31	1,957	7.2	-5.7	28	[illegible].6
750	31	2,484	4.3	-9.6	28	9.1
700	31	3,045	1.2	-14.0	28	10.5
650	31	3,635	-2.5	-17.2	28	10.8
600	31	4,269	-6.2	-19.9	28	12.3
550	31	4,941	-10.6	-24.0	28	13.4
500	31	5,673	-15.2	-27.5	28	15.4
450	31	6,455	-20.5	-33.5	28	16.3
400	31	7,326	-26.8	-39.3	28	18.3
350	31	8,276	-33.8	-44.7	28	20.1
300	31	9,341	-41.5	-51.2	28	20.2
250	31	10,557	-49.2		29	21.1
200	31	11,997	-56.0		28	21.1
175	31	12,841	-58.6		28	21.9
150	31	13,805	-60.2		28	20.4
125	31	14,937	-61.9		28	17.4
100	31	16,316	-62.1		29	13.5
80	31	17,697	-61.3		28	9.5
70	31	18,527	-60.2		28	7.8
60	31	19,488	-59.6		28	6.6
50	30	20,633	-58.1		28	[illegible].7
40	30	22,043	-56.6		28	4.9
30	29	23,869	-55.3		28	5.1
25	28	25,030	-54.[illegible]		29	[illegible].3
20	28	26,463	-53.3		28	7.[illegible]
15	27	28,314	-51.8		29	8.6
10	21	30,933	-48.7		28	12.5
7	12	33,315	-44.7			
5						

+ PAGO PAGO, AMERICAN SAMOA 1012 MB *

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	5	28.0	24.5	10	4.5
1000	31	111	26.6	22.3	10	5.2
950	31	560	22.6	18.3	09	6.3
900	31	1,032	19.3	15.1	08	6.1
850	31	1,522	16.7	11.4	08	6.0
800	31	2,038	14.3	7.4	07	4.3
750	31	2,577	12.1	2.9	06	2.9
700	31	3,158	9.1	-1.5	05	2.3
650	31	3,764	6.1	-5.1	36	1.3
600	31	4,422	2.3	-8.7	34	2.2
550	31	5,114	-1.5	-14.0	30	2.8
500	31	5,877	-5.8	-19.[illegible]	29	3.6
450	31	6,692	-10.5	-24.3	27	4.2
400	31	7,596	-16.1	-30.5	27	6.5
350	31	8,589	-23.0	-37.2	26	7.9
300	31	9,701	-31.4	-45.2	26	10.8
250	31	10,967	-41.4		27	11.5
200	31	12,444	-53.[illegible]		26	14.0
175	31	13,290	-60.3		26	14.1
150	31	14,237	-66.7		26	14.7
125	31	15,322	-73.4		26	12.0
100	31	16,612	-77.0		26	7.1
80	31	17,904	-73.8		19	.[illegible]
70	31	18,690	-69.[illegible]		10	3.9
60	28	19,625	-64.3		09	8.3
50	28	20,752	-60.[illegible]		09	12.0
40	27	22,149	-57.7		09	16.7
30	25	23,981	-53.4		09	17.3
25	24	25,156	-51.[illegible]		09	15.7
20	22	26,610	-49.0		08	10.[illegible]
15	20	28,516	-45.2		35	1.3
10	18	31,258	-39.1		28	[illegible].9
7	7	33,688	-36.0			
5						

PEORIA, ILL. 991 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	200	[illegible].2	5.6	20	2.0
1000	31	128				
950	31	555	10.4	4.0	25	7.0
900	31	1,004	8.6	.4	26	8.4
850	31	1,475	6.7	-3.5	26	8.1
800	31	1,971	4.7	-7.8	26	9.3
750	31	2,492	2.3	-10.2	27	10.1
700	31	3,050	-.6	-12.1	27	10.9
650	31	3,635	-3.5	-15.3	28	11.9
600	31	4,268	-7.0	-18.1	27	13.3
550	31	4,938	-10.8	-23.3	27	14.8
500	31	5,670	-15.3	-27.6	27	15.9
450	31	6,453	-20.8	-33.1	27	16.7
400	31	7,318	-26.[illegible]	-39.3	27	17.5
350	31	8,267	-34.1	-43.9	27	19.3
300	31	9,329	-42.2	-48.6	28	20.6
250	31	10,540	-50.3		28	23.5
200	31	11,977	-55.[illegible]		28	23.2
175	31	12,822	-58.[illegible]		28	22.1
150	31	13,790	-59.6		28	20.3
125	31	14,923	-61.7		28	17.2
100	31	16,303	-62.0		28	14.2
80	31	17,684	-61.3		28	9.5
70	31	18,513	-60.[illegible]		27	7.3
60	31	19,479	-58.[illegible]		28	5.8
50	31	20,626	-57.6		28	5.7
40	31	22,038	-56.4		28	5.1
30	31	23,871	-54.7		27	4.8
25	31	25,040	-53.8		28	5.6
20	31	26,475	-53.0		28	6.6
15	30	28,335	-51.4		28	8.4
10	29	30,977	-47.[illegible]		27	12.3
7	27	33,360	-44.6		27	17.2
5	17	35,565	-41.0			

* PITTSBURGH, PA. 975 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	359	[illegible]	[illegible].7	22	1.4
1000	31	150				
950	31	577	10.1	5.[illegible]	23	4.2
900	31	1,025	8.1	2.4	25	6.8
850	31	1,495	[illegible].7	-1.6	27	7.8
800	31	1,990	3.[illegible]	-7.[illegible]	27	8.3
750	31	2,515	1.0	-10.4	27	9.1
700	31	3,065	-1.3	-14.8	27	9.5
650	31	3,651	-3.8	-18.1	27	11.2
600	31	4,281	-7.1	-22.7	27	12.3
550	31	4,949	-11.2	-26.4	27	13.5
500	31	5,679	-15.9	-28.9	27	15.5
450	31	6,459	-21.3	-33.9	27	15.2
400	31	7,324	-27.4	-40.3	27	16.8
350	31	8,271	-34.[illegible]	-45.0	27	18.3
300	31	9,331	-42.[illegible]	-50.[illegible]	27	19.2
250	31	10,544	-49.5		27	21.5
200	31	11,986	-55.[illegible]		27	21.8
175	31	12,834	-57.6		27	22.1
150	31	13,802	-59.[illegible]		27	21.0
125	31	14,939	-61.2		27	17.3
100	31	16,320	-61.3		27	13.2
80	31	17,707	-60.5		28	10.3
70	31	18,539	-59.6		28	8.8
60	30	19,501	-58.3		28	7.4
50	30	20,652	-57.0		28	6.3
40	30	22,067	-56.0		28	6.3
30	30	23,903	-54.6		28	6.8
25	30	25,071	-53.[illegible]		28	8.0
20	30	26,508	-52.5		28	8.2
15	29	28,373	-50.[illegible]		27	10.3
10	28	31,035	-47.6		27	13.2
7	18	33,410	-44.[illegible]		26	13.9
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+ PONAPE, CAROLINE IS. 1005 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	39	28.7	23.8	21	.1
1000	31	86	28.2	22.9	21	.2
950	31	537	24.6	18.3	23	.5
900	31	1,013	21.[illegible]	14.6	22	1.3
850	31	1,508	18.8	11.0	21	1.8
800	31	2,027	16.1	7.5	20	1.7
750	31	2,573	13.1	4.0	15	1.7
700	31	3,151	10.0	-.2	13	1.6
650	31	3,761	6.7	-4.5	11	2.9
600	31	4,418	3.0	-7.8	12	[illegible].9
550	31	5,115	-.[illegible]	-12.7	12	3.[illegible]
500	31	5,875	-4.9	-17.7	11	2.9
450	31	6,698	-9.4	-23.2	11	3.2
400	31	7,601	-15.0	-29.7	11	[illegible].7
350	31	8,598	-21.6	-36.5	11	3.7
300	31	9,717	-29.[illegible]	-44.6	10	[illegible].8
250	31	10,989	-40.0	-53.5	08	[illegible].4
200	31	12,473	-52.4		06	6.[illegible]
175	30	13,323	-59.4		06	6.[illegible]
150	30	14,272	-66.7		07	7.5
125	30	15,354	-74.3		08	7.3
100	30	16,634	-79.0		08	9.3
80	29	17,917	-74.3		09	9.1
70	29	18,700	-70.7		09	[illegible]
60	29	19,623	-66.[illegible]		09	11.4
50	29	20,736	-63.0		09	16.1
40	29	22,121	-59.3		09	25.7
30	28	23,950	-52.8		09	29.9
25	27	25,137	-48.4		10	19.2
20	25	26,616	-45.2		13	[illegible].7
15	23	28,554	-42.9		27	4.6
10	20	31,319	-37.7		27	[illegible].2
7	10	33,783	-33.[illegible]			
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PORTLAND, MAINE 1014 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	20	7.[illegible]	4.5	28	1.[illegible]
1000	31	132	9.7	5.6	29	[illegible].5
950	31	555	9.1	3.5	30	4.3
900	31	1,005	6.9	.2	30	3.8
850	31	1,473	4.[illegible]	-3.[illegible]	29	4.6
800	31	1,966	2.7	-7.3	28	[illegible].9
750	31	2,484	.4	-10.5	28	8.7
700	31	3,037	-2.1	-14.0	27	10.7
650	31	3,618	-5.[illegible]	-18.4	27	12.5
600	31	4,247	-9.1	-21.5	27	15.0
550	31	4,908	-13.1	-25.8	27	15.7
500	31	5,635	-17.7	-30.6	28	17.1
450	31	6,407	-22.[illegible]	-35.9	28	17.8
400	31	7,272	-28.5	-40.[illegible]	28	19.1
350	31	8,216	-35.0	-45.8	27	21.0
300	31	9,274	-42.3	-49.4	27	23.[illegible]
250	31	10,488	-49.1		27	26.4
200	31	11,929	-55.7		27	26.[illegible]
175	31	12,777	-56.9		27	21.5
150	31	13,749	-58.4		27	19.1
125	31	14,892	-59.3		27	15.7
100	31	16,287	-59.7		27	13.3
80	31	17,684	-58.[illegible]		27	8.1
70	31	18,522	-58.4		27	6.6
60	31	19,493	-58.2		27	[illegible].9
50	31	20,643	-57.2		27	5.4
40	31	22,057	-56.5		29	5.3
30	31	23,884	-55.[illegible]		28	[illegible].0
25	31	25,047	-54.8		28	6.6
20	30	26,480	-53.4		28	[illegible]
15	26	28,315	-51.9		28	11.[illegible]
10	22	30,916	-49.5		27	17.6
7	17	33,220	-47.[illegible]		27	21.3
5	10	35,445	-43.7			

* QUILLAYUTE, WASH. 1007 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	58	8.1	7.4	14	1.[illegible]
1000	31	116			15	2.4
950	31	542	7.5	3.3	18	6.7
900	31	985	4.9	-.7	20	7.[illegible]
850	31	1,450	2.7	-2.9	22	[illegible].1
800	31	1,938	.[illegible]	-6.7	23	10.[illegible]
750	31	2,452	-2.3	-10.0	24	11.2
700	31	2,999	-5.3	-13.8	24	12.4
650	31	3,575	-8.6	-17.[illegible]	24	14.2
600	31	4,195	-11.8	-20.[illegible]	25	16.0
550	31	4,853	-15.[illegible]	-24.7	25	17.2
500	31	5,569	-20.5	-29.3	25	18.[illegible]
450	31	6,338	-25.[illegible]	-33.[illegible]	26	20.[illegible]
400	31	7,187	-31.0	-39.3	26	23.[illegible]
350	31	8,121	-37.9	-41.[illegible]	25	26.0
300	31	9,167	-44.[illegible]		26	29.4
250	31	10,368	-51.[illegible]		27	31.0
200	31	11,803	-55.2		27	30.0
175	30	12,661	-56.6		27	27.6
150	30	13,637	-57.6		27	24.3
125	30	14,787	-57.[illegible]		27	20.3
100	30	16,195	-57.[illegible]		26	14.[illegible]
80	29	17,605	-57.5		27	10.1
70	29	18,446	-57.7		26	8.3
60	28	19,417	-57.6		27	6.3
50	28	20,568	-57.4		27	4.8
40	27	21,982	-56.8		26	3.6
30	26	23,811	-56.2		28	3.1
25	26	24,971	-55.4		31	3.5
20	25	26,401	-54.4		32	4.3
15	21	28,263	-52.9		34	4.[illegible]
10	19	30,886	-51.2		35	[illegible].1
7	11	33,238	-48.2			
5						

RAPID CITY, S. DAK. 903 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	966	5.1	-4.0	32	4.0
1000	30	123				
950	30	547				
900	30	991			32	4.9
850	30	1,465	8.[illegible]	-4.5	32	8.8
800	30	1,964	6.1	-6.9	32	9.6
750	30	2,484	3.4	-9.9	31	10.6
700	30	3,047	.1	-11.9	31	11.9
650	30	3,631	-3.[illegible]	-16.2	30	12.1
600	30	4,265	-7.2	-19.5	30	14.0
550	30	4,931	-11.4	-23.7	29	14.1
500	30	5,662	-16.3	-27.8	29	16.3
450	30	6,439	-21.5	-31.5	28	17.8
400	30	7,306	-27.4	-37.3	28	18.6
350	30	8,254	-34.[illegible]	-43.6	28	20.3
300	30	9,314	-42.5	-51.1	28	19.9
250	30	10,522	-51.[illegible]		28	21.8
200	30	11,951	-56.6		28	21.6
175	30	12,794	-58.[illegible]		28	20.4
150	30	13,759	-59.8		28	17.8
125	30	14,896	-60.8		28	15.6
100	30	16,281	-61.5		28	10.9
80	30	17,666	-60.4		29	8.4
70	30	18,498	-59.[illegible]		28	6.6
60	29	19,460	-59.[illegible]		29	5.5
50	29	20,604	-58.[illegible]		28	4.9
40	27	22,013	-57.[illegible]		29	4.8
30	27	23,833	-56.4		28	4.1
25	24	24,993	-55.3		28	5.1
20	21	26,423	-54.0		28	5.7
15	17	28,283	-52.9		28	7.6
10	14	30,940	-49.3			
7						
5						

ST CLOUD, MINN. 973 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	316	5.[illegible]	3.[illegible]	24	.8
1000	31	88				
950	31	514	7.4	4.0	23	2.3
900	31	956	6.8	1.7	27	4.4
850	31	1,425	5.6	-2.8	29	5.0
800	31	1,920	[illegible]	-6.5	28	6.8
750	31	2,440	1.[illegible]	-8.9	28	8.3
700	31	2,994	-1.6	-13.1	28	9.5
650	31	3,577	-4.8	-16.7	29	10.1
600	31	4,206	-8.7	-21.5	29	12.1
550	31	4,870	-12.7	-25.8	29	14.0
500	31	5,598	-17.1	-29.9	29	15.3
450	31	6,373	-22.7	-33.8	29	16.3
400	31	7,235	-28.7	-38.4	29	17.7
350	31	8,178	-35.[illegible]	-44.6	29	19.5
300	31	9,235	-42.[illegible]	-51.3	29	20.6
250	31	10,446	-50.0		29	22.2
200	31	11,885	-55.3		28	21.1
175	31	12,734	-56.[illegible]		28	20.3
150	31	13,710	-57.3		28	18.1
125	30	14,859	-58.6		28	14.9
100	30	16,257	-59.6		28	11.4
80	30	17,656	-58.[illegible]		28	8.1
70	29	18,491	-58.0		29	6.5
60	29	19,465	-57.[illegible]		29	5.1
50	28	20,616	-57.2		29	4.8
40	28	22,031	-56.1		29	3.9
30	27	23,862	-55.5		30	4.4
25	26	25,022	-54.4		30	4.6
20	26	26,454	-53.6		29	5.6
15	20	28,330	-52.1		28	7.0
10	17	30,975	-48.2		28	9.0
7	7	33,393	-43.7			
5						

* ST PAUL IS., ALASKA 999 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	10	2.8	1.0	22	3.8
1000	31	-2			25	4.0
950	31	411	.8	-1.5	24	5.[illegible]
900	31	845	-2.[illegible]	-3.7	24	6.[illegible]
850	31	1,297	-4.8	-8.4	25	7.2
800	31	1,772	-7.4	-12.7	25	8.1
750	31	2,273	-10.4	-17.3	25	8.[illegible]
700	31	2,800	-13.[illegible]	-20.9	25	8.9
650	31	3,358	-17.[illegible]	-24.4	26	[illegible].9
600	31	3,936	-20.[illegible]	-27.9	26	10.[illegible]
550	31	4,590	-25.0	-32.4	26	11.2
500	31	5,281	-29.[illegible]	-37.3	26	12.[illegible]
450	31	6,022	-34.7	-42.6	26	13.[illegible]
400	31	6,838	-39.[illegible]	-45.7	26	15.3
350	31	7,740	-45.2	-49.7	25	17.[illegible]
300	31	8,758	-49.[illegible]		25	18.3
250	31	9,946	-50.7		25	17.8
200	31	11,402	-49.8		25	17.6
175	31	12,276	-50.0		26	17.1
150	31	13,282	-50.[illegible]		26	16.0
125	31	14,472	-50.3		26	14.9
100	31	15,927	-50.9		25	15.1
80	31	17,379	-50.[illegible]		25	14.[illegible]
70	31	18,248	-50.[illegible]		25	14.[illegible]
60	31	19,250	-51.0		25	13.9
50	31	20,436	-50.[illegible]		25	14.4
40	31	21,889	-50.[illegible]		25	12.[illegible]
30	31	23,764	-50.0		26	11.9
25	31	24,956	-49.[illegible]		25	10.8
20	31	26,419	-49.0		25	10.1
15	31	28,309	-48.[illegible]		25	8.[illegible]
10	29	30,985	-47.1		25	8.0
7	20	33,352	-45.3		27	9.[illegible]
5	13	35,622	-43.4			

SALEM, OREG. 1010 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	61	7.7	6.3	18	[illegible].4
1000	31	139			19	1.[illegible]
950	31	562	9.1	3.9	20	4.0
900	31	1,011	7.7	-.6	22	5.4
850	31	1,481	[illegible].6	-4.[illegible]	23	[illegible].9
800	31	1,975	3.[illegible]	-7.4	24	8.4
750	31	2,490	.[illegible]	-9.0	24	10.1
700	31	3,048	-2.2	-13.1	25	11.7
650	31	3,626	-5.4	-17.4	25	12.5
600	31	4,257	-9.[illegible]	-21.3	26	14.3
550	31	4,916	-12.9	-25.0	26	16.2
500	31	5,648	-17.5	-28.9	26	19.2
450	31	6,420	-22.6	-33.4	26	21.4
400	30	7,283	-28.4	-38.9	26	23.[illegible]
350	30	8,227	-35.[illegible]	-41.9	27	25.6
300	30	9,284	-42.7	-48.9	27	27.0
250	30	10,493	-50.2		27	26.4
200	29	11,928	-56.[illegible]		26	26.3
175	29	12,770	-58.7		27	25.1
150	29	13,734	-60.2		27	22.6
125	29	14,870	-60.9		26	19.1
100	29	16,258	-60.1		27	15.7
80	28	17,658	-59.4		27	9.[illegible]
70	28	18,493	-59.[illegible]		27	7.9
60	27	19,457	-58.7		27	6.7
50	25	20,606	-58.1		28	4.5
40	25	22,012	-57.6		31	2.[illegible]
30	24	23,837	-55.[illegible]		33	2.0
25	23	24,999	-55.0		35	2.9
20	21	26,428	-53.4		36	2.2
15	19	28,289	-51.4		01	3.1
10	12	30,917	-48.4			
7						
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SALT LAKE CITY, UTAH 873 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1,288	6.2	-.8	16	2.6
1000	31	160				
950	31	589				
900	31	1,040				
850	31	1,511	[illegible].9	-1.2	18	2.[illegible]
800	31	2,014	8.[illegible]	-4.9	20	3.8
750	31	2,544	[illegible].1	-8.2	24	3.5
700	31	3,105	1.6	-11.[illegible]	27	5.3
650	31	3,698	-1.8	-14.1	27	7.4
600	31	4,331	-5.[illegible]	-18.2	27	[illegible].7
550	31	5,005	-9.7	-21.7	27	10.6
500	31	5,739	-14.3	-26.2	27	13.2
450	31	6,529	-19.4	-30.8	28	14.[illegible]
400	31	7,398	-25.7	-35.[illegible]	27	15.1
350	31	8,351	-33.1	-42.5	27	15.6
300	31	9,417	-41.2	-47.4	27	17.9
250	31	10,632	-49.9		27	19.2
200	31	12,065	-57.7		27	19.3
175	31	12,902	-60.2		27	19.7
150	31	13,858	-62.3		27	18.7
125	30	14,983	-63.[illegible]		28	17.[illegible]
100	30	16,348	-63.9		28	13.1
80	30	17,717	-63.2		28	9.5
70	30	18,541	-61.7		28	7.4
60	30	19,497	-60.[illegible]		29	5.3
50	29	20,635	-59.4		28	4.5
40	28	22,038	-57.7		30	3.4
30	28	23,859	-56.3		29	3.5
25	25	25,017	-54.[illegible]		29	2.[illegible]
20	23	26,453	-53.[illegible]		28	3.3
15	21	28,307	-51.5		28	4.6
10	12	30,983	-49.0			
7						
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SAN DIEGO, CALIF. 999 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	124	14.[illegible]	11.2	01	.4
1000	31	116			36	1.5
950	31	551	17.5	7.0	33	.7
900	31	1,014	16.8	1.7	32	.6
850	31	1,500	15.7	-3.3	31	1.6
800	31	2,012	13.9	-7.1	28	2.4
750	31	2,550	10.7	-10.2	28	3.5
700	31	3,124	7.4	-12.4	28	4.3
650	31	3,725	3.7	-15.2	27	5.2
600	31	4,376	-.4	-18.8	27	6.3
550	31	5,060	-4.9	-23.0	26	7.6
500	31	5,810	-9.[illegible]	-27.2	26	9.6
450	31	6,609	-15.8	-30.6	26	10.1
400	31	7,492	-22.5	-37.5	25	11.6
350	31	8,458	-30.3	-43.3	26	13.2
300	31	9,536	-38.4	-49.6	26	16.1
250	31	10,767	-46.[illegible]		26	19.6
200	30	12,216	-55.3		26	21.8
175	30	13,060	-59.2		26	21.4
150	30	14,016	-63.1		27	21.5
125	30	15,130	-65.7		27	17.3
100	30	16,478	-68.0		28	11.9
80	30	17,821	-67.1		28	7.0
70	30	18,629	-64.8		29	4.8
60	30	19,575	-62.1		30	2.5
50	30	20,708	-59.[illegible]		31	2.7
40	30	22,112	-57.2		31	1.7
30	30	23,942	-54.5		28	1.4
25	30	25,113	-53.1		28	1.2
20	30	26,555	-51.6		27	2.0
15	27	28,433	-49.[illegible]		28	3.1
10	21	31,117	-45.4		27	3.9
7	13	33,535	-41.3			
5						

See reference note at end of table

RAWINSONDE DATA

Average monthly values

OCTOBER 1968

SAN JUAN, P. R. — 1014 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	6	25.3	22.2	16	1.5
1000	30	127	25.1	21.4	12	4.2
950	30	574	22.6	18.3	10	6.4
900	30	1,047	19.7	14.3	10	7.2
850	30	1,538	17.1	9.3	10	7.3
800	30	2,053	14.4	3.6	10	6.5
750	30	2,591	11.5	-.8	10	5.7
700	30	3,171	8.6	-5.3	10	5.1
650	30	3,773	5.3	-10.7	10	4.0
600	30	4,429	1.3	-15.2	10	4.0
550	30	5,115	-2.9	-20.1	11	2.8
500	30	5,873	-7.3	-24.7	10	2.0
450	29	6,679	-12.4	-28.5	07	1.4
400	29	7,575	-18.5	-34.4	04	1.6
350	29	8,558	-25.2	-40.5	01	2.2
300	29	9,659	-33.3	-48.2	35	2.6
250	29	10,913	-43.2		34	5.3
200	29	12,378	-54.7		32	8.0
175	29	13,220	-60.9		32	9.1
150	29	14,163	-67.3		33	8.7
125	29	15,247	-72.5		33	6.5
100	29	16,549	-74.2		32	3.1
80	29	17,860	-70.3		04	2.7
70	29	18,657	-67.7		07	5.1
60	29	19,593	-63.7		08	8.6
50	29	20,722	-60.0		09	10.9
40	28	22,125	-56.8		09	14.1
30	27	23,956	-54.0		09	14.9
25	27	25,132	-51.7		09	15.2
20	25	26,586	-48.8		10	11.9
15	20	28,495	-44.5		08	8.5
10	12	31,235	-38.6			
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SAN NICOLAS, CALIF. — 994 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	174	14.1	10.6	31	2.7
1000	31	118				
950	31	556	18.0	5.8	33	3.2
900	31	1,018	17.4	2.3	32	2.8
850	31	1,504	15.7	-1.8	31	3.0
800	31	2,016	13.1	-3.7	30	3.2
750	31	2,555	10.0	-6.2	30	3.6
700	31	3,125	6.7	-9.5	31	4.2
650	31	3,729	3.0	-11.9	30	5.0
600	31	4,372	-1.1	-16.9	29	5.7
550	31	5,060	-6.0	-20.2	28	6.7
500	31	5,798	-11.5	-23.7	28	8.2
450	31	6,598	-16.9	-29.3	27	9.2
400	31	7,471	-23.4	-34.5	26	11.0
350	31	8,432	-31.5	-41.0	26	11.7
300	31	9,504	-39.9	-50.2	27	15.0
250	31	10,726	-48.3	-58.3	27	18.5
200	31	12,170	-55.9	-65.8	27	20.3
175	31	13,011	-60.0	-67.5	27	19.5
150	31	13,965	-63.5		27	19.4
125	31	15,077	-66.4		27	16.3
100	30	16,420	-68.4		27	12.2
80	30	17,763	-66.7		27	8.9
70	30	18,573	-65.2		29	4.8
60	30	19,518	-62.7		31	3.1
50	30	20,646	-60.6		32	2.4
40	30	22,043	-58.2		30	1.8
30	30	23,866	-55.5		27	1.1
25	28	25,026	-54.5		28	2.9
20	28	26,461	-53.0		27	3.1
15	28	28,323	-50.9		28	3.8
10	27	30,976	-47.3		28	6.2
7	25	33,342	-43.6		26	12.7
5	18	35,629	-40.4		26	18.5
4	10	37,153	-39.3			

*** SAULT STE MARIE, MICH. — 986 MB**

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	221	8.5	5.1	12	.6
1000	31	105				
950	31	526	7.0	4.6	23	3.9
900	31	971	5.4	2.3	25	6.5
850	31	1,437	2.9	.4	26	6.8
800	31	1,927	1.0	-3.9	25	8.0
750	31	2,445	-1.8	-8.1	25	9.0
700	31	2,991	-4.5	-11.8	26	10.0
650	31	3,567	-7.1	-16.1	26	11.3
600	31	4,192	-10.5	-20.7	26	11.5
550	31	4,854	-14.2	-25.6	27	12.2
500	31	5,574	-18.8	-30.2	27	13.5
450	31	6,347	-24.2	-34.5	27	14.1
400	31	7,200	-30.0	-40.6	27	15.5
350	31	8,137	-36.6	-46.4	28	17.0
300	31	9,189	-43.6	-53.8	28	18.4
250	31	10,397	-49.6		27	19.6
200	31	11,842	-53.6		27	19.8
175	31	12,697	-54.7		27	18.9
150	31	13,682	-55.4		27	16.4
125	31	14,839	-57.0		27	14.1
100	31	16,248	-57.5		27	11.0
80	31	17,659	-56.8		27	7.7
70	31	18,504	-56.8		28	5.7
60	31	19,484	-56.3		28	4.9
50	31	20,643	-55.9		28	5.2
40	31	22,064	-55.5		28	4.7
30	30	23,899	-54.9		29	5.4
25	30	25,065	-54.5		29	5.0
20	29	26,496	-53.5		29	6.1
15	27	28,360	-51.8		29	8.6
10	25	30,975	-49.9		29	10.7
7	18	33,294	-47.1		28	15.1
5	7	35,722	-41.6			

■ SHEMYA, ALASKA — 1002 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	38	4.8	1.4	24	4.9
1000	30	52			25	6.8
950	30	466	1.9	-2.2	26	8.3
900	30	903	-.7	-4.9	27	10.0
850	30	1,358	-3.5	-8.6	27	9.9
800	30	1,835	-6.2	-13.4	27	11.1
750	30	2,334	-9.2	-18.4	27	12.5
700	30	2,868	-12.3	-21.9	27	13.0
650	30	3,428	-15.5	-26.7	27	13.4
600	30	4,032	-18.7	-29.9	27	15.7
550	30	4,671	-22.6	-33.2	27	17.1
500	30	5,370	-27.0	-37.1	28	19.6
450	30	6,121	-31.8	-40.7	28	21.4
400	30	6,946	-36.6	-42.2	28	23.4
350	29	7,857	-42.2	-42.7	27	25.2
300	29	8,887	-47.6		27	26.7
250	29	10,083	-50.1		27	29.5
200	29	11,538	-50.9		27	28.3
175	29	12,406	-51.4		27	27.4
150	29	13,406	-52.0		27	25.6
125	29	14,584	-52.9		28	24.7
100	28	16,022	-52.9		27	22.7
80	27	17,465	-53.2		27	19.5
70	27	18,325	-53.0		27	19.4
60	27	19,319	-53.4		27	17.8
50	27	20,494	-53.2		27	15.3
40	27	21,932	-52.7		27	13.6
30	27	23,793	-51.7		27	11.1
25	27	24,978	-50.8		27	8.6
20	27	26,434	-49.9		27	6.6
15	27	28,321	-48.4		27	4.5
10	23	31,011	-46.1		30	2.3
7	18	33,371	-45.3		23	2.7
5	12	35,667	-42.5			
4	6	37,122	-42.4			

*** SHREVEPORT, LA. — 1008 MB**

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	79	14.1	11.7	14	.1
1000	31	147	15.6	11.6	16	.5
950	31	592	16.5	8.9	22	2.8
900	31	1,046	14.8	5.5	25	3.1
850	31	1,529	13.0	1.5	27	4.4
800	31	2,038	10.4	-1.2	28	5.1
750	31	2,572	8.3	-5.8	28	5.6
700	31	3,141	5.4	-10.8	28	5.9
650	31	3,741	2.0	-15.0	28	7.2
600	31	4,386	-1.2	-21.1	29	8.1
550	31	5,070	-5.5	-24.6	28	8.9
500	31	5,816	-10.6	-28.5	28	10.2
450	31	6,619	-16.0	-33.7	29	12.4
400	31	7,499	-22.4	-39.7	28	13.8
350	31	8,466	-29.8	-44.9	28	15.9
300	31	9,547	-38.2	-49.8	28	18.1
250	31	10,777	-47.4		28	19.7
200	31	12,222	-56.5		28	23.3
175	31	13,061	-60.9		28	24.0
150	31	14,011	-64.3		28	21.9
125	31	15,118	-67.0		28	18.3
100	30	16,460	-68.3		28	12.6
80	30	17,805	-65.7		27	7.5
70	30	18,620	-63.2		27	3.9
60	30	19,573	-60.4		25	2.2
50	30	20,716	-58.4		27	3.7
40	29	22,124	-56.7		29	2.4
30	27	23,958	-54.3		34	1.2
25	27	25,132	-52.8		34	1.0
20	27	26,579	-50.7		27	2.2
15	27	28,462	-48.7		28	3.8
10	19	31,140	-45.3		28	7.6
7	11	33,514	-41.3		27	14.0

SPOKANE, WASH. — 932 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	717	4.1	.7	18	2.4
1000	31	138				
950	31	558				
900	31	1,002	6.7	-.3	21	5.2
850	31	1,470	5.3	-4.1	23	7.5
800	31	1,963	2.6	-7.2	24	8.4
750	31	2,480	-.7	-9.8	25	9.5
700	31	3,030	-4.0	-12.7	26	11.0
650	31	3,605	-7.0	-17.7	26	13.1
600	31	4,233	-10.5	-21.2	26	14.5
550	31	4,890	-14.4	-25.3	26	16.5
500	31	5,614	-18.8	-28.2	26	18.8
450	31	6,383	-24.1	-33.8	26	20.9
400	31	7,241	-30.0	-39.5	26	22.6
350	31	8,179	-36.6	-43.1	26	24.3
300	31	9,232	-43.8	-49.0	26	26.9
250	31	10,435	-51.1		26	29.5
200	31	11,870	-55.0		27	27.6
175	30	12,727	-56.6		27	25.5
150	30	13,702	-57.3		27	21.6
125	29	14,855	-58.1		27	18.2
100	29	16,258	-58.8		27	13.8
80	29	17,661	-57.8		27	10.3
70	29	18,503	-57.7		27	7.6
60	29	19,475	-57.4		27	6.6
50	28	20,628	-57.1		28	4.6
40	28	22,041	-56.6		29	3.5
30	28	23,870	-55.6		32	2.6
25	27	25,036	-54.8		33	3.6
20	25	26,469	-53.2		34	4.3
15	23	28,327	-52.0		35	4.8
10	19	30,959	-50.3		33	8.6
7	6	33,316	-49.3			
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*** SWAN ISLAND, W. I. — 1010 MB**

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	10	26.4	23.7	07	2.0
1000	31	98	25.9	23.3	07	2.7
950	31	552	22.9	20.7	08	3.9
900	31	1,020	19.9	17.1	09	3.7
850	31	1,513	17.3	13.7	09	3.5
800	31	2,030	14.3	10.8	10	3.7
750	31	2,575	11.7	6.2	11	3.3
700	31	3,149	8.8	1.6	11	3.8
650	31	3,761	5.4	-3.6	11	4.0
600	31	4,410	1.8	-6.7	11	4.1
550	31	5,101	-2.2	-10.5	11	3.3
500	31	5,859	-6.6	-14.4	10	2.8
450	31	6,675	-11.3	-20.8	08	2.6
400	31	7,570	-16.7	-27.3	06	2.4
350	31	8,560	-23.7	-35.8	04	1.7
300	31	9,666	-32.4	-43.2	02	1.3
250	30	10,922	-43.0		29	1.9
200	30	12,384	-55.6		27	2.5
175	30	13,221	-62.4		27	3.6
150	30	14,156	-69.4		29	3.4
125	29	15,225	-75.5		33	2.8
100	29	16,509	-76.9		03	2.7
80	29	17,803	-73.1		08	4.1
70	29	18,591	-69.4		09	6.6
60	29	19,522	-65.5		09	8.6
50	28	20,641	-61.1		09	12.6
40	27	22,041	-57.2		09	14.8
30	26	23,875	-54.3		09	14.8
25	23	25,041	-53.1		09	15.4
20	22	26,491	-50.7		09	14.3
15	20	28,381	-45.4		10	9.6
10	18	31,110	-40.3		07	5.6
7	13	33,588	-37.0			

TAMPA, FLA. — 1015 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	8	19.3	17.1	06	2.3
1000	31	134	20.4	16.4	06	3.8
950	31	581	18.9	13.7	09	3.5
900	31	1,042	16.3	10.2	12	1.5
850	31	1,527	14.5	4.4	16	1.3
800	31	2,039	12.6	1.1	20	1.7
750	31	2,577	10.2	-2.2	22	1.8
700	31	3,150	7.6	-7.0	24	2.4
650	31	3,756	4.6	-12.0	25	2.7
600	31	4,407	1.0	-15.6	26	4.0
550	30	5,095	-3.1	-20.8	27	5.1
500	30	5,850	-8.1	-24.5	27	6.4
450	30	6,653	-13.7	-30.0	27	7.6
400	30	7,547	-20.0	-34.5	26	8.3
350	30	8,523	-27.0	-41.3	27	10.4
300	30	9,617	-35.3	-47.5	27	13.2
250	30	10,863	-44.5		26	17.2
200	30	12,321	-55.4		26	20.0
175	30	13,162	-60.9		26	20.6
150	30	14,108	-66.3		26	19.9
125	30	15,199	-70.8		27	17.3
100	30	16,514	-71.8		27	11.6
80	30	17,839	-68.5		27	5.4
70	30	18,643	-65.8		27	2.9
60	30	19,587	-62.2		24	1.5
50	30	20,721	-59.4		32	.3
40	30	22,128	-56.5		05	2.2
30	28	23,963	-53.9		08	2.7
25	27	25,137	-52.6		10	2.8
20	27	26,583	-50.8		08	3.0
15	25	28,472	-47.1		07	2.6
10	19	31,168	-42.1		26	3.6
7	13	33,609	-37.8			

TOPEKA, KANS. — 983 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	269	9.4	6.7	21	2.2
1000	31	124				
950	31	552	12.0	5.1	23	5.0
900	31	1,006	11.8	2.1	25	8.2
850	31	1,483	10.0	-1.6	27	8.4
800	31	1,986	7.7	-4.5	27	9.4
750	31	2,515	5.2	-8.2	28	9.7
700	31	3,077	2.3	-12.0	28	10.7
650	31	3,670	-1.1	-14.9	28	12.2
600	31	4,307	-4.9	-18.5	28	13.4
550	31	4,981	-9.1	-24.3	28	15.5
500	31	5,717	-13.9	-29.2	28	16.3
450	31	6,508	-19.1	-33.7	28	16.8
400	31	7,377	-25.3	-38.9	28	18.5
350	31	8,333	-32.6	-44.8	28	19.5
300	31	9,402	-40.7	-51.6	28	21.1
250	31	10,622	-49.0		28	22.7
200	31	12,061	-56.6		28	22.8
175	31	12,902	-59.5		28	22.5
150	31	13,862	-61.2		28	21.0
125	31	14,988	-63.3		28	17.3
100	31	16,358	-63.7		28	13.4
80	31	17,730	-62.8		28	10.7
70	31	18,553	-61.7		28	7.2
60	31	19,513	-59.7		28	5.3
50	31	20,657	-58.3		28	4.6
40	31	22,065	-57.1		27	3.6
30	31	23,894	-55.0		27	3.1
25	30	25,057	-54.0		28	4.4
20	30	26,493	-52.4		28	5.8
15	28	28,347	-50.7		28	7.5
10	21	30,993	-47.8		27	12.9
7	9	33,329	-45.7			

+ TRUK, CAROLINE IS. — 1010 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	2	28.9	24.6	22	1.8
1000	31	90	28.0	23.3	21	2.0
950	31	537	23.8	18.9	21	2.0
900	31	1,016	20.8	15.3	22	2.6
850	31	1,509	18.2	11.8	22	2.3
800	31	2,028	15.5	7.9	20	2.0
750	31	2,572	12.9	3.7	18	1.8
700	31	3,151	9.9	-.2	16	1.6
650	31	3,762	6.5	-3.5	14	1.9
600	31	4,417	2.8	-7.7	11	2.4
550	31	5,110	-.9	-12.1	08	2.5
500	31	5,872	-5.0	-17.5	09	2.9
450	31	6,690	-9.8	-22.8	10	3.0
400	31	7,596	-15.0	-29.9	08	2.3
350	31	8,593	-21.7	-36.9	10	2.7
300	31	9,711	-30.0	-44.7	09	4.4
250	31	10,983	-40.1	-53.1	07	6.4
200	31	12,467	-52.4		07	8.7
175	31	13,316	-59.5		07	9.3
150	31	14,264	-67.1		08	8.8
125	31	15,343	-74.7		08	8.4
100	31	16,620	-79.7		08	11.8
80	31	17,898	-74.8		09	9.7
70	31	18,681	-70.8		09	9.4
60	31	19,604	-67.4		09	11.2
50	31	20,713	-63.7		09	16.8
40	30	22,096	-59.7		09	25.0
30	29	23,921	-53.2		09	28.9
25	28	25,108	-49.1		10	18.3
20	26	26,585	-46.3		12	3.5
15	25	28,509	-43.4		25	2.5
10	24	31,263	-38.8		27	2.7
7	12	33,710	-35.0			
5	5	36,044	-33.8			

*** TUCSON, ARIZ. — 924 MB**

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	789	14.8	.9	13	3.2
1000	31	111				
950	31	550				
900	31	1,015	20.1	1.9	15	2.8
850	31	1,506	18.2	-.1	17	1.5
800	31	2,022	14.8	-2.0	20	2.8
750	31	2,561	10.9	-5.2	21	5.0
700	31	3,137	7.4	-11.2	22	5.9
650	31	3,739	3.9	-15.5	24	5.9
600	31	4,390	.3	-19.6	24	6.4
550	31	5,074	-4.1	-23.7	24	8.0
500	31	5,828	-9.2	-27.7	25	8.6
450	31	6,627	-15.3	-33.2	26	9.3
400	31	7,514	-22.2	-38.8	26	10.9
350	31	8,481	-29.8	-44.5	27	13.1
300	31	9,561	-38.2	-50.9	26	14.9
250	31	10,791	-47.2		26	17.3
200	31	12,238	-56.1		27	20.1
175	31	13,078	-60.6		27	20.2
150	30	14,026	-64.0		27	20.2
125	30	15,133	-67.4		27	17.9
100	30	16,472	-68.3		28	12.9
80	30	17,810	-67.3		29	8.0
70	30	18,618	-65.0		30	4.9
60	30	19,563	-62.8		30	2.9
50	30	20,694	-59.9		29	2.2
40	30	22,096	-57.3		28	1.7
30	30	23,925	-54.9		27	1.2
25	30	25,093	-53.8		29	1.3
20	30	26,531	-52.4		28	2.4
15	30	28,398	-50.7		28	3.6
10	30	31,059	-46.6		27	6.3
7	24	33,451	-42.3		27	8.5
5	8	35,662	-39.4			

*** VANDENBERG AFB, CALIF. — 1003 MB**

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	100	11.8	10.2	03	.7
1000	29	127	12.6	10.3	02	1.1
950	29	563	16.4	3.3	01	3.3
900	29	1,023	17.3	-1.1	36	2.8
850	29	1,509	15.1	-6.1	35	2.4
800	29	2,020	12.8	-9.1	34	2.8
750	29	2,553	9.7	-12.1	33	3.8
700	29	3,128	6.7	-14.8	32	4.3
650	29	3,729	3.2	-16.6	30	4.8
600	29	4,376	-1.1	-19.7	30	5.7
550	29	5,057	-6.0	-22.9	29	6.2
500	29	5,803	-11.3	-26.5	29	6.9
450	29	6,597	-17.4	-30.6	28	8.0
400	29	7,475	-24.0	-36.9	27	9.3
350	29	8,435	-31.5	-43.8	27	9.9
300	29	9,508	-39.8	-49.8	26	11.4
250	29	10,730	-48.6		27	12.9
200	29	12,169	-56.7		27	16.9
175	29	13,009	-60.1		27	17.5
150	29	13,964	-63.1		27	16.3
125	29	15,078	-65.8		27	15.7
100	29	16,426	-67.5		27	12.6
80	29	17,775	-65.7		28	8.9
70	29	18,588	-64.3		28	6.8
60	29	19,535	-62.5		29	4.9
50	29	20,665	-60.5		29	3.6
40	29	22,062	-58.6		31	3.0
30	29	23,883	-55.7		29	2.7
25	29	25,047	-54.7		28	2.8
20	29	26,479	-53.2		27	3.8
15	29	28,339	-51.4		28	4.3
10	24	31,000	-47.4		27	5.5
7	20	33,375	-44.1		28	6.8
5	10	35,718	-39.1			

VICTORIA, TEXAS — 1012 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	33	18.9	16.9	05	1.8
1000	31	135	20.7	17.1	09	2.6
950	31	578	19.4	13.8	15	3.9
900	31	1,044	17.3	11.0	17	3.1
850	31	1,531	14.9	7.9	20	2.2
800	31	2,043	12.4	3.0	23	1.8
750	31	2,581	10.1	-2.7	26	2.4
700	31	3,153	7.1	-6.6	27	3.2
650	31	3,757	3.7	-10.7	29	3.8
600	31	4,405	.1	-17.4	30	4.5
550	31	5,092	-3.9	-23.1	29	5.0
500	31	5,843	-8.4	-28.1	28	5.6
450	31	6,648	-14.2	-32.0	28	6.6
400	31	7,535	-20.7	-37.3	28	9.0
350	31	8,508	-28.2	-42.5	28	11.4
300	31	9,595	-36.7	-48.6	28	13.0
250	31	10,833	-46.0		27	16.5
200	31	12,285	-56.2		27	19.6
175	31	13,124	-61.1		27	20.6
150	31	14,070	-66.0		27	19.5
125	31	15,164	-70.0		28	17.0
100	30	16,486	-71.8		28	11.8
80	30	17,809	-69.0		28	5.7
70	30	18,613	-65.8		30	2.8
60	30	19,557	-61.9		25	.3
50	30	20,691	-60.0		20	1.6
40	30	22,090	-57.8		19	.3
30	29	23,913	-55.3		04	1.3
25	28	25,077	-53.9		08	1.5
20	26	26,515	-51.7		08	1.3
15	24	28,397	-48.4		01	.6
10	15	31,101	-44.1		27	2.7
7	10	33,448	-41.8			
5	5	35,677	-38.1			

*** WAKE IS., PACIFIC AREA — 1012 MB**

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	5	27.3	24.8	10	5.4
1000	31	107	26.4	23.9	09	6.1
950	31	556	23.0	20.7	10	6.1
900	31	1,031	20.0	17.2	11	5.6
850	31	1,523	17.3	13.3	11	5.0
800	31	2,040	14.7	9.9	12	4.6
750	31	2,583	12.3	4.3	12	3.7
700	31	3,161	9.2	-1.5	13	3.2
650	31	3,772	5.9	-5.5	13	3.0
600	31	4,424	2.0	-9.7	14	2.4
550	31	5,118	-2.2	-14.4	17	2.0
500	31	5,872	-6.8	-18.2	19	1.8
450	31	6,685	-11.2	-25.1	20	2.4
400	31	7,583	-16.7	-30.3	23	3.4
350	31	8,573	-23.5	-35.4	23	4.8
300	31	9,682	-31.7	-43.6	25	6.4
250	31	10,946	-41.3		25	7.7
200	30	12,424	-52.9		25	6.3
175	30	13,273	-59.4		25	3.2
150	29	14,221	-66.3		23	1.1
125	29	15,306	-73.2		07	3.3
100	28	16,592	-78.4		09	7.4
80	22	17,870	-75.0		08	9.1
70	20	18,650	-71.2		09	9.9
60	20	19,570	-66.2		09	11.0
50	19	20,689	-61.6		09	11.8
40	19	22,082	-58.7		09	11.5
30	18	23,904	-55.8		09	12.6
25	16	25,061	-54.0		09	13.0
20	16	26,500	-52.2		09	12.1
15	15	28,378	-47.3		09	7.8
10	11	31,126	-42.1			
7	7	33,534	-36.9			

*** WALLOPS IS., VA. NASA — 1018 MB**

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	3	13.8	10.8	31	.5
1000	31	152	15.0	8.9	29	1.0
950	31	587	12.8	5.6	28	3.2
900	31	1,038	10.0	3.9	28	4.8
850	31	1,511	7.6	.5	28	5.8
800	31	2,010	5.1	-4.6	27	6.5
750	31	2,537	3.7	-8.0	27	7.7
700	31	3,095	1.2	-11.5	26	9.2
650	31	3,687	-1.3	-16.3	26	9.9
600	31	4,324	-4.8	-18.6	26	11.8
550	31	4,999	-8.8	-22.9	26	13.0
500	31	5,736	-13.4	-27.1	26	14.8
450	31	6,525	-19.1	-31.5	26	15.7
400	31	7,396	-25.3	-37.8	26	16.4
350	31	8,352	-32.4	-43.2	26	17.7
300	31	9,422	-40.2	-47.8	26	18.6
250	31	10,645	-48.2		27	18.4
200	31	12,089	-56.1		27	21.4
175	31	12,932	-58.9		27	20.8
150	31	13,893	-61.7		27	19.9
125	31	15,018	-63.3		27	17.8
100	31	16,387	-63.9		28	14.1
80	31	17,760	-62.0		28	10.2
70	31	18,588	-60.7		27	7.4
60	31	19,549	-59.2		27	6.1
50	31	20,697	-57.4		27	5.1
40	29	22,113	-56.1		27	4.7
30	29	23,950	-54.6		28	5.4
25	29	25,121	-53.3		27	5.4
20	29	26,563	-51.8		28	6.4
15	27	28,442	-49.8		27	7.1
10	22	31,105	-46.6		26	11.8
7	7	33,485	-42.8			

See reference note at end of table

RAWINSONDE DATA

Average monthly values

Standard pressure surface (mb)	WASHINGTON DULLES INT. AP 1009 MB						WINNEMUCCA, NEV. 871 MB					
	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	85	8.8	6.6	29	1.4	30	1,312	2.8	-9.9	14	1.5
1000	31	158	11.2	8.0	28	1.4	30	167				
950	31	590	11.5	5.1	28	3.9	30	594				
900	31	1,039	8.8	3.0	28	5.4	30	1,042				
850	31	1,510	6.0	-1.0	28	6.2	30	1,509	8.8	-3.7	16	1.6
800	31	2,005	4.5	-6.1	27	7.4	30	2,010	7.7	-5.6	23	2.7
750	31	2,531	2.8	-10.7	27	7.8	30	2,537	4.7	-8.9	25	5.5
700	31	3,085	.4	-15.1	26	8.6	30	3,098	1.3	-12.7	25	7.6
650	31	3,676	-2.1	-18.9	26	9.7	30	3,687	-2.0	-15.7	25	8.4
600	31	4,309	-5.9	-21.5	26	10.7	30	4,324	-5.7	-19.3	26	9.9
550	31	4,981	-9.9	-26.1	26	11.9	30	4,996	-9.5	-23.9	26	11.4
500	31	5,714	-14.5	-30.3	27	13.0	30	5,732	-14.1	-28.4	26	12.9
450	31	6,498	-20.0	-34.1	26	14.5	30	6,518	-19.7	-33.0	27	13.8
400	31	7,368	-26.2	-39.8	26	16.4	30	7,388	-26.0	-37.7	27	14.8
350	31	8,320	-33.3	-45.9	26	16.6	30	8,341	-33.1	-44.1	27	16.6
300	31	9,386	-40.9	-51.2	26	17.8	30	9,406	-41.2	-50.9	27	17.3
250	31	10,605	-48.8		26	20.8	30	10,622	-49.7		27	17.6
200	30	12,046	-55.7		26	21.9	30	12,053	-57.8		28	17.0
175	30	12,892	-58.0		26	21.8	30	12,890	-60.3		28	17.2
150	30	13,858	-60.3		27	19.9	29	13,843	-61.9		27	17.1
125	30	14,989	-62.6		27	17.0	27	14,973	-63.8		27	14.8
100	30	16,361	-63.1		26	14.0	27	16,340	-64.3		27	13.1
80	30	17,739	-61.3		27	10.0	26	17,711	-62.4		27	9.4
70	30	18,569	-60.1		27	7.7	26	18,537	-61.1		28	6.9
60	30	19,536	-58.5		27	6.9	25	19,494	-59.6		28	5.3
50	30	20,686	-56.8		27	5.4	24	20,634	-59.0		28	4.6
40	29	22,106	-56.0		27	4.2	24	22,038	-57.5		31	1.9
30	27	23,935	-54.6		28	4.6	23	23,867	-55.5		29	2.4
25	26	25,108	-53.4		28	4.7	23	25,033	-54.2		28	3.4
20	25	26,548	-51.8		28	5.7	19	26,472	-52.3		28	4.4
15	21	28,440	-49.9		27	6.7	18	28,336	-50.6		27	5.4
10	17	31,115	-46.7		27	9.1	12	31,025	-47.2			
7	9	33,519	-44.2									

Standard pressure surface (mb)	WINSLOW, ARIZ. 852 MB						YAKUTAT, ALASKA 999 MB					
	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1,492	6.5	-2.8	16	1.2	31	12	.3	-.3	12	2.3
1000	31	154					31	2			10	2.7
950	31	585					31	417	3.5	-1.2	12	5.5
900	31	1,038					31	855	.6	-3.7	14	6.6
850	31	1,513			15	1.0	31	1,312	-2.4	-6.2	14	7.2
800	31	2,020	12.2	-1.7	24	2.8	31	1,791	-5.3	-9.7	15	7.4
750	31	2,555	9.0	-4.2	24	4.6	31	2,296	-8.3	-12.9	16	6.7
700	31	3,125	5.3	-8.6	25	5.9	31	2,828	-11.8	-17.1	17	6.5
650	31	3,723	2.3	-13.5	25	6.9	31	3,389	-15.3	-21.3	17	6.7
600	31	4,369	-1.5	-17.3	26	8.5	31	3,993	-19.1	-26.1	18	6.9
550	31	5,048	-5.6	-22.4	26	10.0	31	4,632	-23.3	-31.0	19	7.4
500	31	5,798	-10.6	-26.9	26	10.8	31	5,327	-28.0	-34.3	19	8.4
450	31	6,594	-16.6	-31.4	26	11.6	31	6,071	-33.5	-40.1	20	9.3
400	31	7,475	-23.6	-36.8	26	12.8	31	6,893	-39.5	-44.9	21	10.0
350	31	8,436	-31.2	-42.8	27	13.9	31	7,794	-45.6		23	10.2
300	31	9,511	-39.3	-49.2	27	15.8	31	8,808	-51.3		23	11.1
250	31	10,737	-47.9		27	16.2	31	9,985	-53.0		24	11.3
200	31	12,180	-56.7		27	20.4	31	11,432	-50.6		24	12.3
175	31	13,019	-60.5		26	20.8	31	12,302	-50.0		25	11.2
150	31	13,970	-64.2		27	21.2	30	13,313	-49.2		24	11.6
125	31	15,078	-66.3		27	18.3	30	14,509	-49.0		25	11.1
100	31	16,424	-67.5		28	13.2	30	15,972	-49.7		24	11.9
80	30	17,770	-66.1		29	8.2	30	17,431	-50.2		25	11.9
70	30	18,582	-64.5		29	6.3	29	18,304	-50.5		25	10.5
60	29	19,526	-62.5		30	4.1	29	19,308	-51.0		25	9.4
50	27	20,656	-60.2		31	2.6	29	20,492	-51.6		25	9.5
40	26	22,058	-57.7		28	2.1	29	21,938	-51.9		26	8.7
30	24	23,884	-55.4		28	2.0	27	23,803	-52.0		27	9.1
25	23	25,054	-54.1		27	2.1	25	24,993	-52.1		28	9.0
20	21	26,496	-52.7		27	2.3	22	26,445	-52.2		30	10.1
15	17	28,347	-50.9		26	3.9	17	28,307	-51.5		30	12.2
10	11	30,984	-48.6				13	30,949	-50.9		31	14.2
7												

Standard pressure surface (mb)	+ YAP, CAROLINE IS. 1008 MB					
	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	17	28.3	24.2	31	.5
1000	31	84	27.5	23.2	28	.5
950	31	531	23.6	18.6	24	1.4
900	31	1,008	20.7	14.9	25	2.4
850	31	1,502	17.9	11.7	25	3.3
800	31	2,019	15.2	8.2	25	3.2
750	31	2,558	12.6	4.2	23	2.7
700	31	3,142	10.0	-.3	22	1.9
650	31	3,751	6.7	-4.3	21	2.0
600	31	4,409	3.0	-8.9	17	1.7
550	31	5,105	-.8	-13.3	15	1.5
500	31	5,866	-4.8	-18.6	12	1.8
450	31	6,684	-9.5	-24.5	14	2.5
400	31	7,590	-15.2	-29.5	13	2.5
350	31	8,586	-21.9	-36.2	13	2.8
300	31	9,702	-30.2	-44.2	12	4.2
250	31	10,973	-40.4	-51.3	11	6.0
200	31	12,454	-52.7		10	7.4
175	31	13,302	-59.7		09	8.0
150	31	14,249	-67.1		08	9.0
125	31	15,328	-75.0		08	11.7
100	31	16,602	-79.6		08	13.5
80	31	17,877	-75.6		09	12.6
70	31	18,657	-71.5		09	12.6
60	31	19,576	-67.4		09	14.3
50	31	20,687	-63.1		09	17.8
40	31	22,072	-59.2		09	24.9
30	30	23,894	-54.4		09	27.7
25	27	25,071	-51.2		09	22.7
20	25	26,537	-47.0		10	12.1
15	23	28,458	-43.1		20	3.2
10	17	31,209	-38.5		25	4.0
7	6	33,628	-37.4			

Standard pressure surface (mb)	YUCCA FLAT, NEV. 882 MB						YUMA, ARIZ. 995 MB					
	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1,196	6.3	-4.1	27	.9	23	131	17.0	3.3	03	.3
1000	31	150					23	90				
950	31	576					23	530	22.8	5.5	34	2.6
900	31	1,033					23	1,002	20.4	2.8	35	1.1
850	31	1,507	14.0	-1.6	32	1.3	23	1,492	17.3	-.9	25	.8
800	31	2,016	11.4	-4.6	22	.5	23	2,007	14.6	-7.9	22	2.4
750	31	2,549	8.1	-8.1	21	2.1	23	2,542	11.3	-11.0	23	3.6
700	31	3,118	4.4	-10.4	24	2.9	23	3,121	7.6	-14.1	23	4.5
650	31	3,715	.9	-13.5	25	4.4	23	3,718	4.2	-17.8	24	5.0
600	31	4,356	-3.0	-18.2	25	5.7	23	4,373	.2	-20.7	24	6.4
550	31	5,034	-7.2	-22.6	25	7.6	23	5,054	-4.5	-24.3	24	8.2
500	31	5,777	-12.1	-26.3	25	8.3	23	5,808	-9.9	-28.6	25	9.6
450	31	6,571	-17.8	-31.7	26	9.2	23	6,600	-15.8	-33.3	25	12.4
400	31	7,445	-24.4	-36.8	26	11.4	23	7,490	-22.9	-38.1	25	12.5
350	31	8,404	-31.[illegible]	-42.0	25	12.5	23	8,455	-30.6	-44.0	25	12.7
300	31	9,475	-40.2	-47.6	26	12.5	23	9,532	-39.1	-50.1	26	15.2
250	31	10,696	-49.0		27	14.8	23	10,758	-48.0		26	19.2
200	30	12,131	-56.7		27	15.1	16	12,208	-56.0		27	21.7
175	30	12,972	-59.8		27	15.6	7	13,055	-59.4			
150	30	13,927	-63.0		27	15.2						
125	30	15,045	-64.9		27	15.0						
100	30	16,401	-65.9		27	13.3						
80	30	17,758	-64.8		28	9.8						
70	30	18,576	-63.4		28	7.1						
60	30	19,524	-62.0		29	4.6						
50	30	20,659	-59.9		30	3.5						
40	28	22,059	-58.0		28	3.3						
30	26	23,880	-55.7		28	3.3						
25	24	25,040	-54.5		29	4.2						
20	21	26,460	-53.6		28	5.3						
15	10	28,328	-51.9									

Note: All observations scheduled at 1200, G.C.T. Pressures shown under station names are the average monthly station pressures for the month of record, corrected to the height of the floors of the instrument shelters used for rawinsonde purposes. "Number of observations" refers to those of dynamic height only. Although the number of temperature observations at any given pressure surface is usually the same as for height, it is possible for temperature to be missing for one or more pressure surfaces of some observations. Dew Point averages are limited to those observations with temperatures warmer than -40°C. Observations of wind speed and direction are sometimes lost due to limiting angles, i. e., elevation angles less than 6° above the horizon, or any obstruction above the horizon.

The temperature and wind values are based on 15 or more observations at the surface or 5 observations at a standard pressure level for temperature and 10 for wind. Dew Point data are not published for standard pressure surfaces for which less than 5 observations are available. Dew Point data are computed and expressed on the basis of vapor pressure over water. Unless otherwise indicated, they are obtained from carbon hygristors.

These average values for standard pressure surfaces were obtained by rawinsondes; dynamic height (geopotential) in units of .98 dynamic meter, temperature and dew point in degrees Celsius, and resultant winds in tens of degrees and meters per second.

* Rawinsondes at this station were equipped with hypsometers to permit more accurate evaluations of pressure, and consequently height, at pressures lower than 50 mb. These rawinsondes were carried aloft by special high altitude balloons, in an effort to consistently reach higher altitudes.

\+ Observations for these stations are scheduled at 0000 G. C. T.

† Dew Point temperatures are based on a minimum of 5 observations. Therefore, due to the lesser number of Dew Point observations at the higher levels comparison with dry-bulb temperatures should be made with care. Dew Point temperatures replaced Relative Humidity January 1967

Solar radiation intensities, tabulated in langleys per minute on a surface normal to the direction of the sun.

Date	Sun's zenith distance								
	A M				*	P M.			
	78.7°	75.7°	70.7°	60.0°		60.0°	70.7°	75.7°	78.7°
ALBUQUERQUE, N MEX.									
	Air mass								
	4.19	3.35	2.51	1.67	*	1.67	2.51	3.35	4.19
Oct.									
1-----	(0.49)	(0.67)	----	----	----	----	----	----	0.84
2-----	.98	1.12	1.24	1.33	1.47	----	----	----	----
5-----	.90	1.01	1.13	1.27	1.42	1.28	1.12	1.01	.88
6-----	.91	1.03	1.15	1.31	1.42	1.26	----	----	----
7-----	----	1.01	(1.07)	(1.24)	(1.34)	----	----	(.88)	(.75)
8-----	.85	.96	1.05	1.25	1.41	1.24	1.07	.97	.85
9-----	(.67)	1.03	1.14	1.28	(1.42)	----	----	(1.01)	.85
10----	(.86)	.99	1.09	(1.26)	1.40	(1.23)	1.04	(.94)	.79
11----	.81	.94	----	1.23	1.40	----	----	----	----
12----	----	.97	(1.06)	1.27	1.38	1.30	1.13	1.05	.92
13----	.98	1.09	1.21	1.34	1.46	1.33	1.17	1.07	.94
14----	.94	1.05	1.13	1.30	1.40	----	----	----	----
15----	----	----	----	1.33	----	----	----	----	----
16----	.97	1.09	1.20	1.37	1.49	1.36	1.22	1.15	1.03
17----	1.02	1.16	1.26	1.42	1.50	1.40	1.26	1.20	1.08
18----	1.10	1.21	1.28	1.42	1.52	1.41	1.23	1.11	1.00
19----	1.03	1.12	----	----	----	----	----	----	----
21----	.82	.97	1.10	1.29	1.40	1.34	1.22	1.12	1.00
22----	.90	1.04	1.13	1.31	1.42	1.31	1.14	1.05	.91
25----	.96	1.09	1.20	1.34	1.42	1.33	1.17	1.08	.97
26----	.96	1.08	1.21	1.35	----	----	----	----	----
27----	.91	1.04	1.17	1.33	1.42	1.34	1.19	1.06	.91
28----	----	----	----	1.35	1.41	1.34	1.21	1.07	.92
29----	1.01	1.12	1.25	1.36	----	----	----	----	----
30----	----	----	1.08	(1.24)	(1.35)	----	----	----	----
31----	.95	1.08	1.20	1.33	----	1.31	----	----	----
Averages	0.94	1.05	1.17	1.32	1.43	1.33	1.17	1.08	0.93
OMAHA, NEBR.									
	Air mass								
	4.78	3.82	2.87	1.91	*	1.91	2.87	3.82	4.78
Oct.									
1-----	HS0.75	HS0.85	HS0.96	HS1.12	HS1.22	----	----	----	----
3-----	HS .79	HS .90	HS1.03	HS1.21	----	----	----	----	----
4-----	HS .83	----	HS1.17	HS1.21	HS1.29	HS1.17	HS0.99	----	----
6-----	HS .78	HS .84	HS1.04	HS1.20	HS1.30	HS1.22	----	HS0.92	----
14----	HM .61	HM .79	HM .88	----	----	----	----	----	----
19----	HS .92	HS .98	----	----	----	----	----	----	----
20----	HS .88	HS1.00	HS1.11	HS1.24	HS1.29	HS1.22	HS .92	HS .75	HS0.71
22----	HS .90	HS1.00	HS1.12	HS1.24	1.30	----	----	----	----
23----	----	HS .90	HS1.05	HS1.23	HS1.30	----	----	----	----
25----	HS .84	HS1.00	HS1.16	HS1.25	HS1.31	HS1.14	HS .98	HS .92	HS .86
26----	HM .72	HM .98	HM1.08	HM1.22	HM1.25	----	----	----	----
30----	HM .82	HM .93	HM1.03	HM1.20	HM1.26	HM1.22	HM .86	----	HM .73
Averages	0.80	0.93	1.06	1.21	1.28	1.19	0.94	0.86	0.77
GUAM, M. I.									
	Air mass								
	4.92	3.93	2.95	1.97	*	1.97	2.95	3.93	4.92
Oct.									
19----	----	----	----	----	M 1.28	----	----	----	----

Date	Sun's zenith distance								
	A. M				*	P. M.			
	78.7°	75.7°	70.7°	60.0°		60.0°	70.7°	75.7°	78.7°
BLUE HILL OBS., MASS.									
	Air mass								
	4.89	3.92	2.94	1.96	*	1.96	2.94	3.92	4.89
Oct.									
1-----	0.70	0.78	0.91	1.12	1.30	1.18	0.93	0.77	0.67
4-----	----	----	----	----	1.33	1.21	1.06	.93	.84
5-----	.89	.99	1.11	1.27	1.39	1.22	1.05	.89	.74
6-----	.90	.99	1.10	----	----	----	----	----	----
9-----	.83	.93	1.03	1.22	1.33	1.17	.98	.86	.76
13----	.57	.67	.84	1.07	1.21	1.05	.84	.70	.60
14----	.74	.86	.99	1.12	1.20	1.06	.88	.75	.65
17----	.70	.79	.94	1.12	1.22	1.12	.91	.77	.60
18----	.72	.83	.93	1.11	1.17	1.05	.91	.77	.65
22----	.91	.96	1.08	1.18	1.34	1.29	1.10	.96	.87
26----	----	----	----	1.24	1.27	1.18	.95	.81	.70
27----	.94	1.05	1.16	1.32	1.35	1.24	1.07	.91	.81
30----	.84	.94	1.07	1.25	1.30	----	----	----	----
31----	.90	1.01	1.15	1.30	1.34	1.30	1.15	1.05	.95
Averages	0.80	0.90	1.03	1.19	1.29	1.17	0.99	0.85	0.74
TUCSON, ARIZ.									
	Air mass								
	4.56	3.65	2.74	1.83	*	1.83	2.74	3.65	4.56
Oct.									
1-----	0.89	0.99	1.12	1.27	1.38	1.25	1.09	0.99	0.88
2-----	.83	.93	1.08	1.19	----	----	----	----	----
4-----	----	----	.99	1.16	1.31	1.19	1.02	.89	.76
5-----	.84	.94	1.07	1.22	1.37	1.19	1.01	.88	.78
6-----	.83	.93	1.05	1.20	1.35	1.20	1.03	.89	.79
7-----	----	----	----	1.24	1.36	1.23	1.09	.98	.87
8-----	.82	.90	1.03	1.17	1.35	1.24	1.04	.92	.77
9-----	----	----	----	----	1.34	1.17	1.02	.88	.79
10----	.84	.95	1.07	1.22	1.36	1.22	1.08	.95	----
11----	.82	.92	1.05	1.19	1.34	1.23	1.09	.98	.89
12----	.89	.99	1.10	1.25	1.36	1.24	1.08	.96	.86
13----	.87	.96	1.07	1.22	1.33	1.15	1.00	.92	----
14----	.81	.91	1.03	1.20	1.35	1.24	1.08	.96	.89
15----	.91	1.01	1.10	1.25	1.33	1.26	1.07	.95	.87
16----	.94	1.03	1.12	1.28	1.39	1.30	1.13	.99	.90
17----	.95	1.04	1.08	1.24	1.42	1.21	----	----	----
18----	.92	1.01	1.10	1.24	1.38	1.21	1.07	.90	.79
21----	.86	.96	1.07	1.26	1.35	1.20	1.04	.91	.81
22----	.87	.94	1.06	1.19	1.34	1.20	1.03	.93	.84
23----	.84	.95	1.09	1.18	1.34	1.20	1.11	.96	.86
24----	.81	.90	1.06	1.19	1.34	1.22	1.03	.85	.72
25----	.80	.91	1.02	1.18	1.27	1.13	.96	.80	.68
26----	----	----	1.00	1.20	----	1.14	.95	.83	.71
27----	.84	.93	1.05	1.21	1.31	1.20	1.05	.90	.78
28----	.77	.89	.99	1.20	1.31	1.20	1.06	.88	.77
29----	.72	.79	.95	1.11	1.24	1.02	.90	.78	----
30----	----	----	----	----	----	1.10	----	----	----
31----	.81	.89	1.00	1.18	1.27	1.20	1.06	.96	.85
Averages	0.85	0.94	1.05	1.21	1.34	1.20	1.04	0.91	0.81

( ) Clouds present
HS Slight haze
HM Moderate haze
M Moderate haze - indeterminable
* Values corresponding to true solar noon

Langley is the unit used to denote one gram calorie per square centimeter. An explanation of the formula used in computing the air mass values for each station listed above appears in the February 1957 issue, Vol. 8, No. 2, page 63, of this publication.

SOLAR RADIATION DATA

Daily totals and monthly averages of solar radiation (direct and diffuse) received on a horizontal surface, tabulated in langleys. OCTOBER 1968

Station	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
ALBUQUERQUE N.M.	477	484	234	156	492	488	469	474	469	466	440	458	461	406	347	467	464	461	341	311	420	422	391	403	405	394	409	402	397	352	376	411
AMES IOWA	387	322	289	410	59	340	351	55	146	355	351	177	49	208	314	134	60	114	237	332	293	313	266	228	262	295	88	206	282	285	248	241
ANNETTE ALASKA	308	43	16	169	65	165	254	137	271	153	227	98	100	107	145	---	104	54	44	113	58	93	81	80	129	53	15	34	62	93	62	111
APALACHICOLA FLORIDA	507	---	509	413	485	108	---	418	317	426	457	493	491	485	420	439	176	141	473	485	422	284	254	255	473	482	465	449	465	455	440	403
ARGONNE NAT. LAB.	376	295	425	442	419	84	303	317	116	420	361	368	351	342	330	334	124	358	376	376	326	68	175	49	313	342	202	79	191	316	293	286
ASTORIA OREGON	386	390	360	360	212	234	227	355	111	276	116	99	258	122	125	188	66	282	44	299	70	150	245	226	109	250	255	155	114	164	254	210
ATLANTA GEORGIA	442	413	288	508	462	63	202	237	125	306	239	243	167	387	384	91	103	89	405	385	379	365	386	223	373	420	102	405	403	372	310	299
BARROW ALASKA	---	---	---	59	---	137	52	60	102	29	27	41	---	38	28	---	75	32	21	23	---	73	42	10	25	30	6	4	4	4	---	40
BETHEL ALASKA	198	87	119	183	16	31	149	119	138	78	120	66	51	78	83	173	146	120	112	156	129	46	95	63	66	111	93	33	53	89	35	98
BISMARCK N.DAK.	412	312	415	419	372	367	382	287	324	378	374	318	330	70	78	222	102	228	301	307	133	223	79	194	300	133	137	245	282	266	153	263
BLUE HILL MASS.	421	322	299	345	376	397	33	110	397	186	161	302	355	353	287	321	337	331	84	52	223	337	257	230	62	267	318	105	162	251	306	258
BOISE IDAHO	364	405	390	301	390	321	393	386	254	---	50	97	138	204	196	346	323	238	303	154	269	245	282	293	278	300	281	281	196	148	196	267
BOSTON MASSACHUSETTS	405	313	298	356	358	387	28	112	392	274	132	279	348	350	274	328	324	313	80	68	229	329	253	243	37	285	327	109	187	---	---	256
BROWNSVILLE TEXAS	272	528	515	193	535	522	400	461	488	375	412	456	479	433	447	501	322	286	383	---	482	272	416	245	487	435	434	421	467	362	452	416
BURLINGTON VERMONT	354	277	127	156	280	280	39	59	304	257	284	281	293	317	250	297	264	294	49	252	50	285	200	193	58	125	269	74	74	31	133	200
CAPE HATTERAS N.C.	446	438	429	324	497	408	137	442	258	313	351	415	392	220	213	365	330	308	327	353	415	407	231	232	181	380	409	355	385	331	385	344
CARIBOU MAINE	200	262	303	214	284	410	257	292	178	320	62	186	223	233	136	305	72	264	260	67	42	318	200	219	40	79	140	74	106	156	150	195
CHARLESTON S.C.	459	450	433	426	520	306	278	204	221	367	378	374	384	453	276	81	138	88	91	431	434	403	353	267	386	450	443	369	432	415	398	345
CLEVELAND OHIO	421	284	252	251	255	72	180	376	354	282	265	241	358	338	362	353	344	107	388	348	316	231	287	157	64	197	183	147	110	202	316	259
COLUMBIA MISSOURI	431	420	437	492	97	127	453	430	90	419	395	268	40	388	392	389	259	384	409	405	304	306	170	260	385	375	236	198	364	351	343	323
DAVIS CALIFORNIA	456	442	441	451	317	340	478	478	358	435	208	152	120	222	443	278*	391*	418	415	411	420	374	381	359	368	356	358	356	96	320	293	353*
DODGE CITY KANSAS	433	454	379	367	345	470	430	426	472	363	426	380	435	428	331	40	385	433	405	404	369	400	233	375	389	350	382	359	375	370	311	378
E. LANSING MICHIGAN	412	129	364	320	405	57	172	357	268	371	275	376	309	302	331	334	264	88	347	132	340	77	251	92	271	149	101	64	139	332	303	250
EL CENTRO CALIF. NPF	489	451	473	469	467	467	467	467	373	480	480	482	445	478	467	456	456	437	437	437	426	434	433	426	372	417	409	408	373	361	416	440
EL PASO TEXAS	538	454	202	378	538	518	523	533	524	502	496	494	483	483	469	513	506	494	467	460	460	473	467	441	447	443	443	437	428	414	424	466
ELY NEVADA	524	507	---	480	500	321	445	511	432	428	313	452	44	124	425	---	439	401	452	443	409	340	420	412	406	391	387	401	332	163	302	386
EPPLEY NEWPORT R.I.	417	291	315	323	397	353	34	177	388	279	---	335	345	---	258	333	313	293	73	110	253	336	306	133	---	313	318	156	230	228	---	271
FAIRBANKS ALASKA	147	106	105	93	67	134	96	184	100	51	46	100	102	111	49	56	100	61	---	64	47	106	35	92	76	74	23	30	73	46	85	82
FORT WORTH TEXAS	496	502	133	488	120	393	498	218	110	502	135	204	426	395	366	119	490	467	461	454	383	430	336	464	444	443	421	423	409	413	312	370
FRESNO CALIFORNIA	---	---	---	---	---	---	---	---	---	---	---	216	71	357	325	347	356	330	343	343	340	341	335	333	310	315	319	312	152	284	228	---
GAINESVILLE FLORIDA	---	472	468	351	334	226	375	300	309	306	399	580	---	476	313	318	400	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
GLASGOW MONTANA	163	336	420	397	394	358	176	100	333	192	321	162	183	50	156	190	362	325	263	273	244	140	223	242	287	253	236	236	271	249	254	251
GRAND JUNCTION COLO.	316	428	465	119	396	455	309	203	426	129	405	328	370	379	189	383	414	433	423	388	407	386	382	383	398	366	392	377	383	225	292	353
GREAT FALLS MONTANA	109	331	405	304	381	323	256	297	243	367	152	187	272	170	288	261	340	122	223	134	---	173	249	261	227	265	237	---	---	---	293	254
GREENSBORO N.C.	440	363	297	470	452	306	399	259	---	210	283	218	235	301	97	109	216	63	87	401	392	292	349	305	230	354	385	234	330	362	334	292
INDIANAPOLIS INDIANA	378	212	359	476	421	37	127	425	297	435	394	311	248	339	357	345	221	331	398	391	360	213	247	188	183	363	294	49	265	333	315	300
ITHACA NEW YORK	404	368	97	162	223	191	91	40	265	180	312	304	363	343	339	343	394	192	26	343	117	271	185	121	24	80	249	192	71	164	189	214
LAKE CHARLES LA.	482	503	439	306	88	76	335	202	366	255	309	389	393	386	437	366	414	470	491	241	439	309	426	462	468	457	416	467	429	430	343	374
LAKELAND FLORIDA	458	576	547	505	515	509	390	389	416	433	421	479	490	437	425	249	236	207	365	549	358	355	240	225	413	515	499	477	492	490	429	422
LANDER WYOMING	414	232	456	342	438	243	428	369	434	219	252	186	344	299	240	229	397	371	361	379	370	241	310	301	317	335	337	326	327	293	321	326
LARAMIE WYOMING	363	197	406	233	395	333	217	113	406	261	327	309	283	312	197	317	363	351	353	269	305	249	167	295	327	267	319	284	309	213	200	288
LAS VEGAS NEVADA	463	526	272	496	495	445	449	488	257	405	344	467	396	331	474	466	469	436	396	450	447	442	436	429	401	418	418	416	342	387	355	420
LITTLE ROCK ARKANSAS	441	436	207	514	---	---	---	447	110	483	264	303	162	358	---	394	431	447	429	383	354	375	370	400	415	393	350	405	382	368	235	365
LOS ANGELES CALIF.	134	260	404	243	370	110	381	430	313	284	227	377	367	142	483	451	457	370	383	389	374	405	394	418	308	329	366	312	312	379	206	335
LOS ANGELES CALIF. U	90	263	189	131	418	189	189	391	325	229	224	375	---	161	473	434	456	381	---	398	378	409	414	418	337	362	387	326	317	302	185	316
MADISON WISCONSIN	335	268	313	393	348	117	367	168	39	402	361	258	285	153	331	341	140	149	344	366	278	51	182	278	314	327	187	123	210	279	287	258
MANHATTAN KANSAS	345	378	384	366	13	416	366	22	399	317	315	97	247	347	253	4	237	366	340	346	226	356	169	315	336	309	288	324	319	316	266	283
MATANUSKA ALASKA	72	40	199	192	180	159	67	155	87	82	166	99	61	44	51	78	167	156	203	58	72	113	173	71	63	70	70	137	58	34	95	105
MEDFORD OREGON	416	443	439	143	328	365	445	442	296	373	68	189	342	230	202	361	352	389	341	245	328	281	331	338	253	327	313	310	212	147	110	302
MIAMI FLORIDA	409	395	416	345	528	551	386	486	406	441	205	459	477	437	371	100	205	423	481	518	389	322	221	162	236	478	418	307	513	519	462	389
MIDLAND TEXAS	471	438	324	242	412	469	440	396	334	292	276	418	420	370	343	450	452	445	425	412	286	314	385	358	398	404	393	390	384	382	327	382
NASHVILLE TENNESSEE	428	---	240	514	418	30	132	345	210	101	249	186	330	316	413	276	306	224	435	420	398	308	366	300	357	395	320	101	340	365	340	305
NEW YORK N.Y. U	409	344	228	464	436	280	133	259	316	157	12	150	248	280	259	277	314	187	31	220	292	312	321	202	138	177	312	96	149	269	326	245
NORTH OMAHA NEBRASKA	392	370	397	430	37	431	355	46	360	374	342	105	192	103	245	41	67	281	187	360	337	357	320	273	343	301	111	313	310	316	284	270
OAK RIDGE TENNESSEE	432	351	134	500	464	38	268	427	315	101	346	194	331	385	389	177	211	85	409	415	411	282	385	218	96	402	364	242	240	347	324	299

Note. --Langley is the unit used to denote one gram calorie per square centimeter.
Values with an asterisk are interpolated.

U Indicates Urban sites.

SOLAR RADIATION DATA

Daily totals and monthly averages of solar radiation (direct and diffuse) received on a horizontal surface, tabulated in langleys.

OCTOBER 1968

Station	Day of month																															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
OKLAHOMA CITY OKLA.	395	484	498	416	116	482	473	126	453	485	95	224	396	427	232	151	462	460	451	353	323	424	239	392	419	416	422	410	412	400	284	365
PALMER AAES ALASKA	67	55	218	193	179	164	82	144	91	88	163	102	70	47	65	89	149	144	192	62	76	96	147	73	71	152	147	113	70	58	93	112
PHOENIX ARIZONA	539	521	281	474	496	495	490	490	455	417	472	478	474	461	465	475	483	463	211	443	449	448	444	435	425	411	420	416	404	249	394	438
PORTLAND MAINE	418	345	239	358	262	288	29	144	264	297	109	259	351	361	282	330	337	321	69	80	111	330	75	144	42	291	330	100	271	287	309	240
PROSSER WASHINGTON	352	420	403	390	371	364	398	359	203	295	54	---	---	203	246	328	259	347	146	260	161	222	163	280	164	294	260	225	72	206	264	266
RAPID CITY S.DAK.	377	300	---	403	397	346	340	216	405	284	336	360	335	172	247	292	250	327	299	360	275	171	347	263	329	177	331	243	304	294	130	297
RENO NEVADA	438	428	432	424	428	327	394	431	330	396	273	169	105	270	396	381	376	370	375	369	335	344	352	341	340	336	333	328	129	314	211	338
RICHLAND 25 NW WASH.	331	420	404	350	341	368	340	366	196	351	48	233	266	199	299	331	287	325	160	244	140	215	145	288	122	285	260	219	81	172	259	260
RIVERSIDE CALIFORNIA	181	269	295	298	387	177	210	352	282	267	274	258	412	251	496	485	481	420	440	429	436	440	449	444	358	412	412	395	350	264	241	351
RUSTON LOUISIANA	448	380	169	456	225	108	341	393	135	136	120	401	377	411	346	377	322	433	431	379	409	348	376	393	403	397	352	392	378	353	338	340
SAINT CLOUD MINN.	398	105	322	409	56	356	71	142	89	352	349	250	123	134*	149	31	47	61	116	303	497	306	200	275	569	217	88	250	258	291	244	228*
SALT LAKE CITY	460	479	477	334	467	403	416	476	440	405	331	375	63	39	224	236	433	393	416	394	409	344	343	380	363	351	360	353	350	42	334	350
SAN ANTONIO TEXAS	449	490	364	118	213	464	244	314	296	364	233	271	358	256	313	272	467	390	463	314	350	303	343	467	448	451	416	428	415	378	353	355
SANTA MARIA CALIF.	422	424	429	418	479	451	466	425	344	401	430	270	81	---	452	432	440	388	423	387	424	418	421	388	410	411	367	293	225	392	349	389
SAULT STE MARIE MICH	289	112	130	280	240	91	247	96	59	112	279	319	143	94	173	248	184	67	98	68	275	17	105	187	160	258	32	100	230	121	198	162
SEATTLE TACOMA WASH.	---	426	271	286	191	300	290	333	87	134	63	61	188	106	243	196	114	260	63	160	87	129	174	272	86	251	225	134	170	193	234	191
SPOKANE WASHINGTON	315	395	380	302	312	279	226	274	167	220	44	219	219	190	221	325	290	168	119	78	193	215	132	232	179	278	192	190	153	87	193	219
STATE COLLEGE PENN.	409	385	125	290	232	243	159	314	271	25	315	299	264	107	306	260	327	78	74	374	374	351	383	67	106	177	285	216	139	233	345	243
STERLING VIRGINIA	418	---	148	465	---	336	255	389	152	104	162	172	197	135	113	187	231	106	58	357	369	307	300	108	269	246	351	196	233	314	337	242
SWAN ISLAND W.I.	573*	533*	326	168	406	443	510	555*	506	461	254	481	308	242	419	168	462	313	523	518	496	529	452	350	221	220	152	407	149	262	64	370*
TAMPA FLORIDA	368	464	468	439	409	425	413	407	253	375	341	411	428	408	333	337	171	81	302	392	387	268	230	215	365	450	---	---	---	418	392	355
TUCSON ARIZONA	508	347	294	489	486	479	474	473	463	449	448	454	434	441	439	431	454	440	235	421	433	436	423	416	404	395		398	---	---	---	428
WAKE ISLAND PACIFIC	561	468	520	281	---	---	---	457	234	540	528	500	547	504	540	525	545	464	501	531	525	384*	447	499	516	504	502	462	510	414	384	478*

Note.--Langley is the unit used to denote one gram calorie per square centimeter.

Values with an asterisk are interpolated.

NET RADIATION

Net radiation in langleys per day (8 a.m. to 8 a.m.) at Palmer, Alaska

OCTOBER 1968

Date.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
Langleys. . .	-28	-33	8	28	20	12	6	21	2	-16	†	-17	-23	-24	-60	-55	-43	-64	-66	-29	-52	-48	-69	-70	-65	-39	-55	-59	-33	-50	-58	-31

The measurement is made with a CSIRO FUNK net exchange radiometer over a plot of sod. The value represents the total incoming minus the total outgoing radiation of all wave lengths.

† less than 0.5

These data are of an experimental nature and are published as received from the Palmer Exp. Station. The instrument with which they were measured has not been checked by the ESSA, Weather Bureau.

SOLAR ULTRA-VIOLET RADIATION DATA

Daily totals and monthly average (<3900 Å)

Date.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
Langleys. . .	20.79	18.58	15.97	20.65	4.95	18.17	17.90	4.13	9.63	18.17	18.31	11.70	4.13	11.84	16.79	8.53	4.81	7.57	12.53	16.38	14.32	13.63	13.63	12.25	13.21	14.73	6.33	11.29	13.90	13.63	11.84	12.91

These data are from an U - V Eppley total ultra violet sensor and Speedomax H (Leeds Northrup) Recorder. It is at the same location (Agronomy Building, Iowa State University, Ames) as the published total solar radiation instrumentation. This instrument has not been checked by the ESSA, Weather Bureau.

TOTAL OZONE DATA

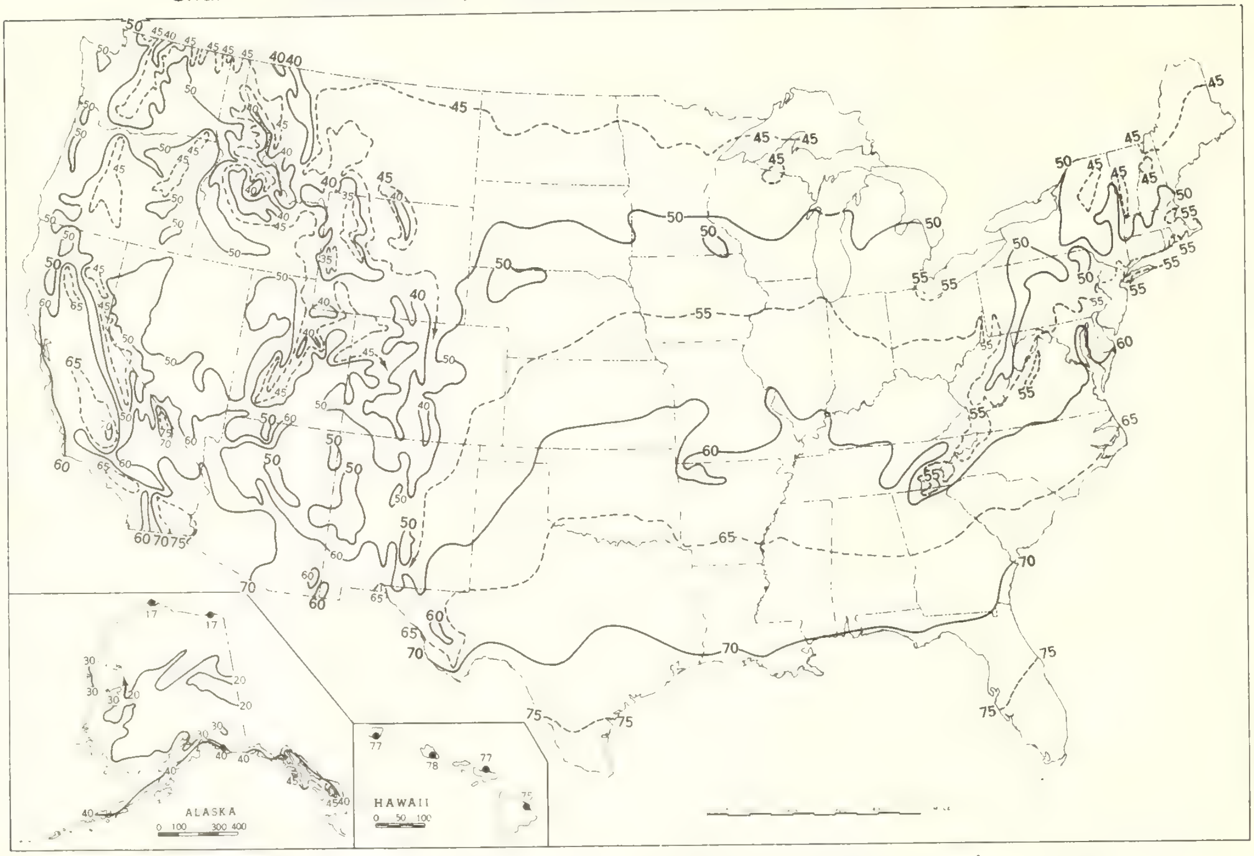
These provisional ozone data are obtained from measurements made with a Dobson ozone spectrophotometer, and are applicable approximately to local apparent noon. The data are presented in the code λs Ω Ω Ω defined in the August 1962 WMO circular entitled "PUBLICATION OF DATA FOR METEOROLOGICAL RESEARCH, WORLD OZONE DATA."

Units: Milli-atmo-cms.

Station	Day of month																															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean O_3
															Data will be delayed																	

The spectrophotometer measures the total amount of ozone in the atmosphere, i.e., the amount contained in a vertical column of air extending from ground level to the top of the atmosphere in the vicinity of the station. The amount of ozone in this column (coded Ω Ω Ω) is expressed in terms of a thickness of a layer it would occupy at standard temperature and pressure, e.g. [illegible] milli-atmo-cm ozone implies an ozone layer 0.3[illegible] centimeter thick. The code λs designates the type of measurement made.

Chart 1. A. Normal Daily Average Temperature (°F. 1931-60), October



B. Temperature Departure from 30 - Year Mean (°F 1931-60), October 1968.

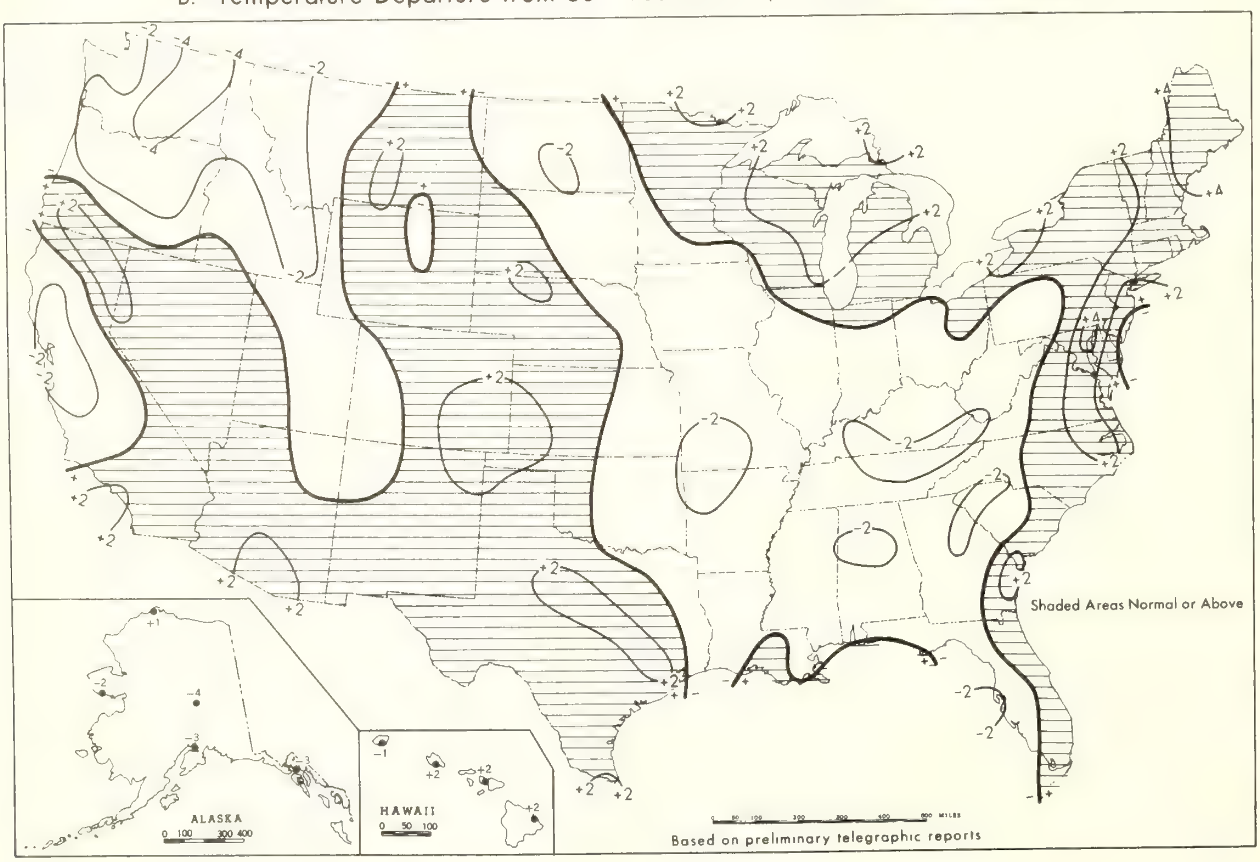


Chart II. Total Precipitation (Inches), October 1968.

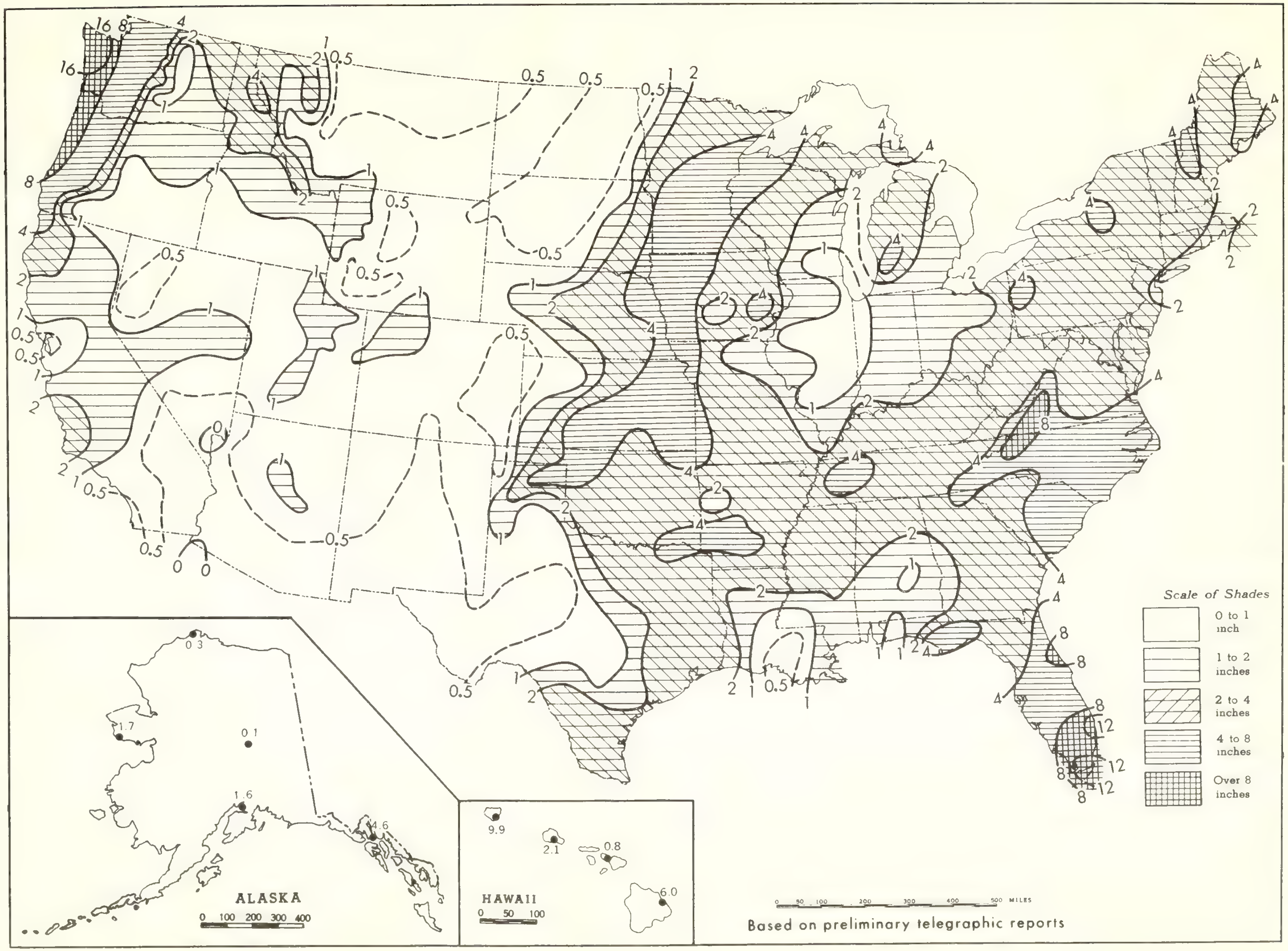


Chart III. Percentage of Normal Precipitation, October 1968.

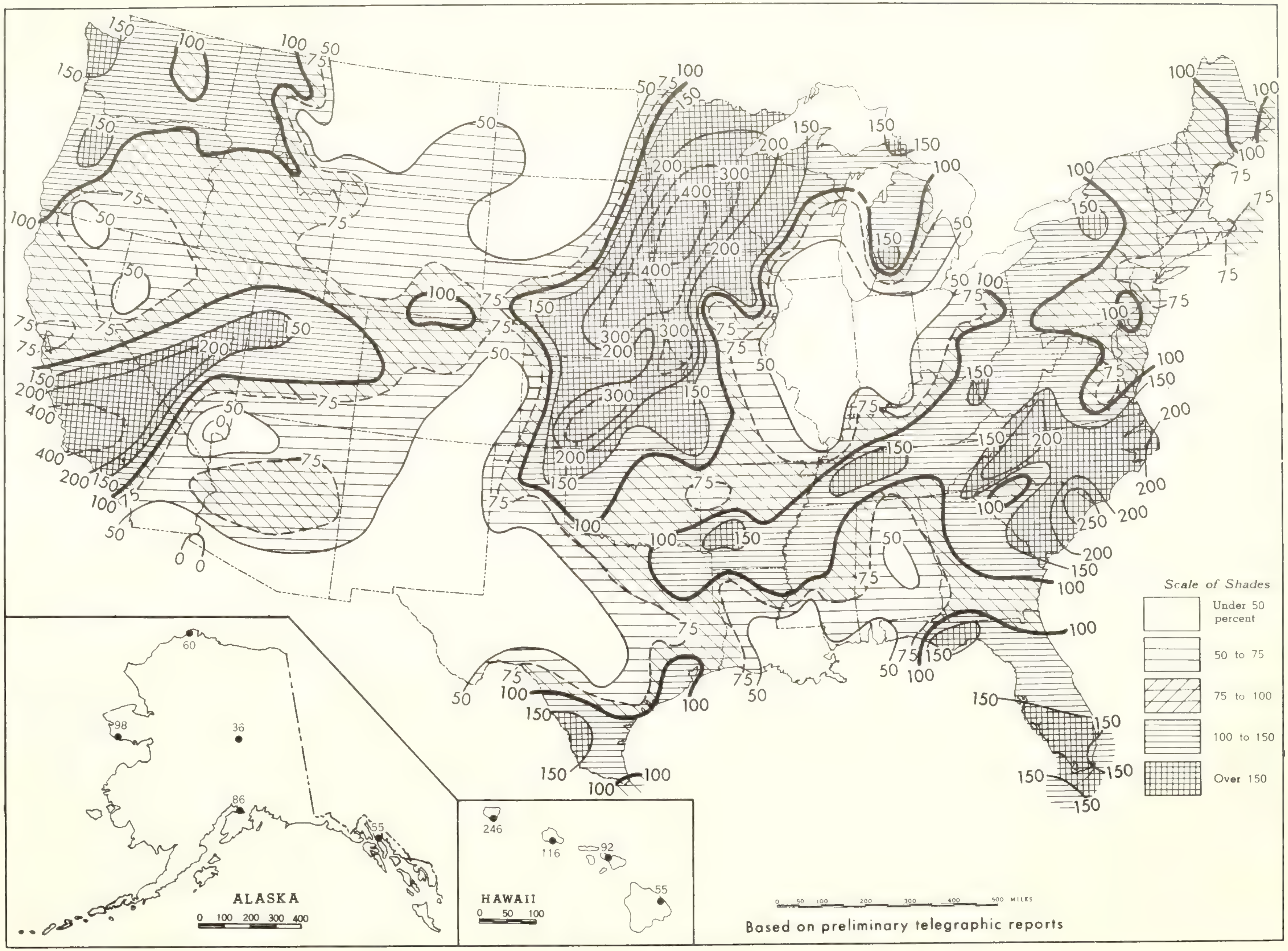
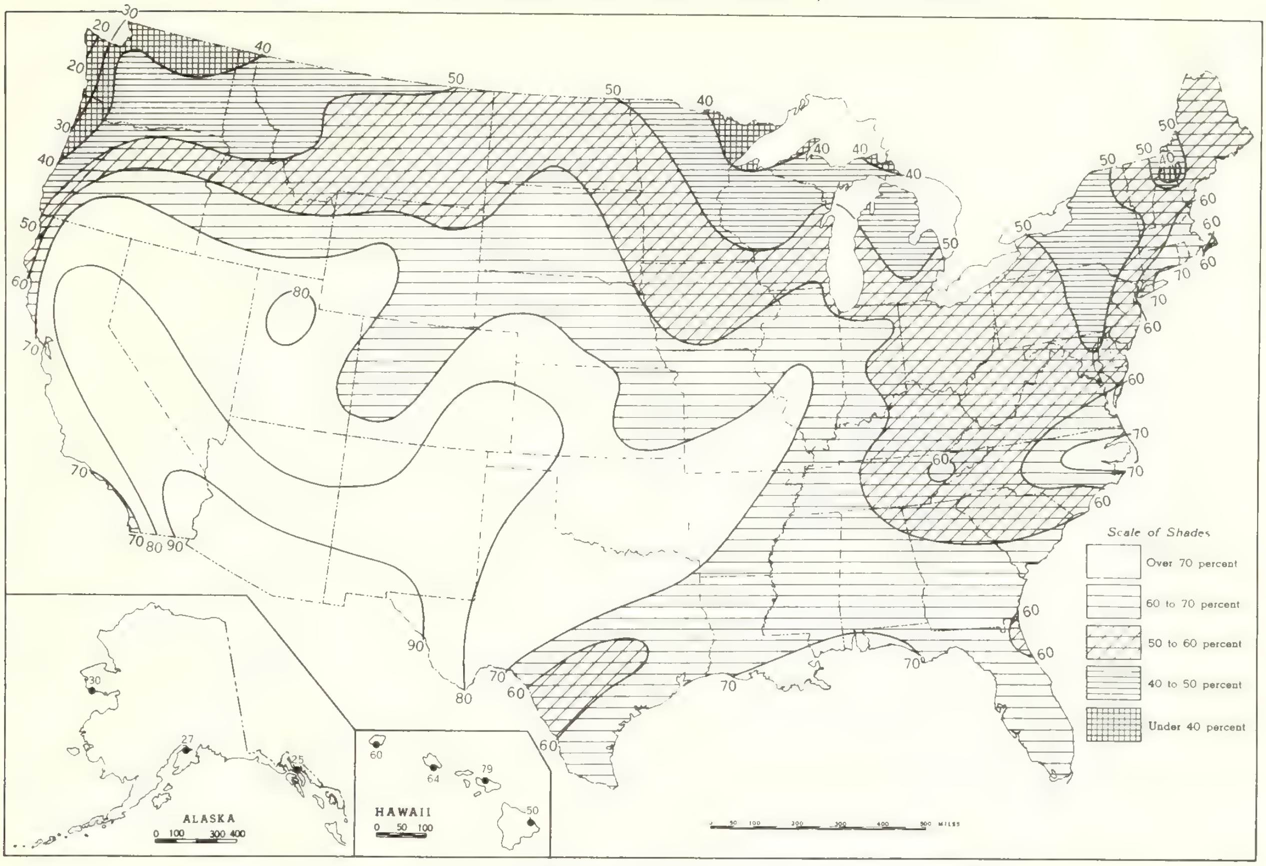
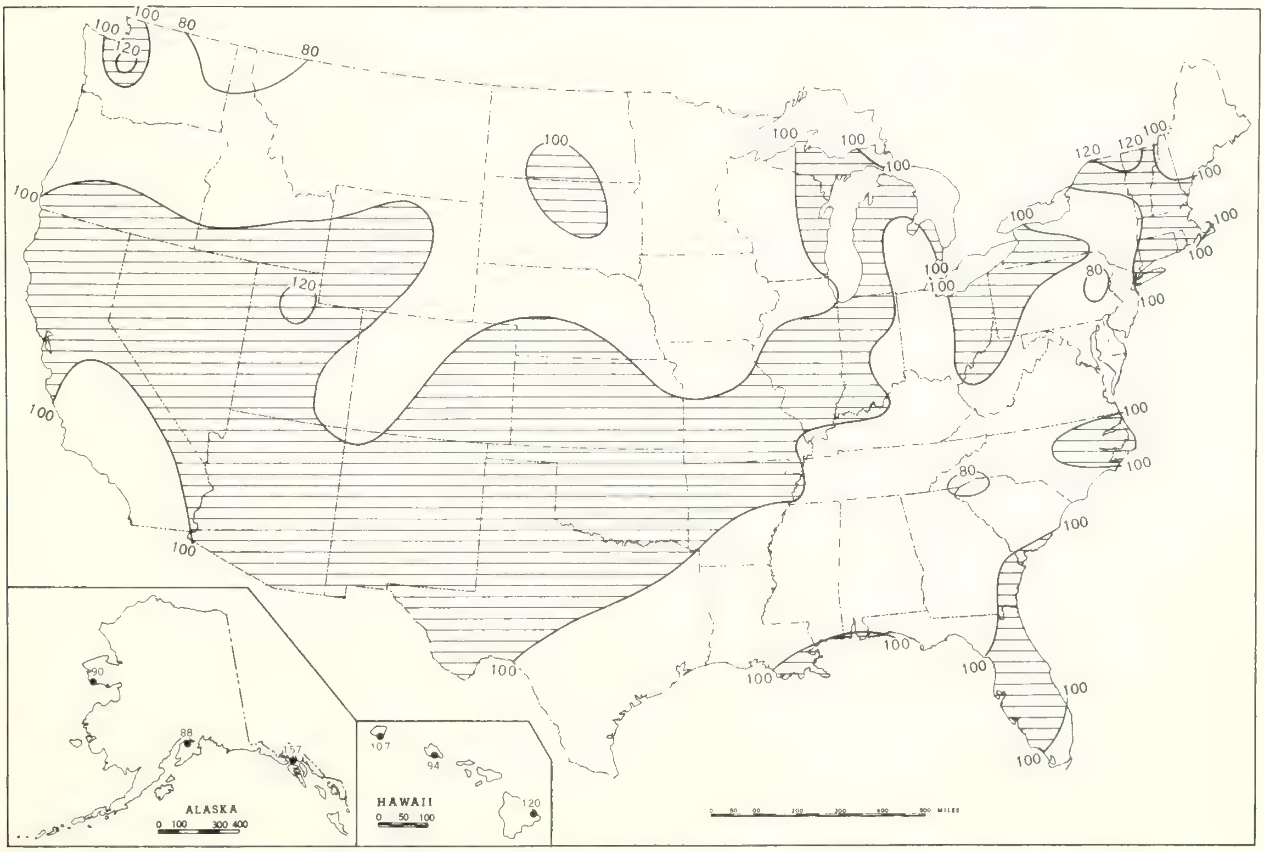


Chart VI. A. Percentage of Possible Sunshine, October 1968.

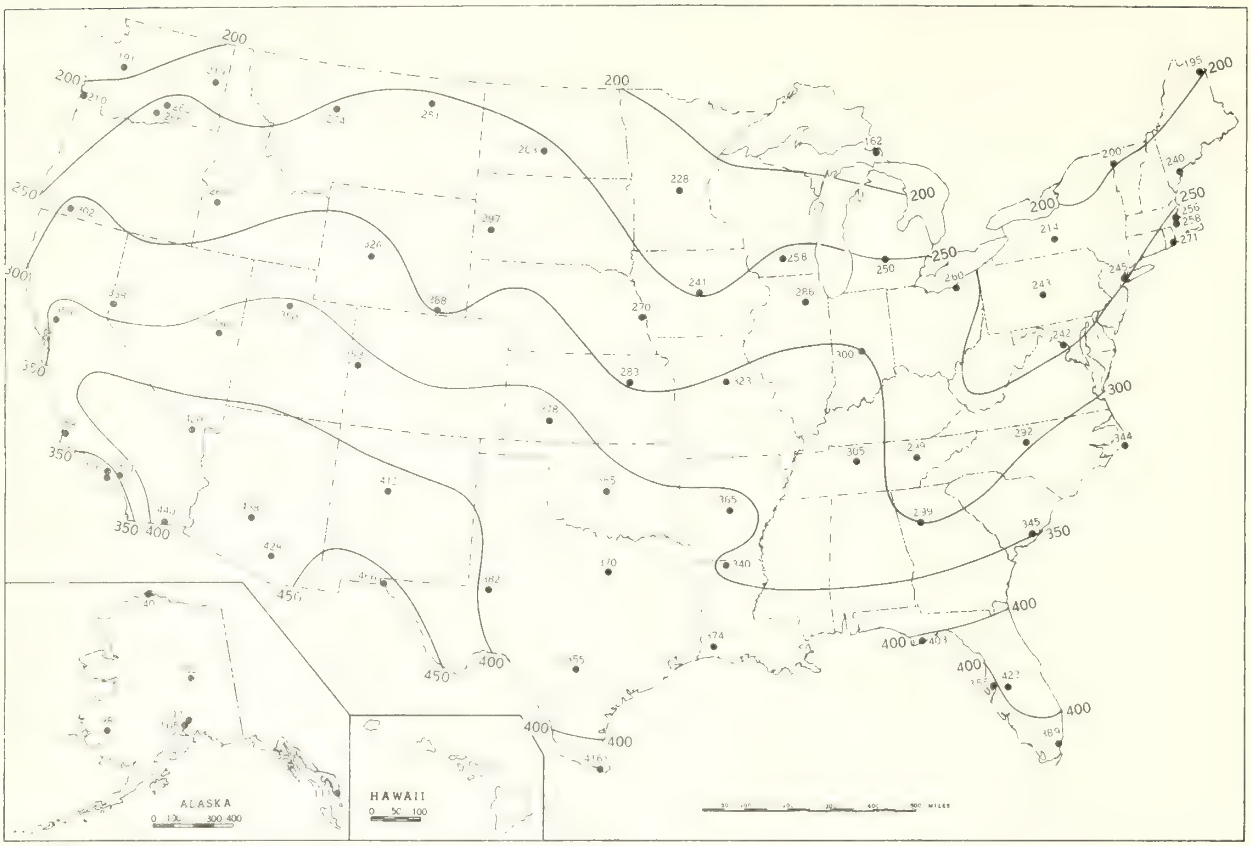


B. Percentage of Mean Monthly Sunshine, October 1968.

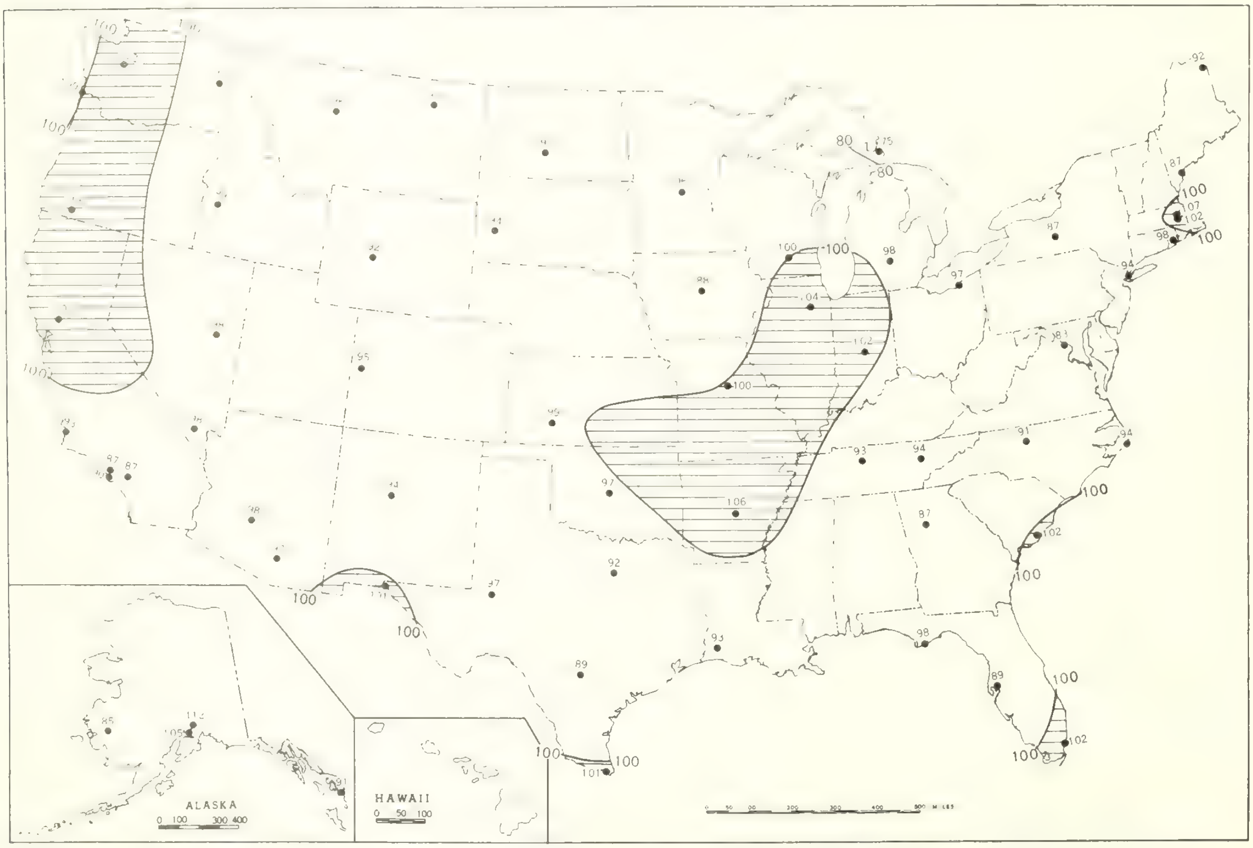


A. Computed from total number of hours of observed sunshine in relation to total number of possible hours of sunshine during month. B. Means are computed for stations having at least 10 years of record.

Chart VII. A. Average Daily Values of Solar Radiation, Langleys, October 1968.

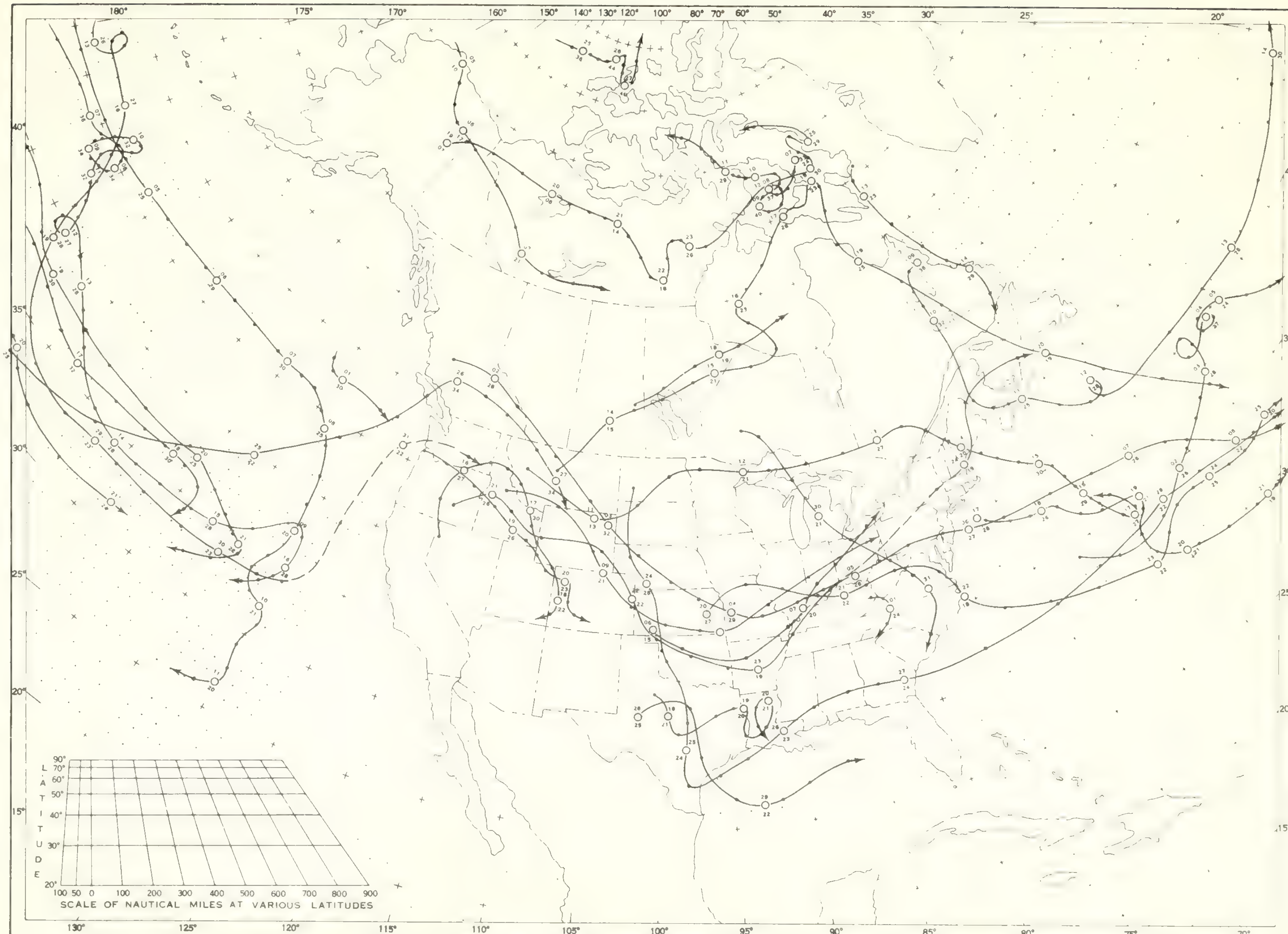


B. Percentage of Mean Daily Solar Radiation, October 1968.



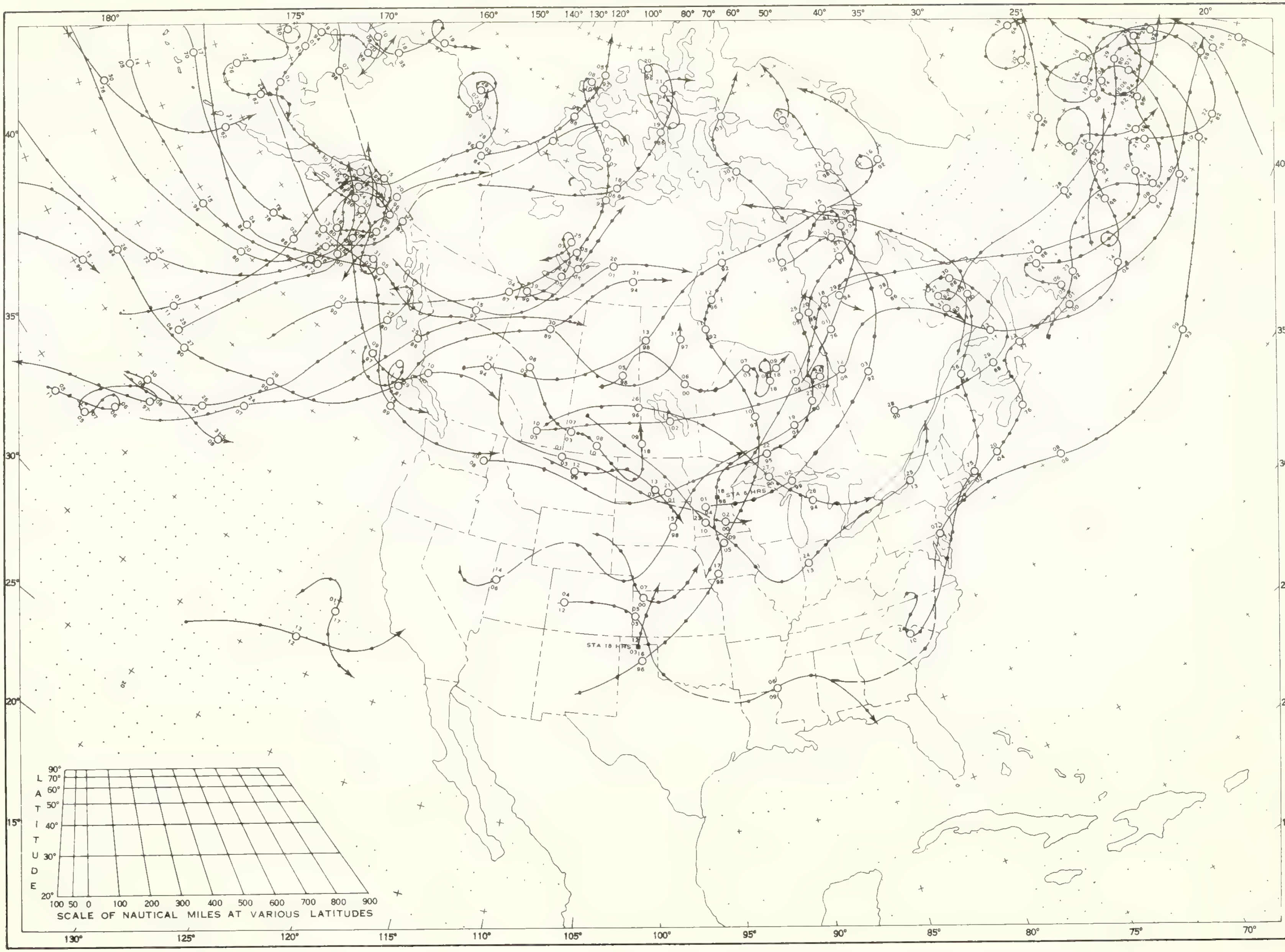
A. Mean daily solar radiation, direct + diffuse, received on a horizontal surface in langleys (1 langley = 1 gm. cal. cm.$^{-2}$) and recorded in International Pyrheliometer Scale of 1956. B. Percentage of the mean based on at least 5 years of record during the period 1950-60, and corrected to the International Pyrheliometer Scale of 1956.

Chart VIII. Tracks of Centers of Anticyclones at Sea Level, October 1968.



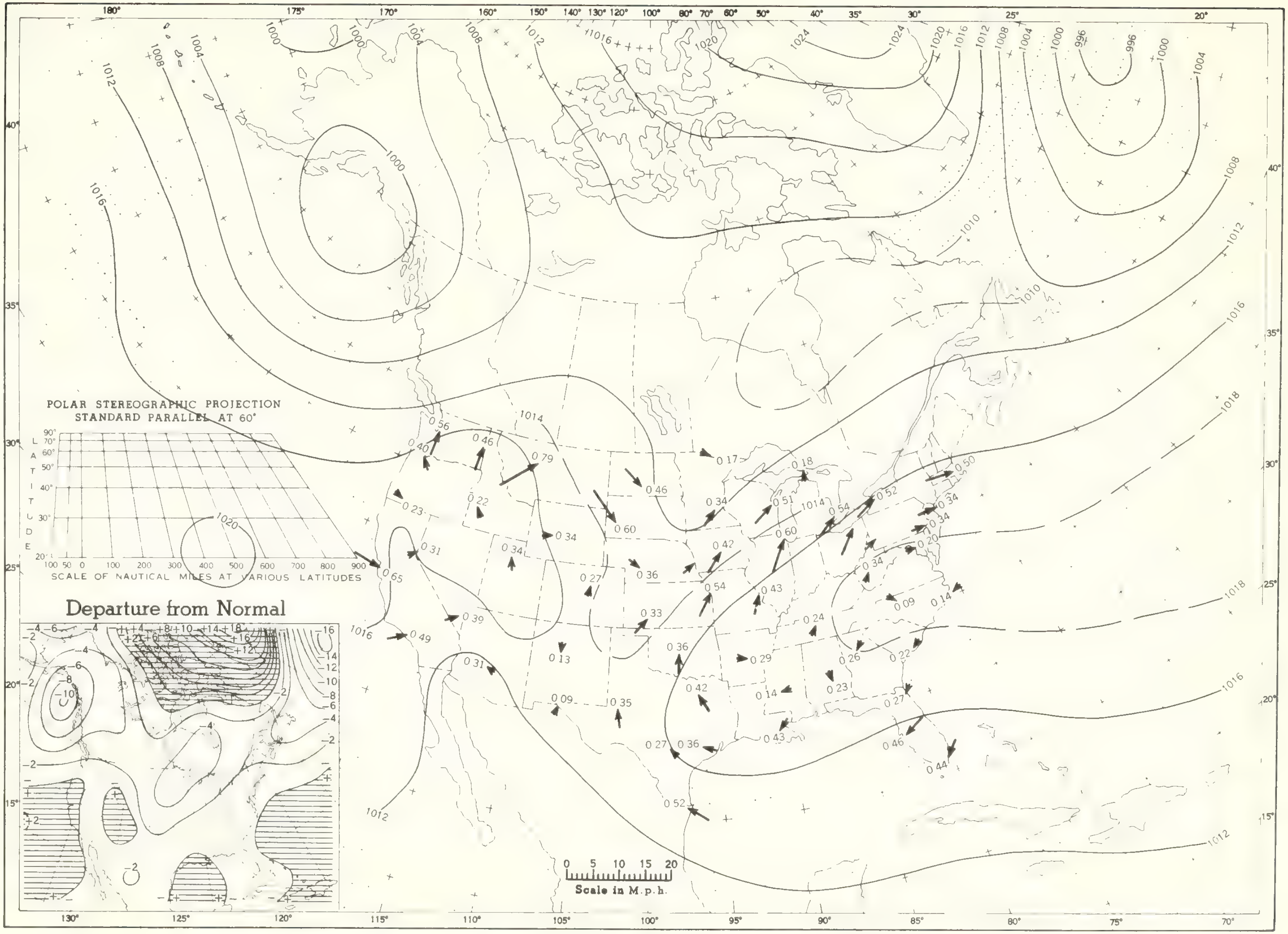
Circle indicates position of center at 7:00 a.m. E.S.T. Figure above circle indicates date, figure below, pressure to nearest millibar. Dots indicate intervening 6-hourly positions. Squares indicate position of stationary center for period shown. Dashed line in track indicates reformation at new position. Only those centers which could be identified for 24 hours or more are included.

Chart IX. Tracks of Centers of Cyclones at Sea Level, October 1968.



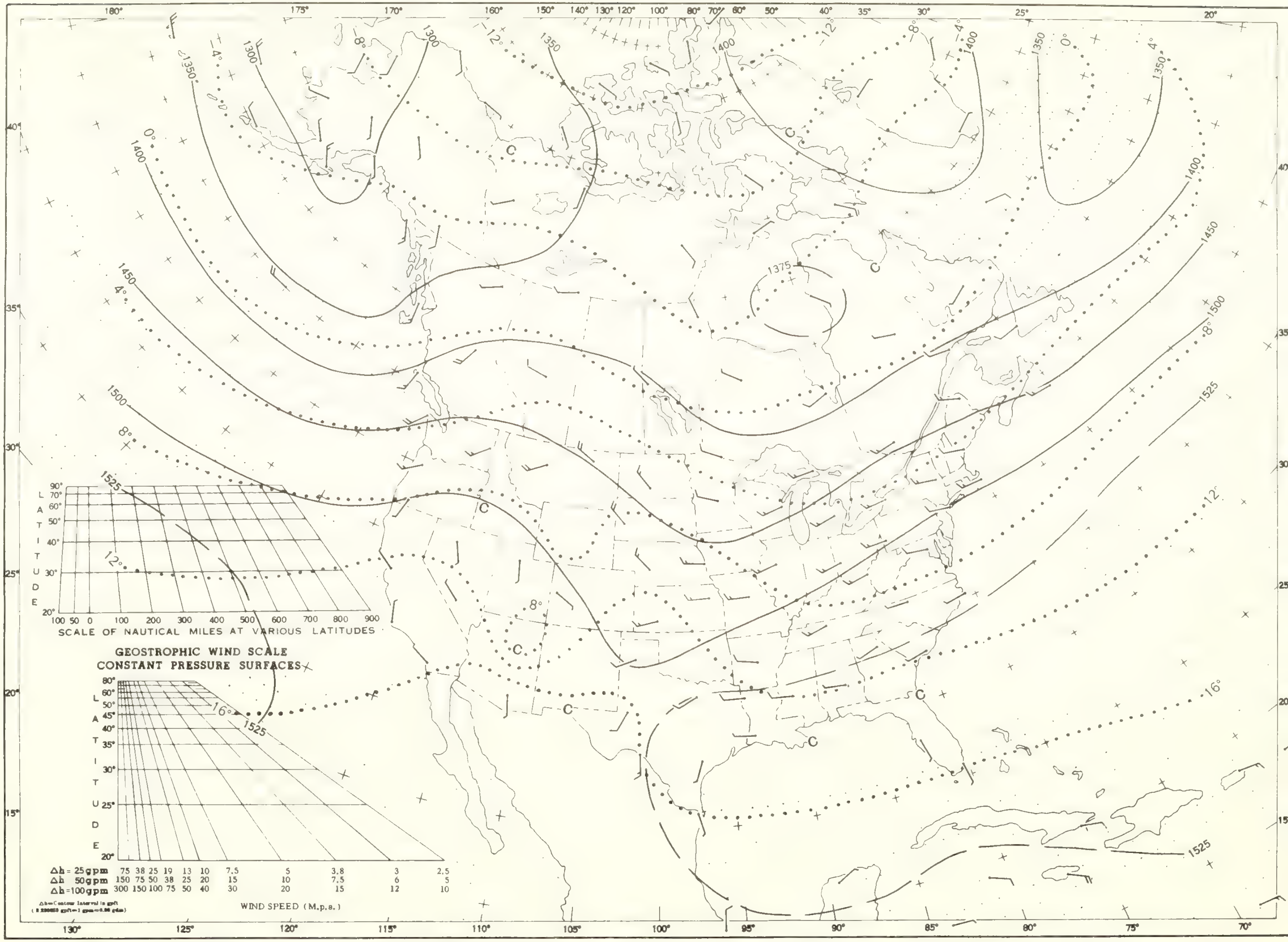
Circle indicates position of center at 7:00 a.m. E.S.T. Figure above circle indicates date, figure below, pressure to nearest millibar. Dots indicate intervening 6-hourly positions. Squares indicate position of stationary center for period shown. Dashed line in track indicates reformation at new position. Only those centers which could be identified for 24 hours or more are included.

Chart X. Average Sea Level Pressure (mb) and Resultant Surface Wind, **October 1968.** Inset: Departure of Average Pressure (mb) from Normal, **October 1968.**



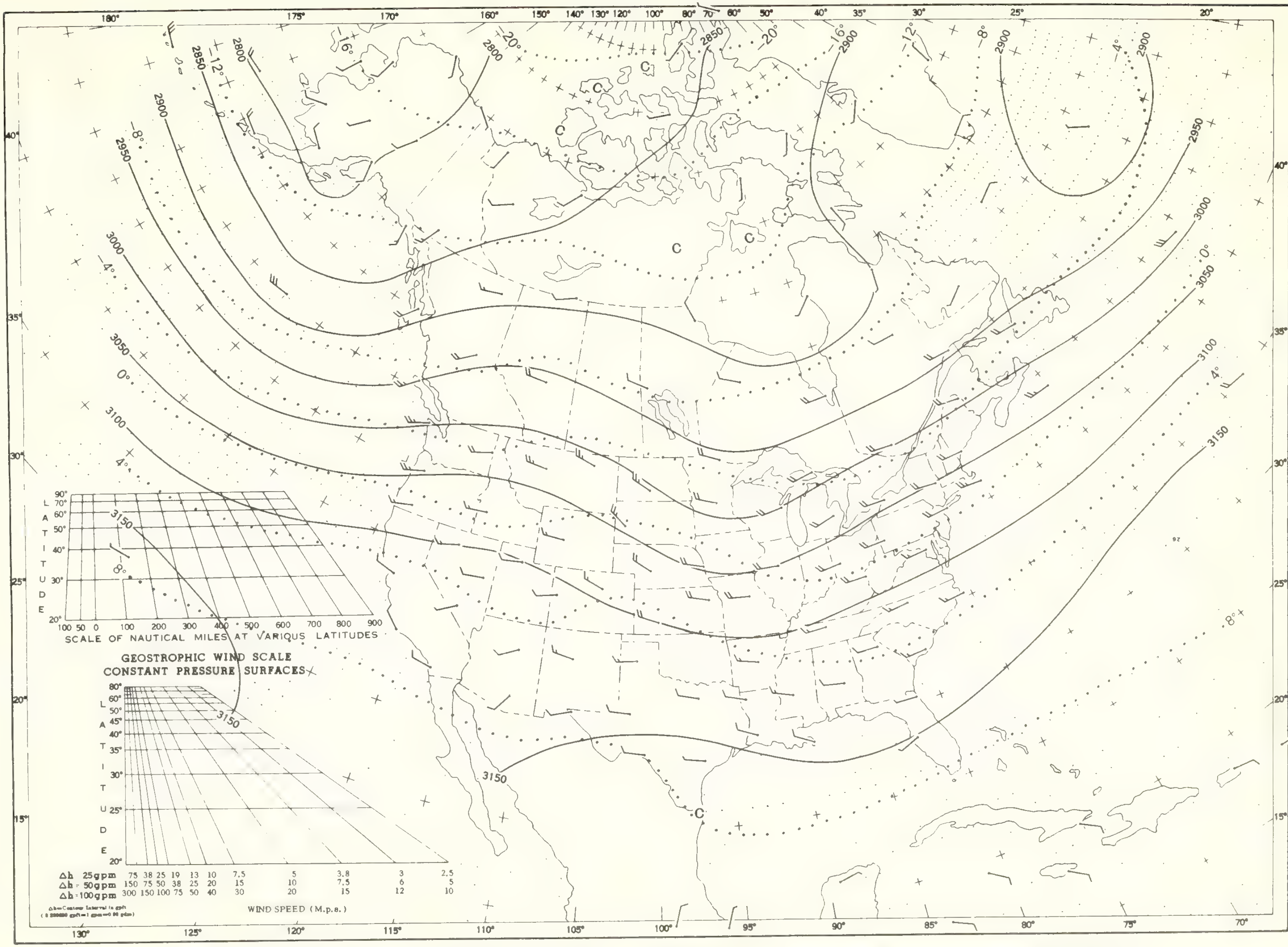
Average sea level pressures are obtained from eight daily 3-hourly observations. Resultant wind directions and speeds are shown by arrows. Constancy ratios (resultant speed÷average speed) are shown to two decimal places. Pressure normals are computed for stations having at least 10 years of record and for 10° intersections in a diamond grid over the oceans.

Chart XI. 850-mb Surface, 1200 GMT, October 1968. Average Height and Temperature, and Resultant Winds.



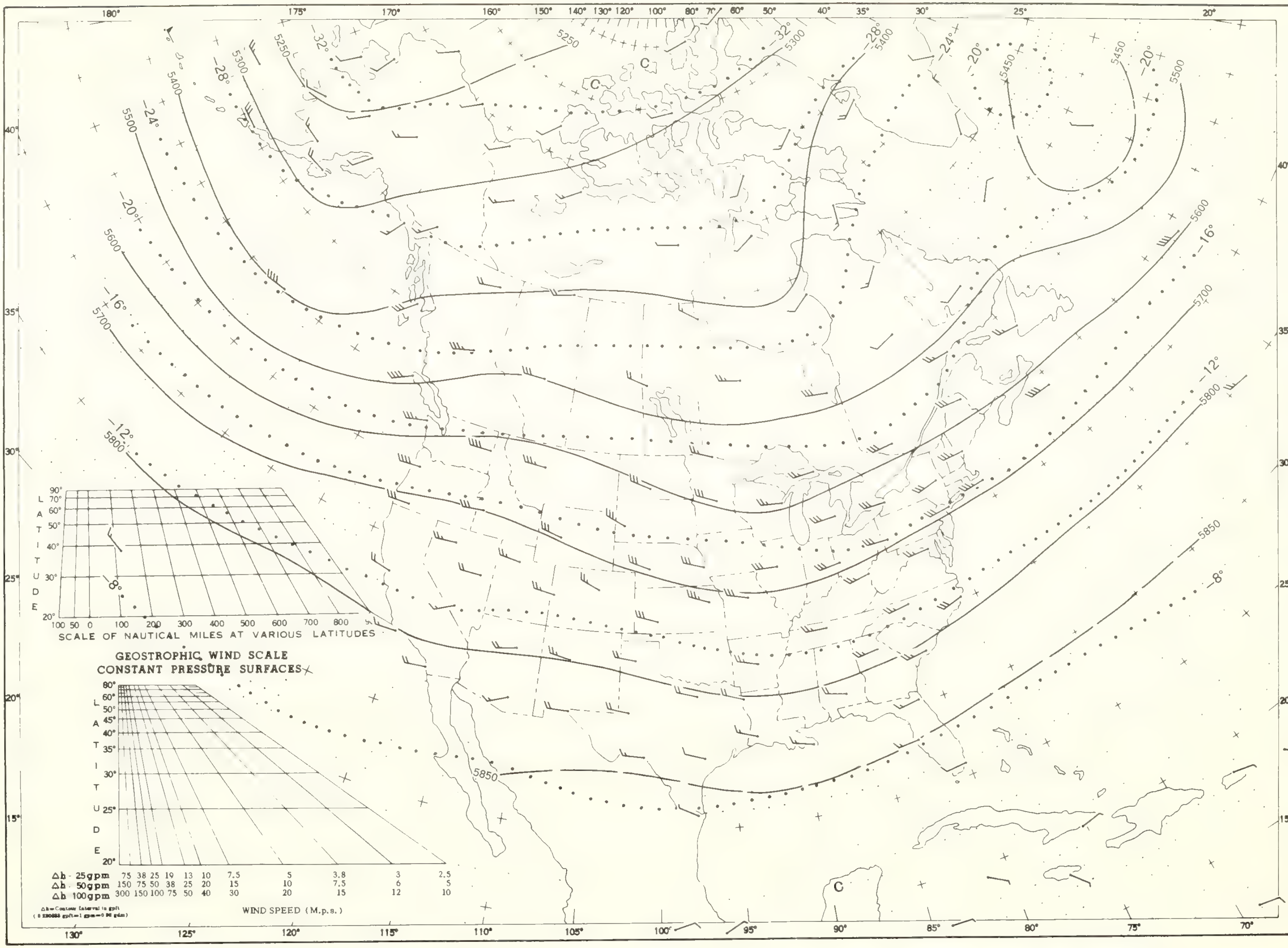
Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XII. 700-mb. Surface, 1200 GMT, October 1968. Average Height and Temperature, and Resultant Winds.



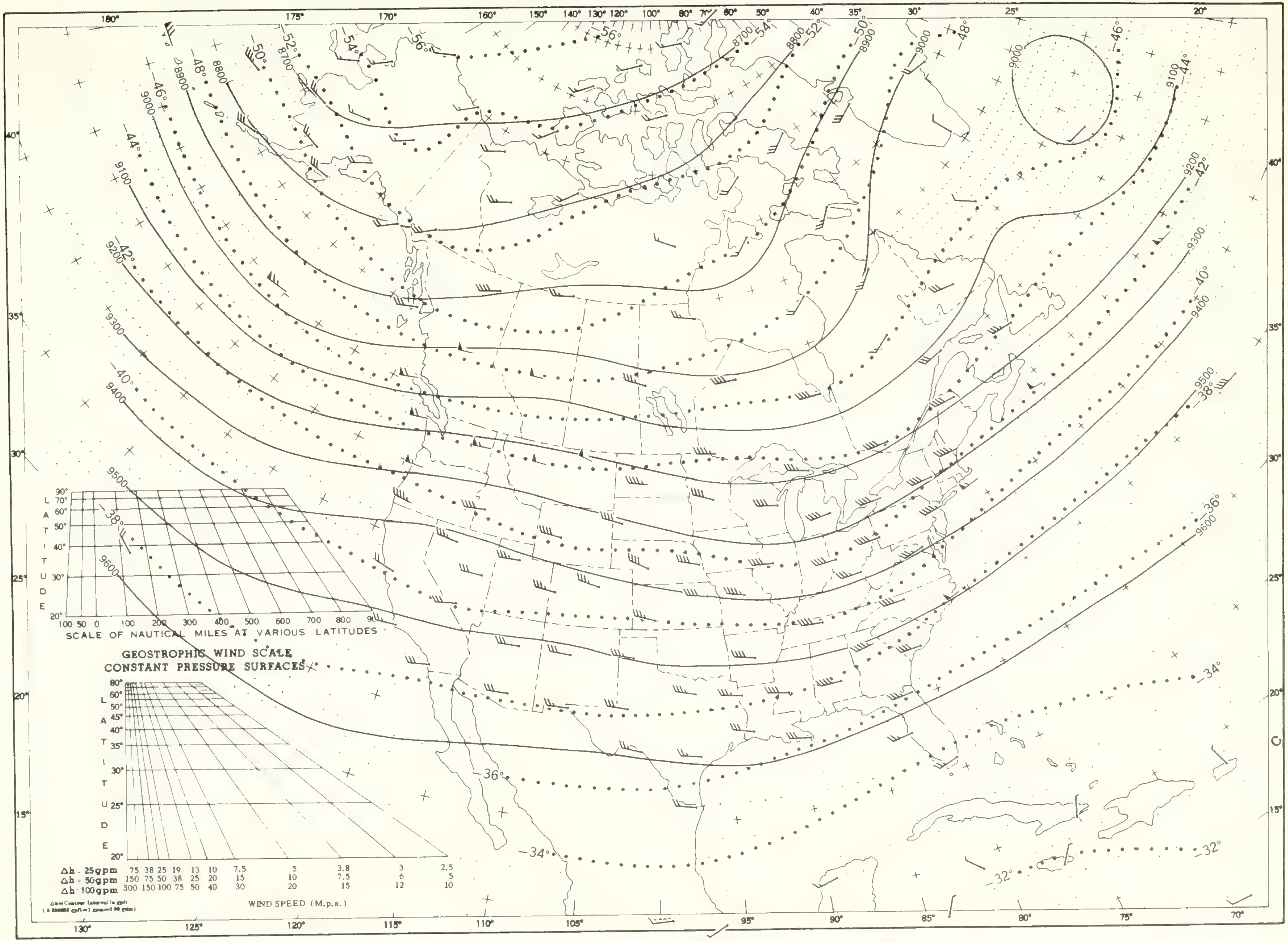
Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XIII. 500-mb. Surface, 1200 GMT, October 1968. Average Height and Temperature, and Resultant Winds.



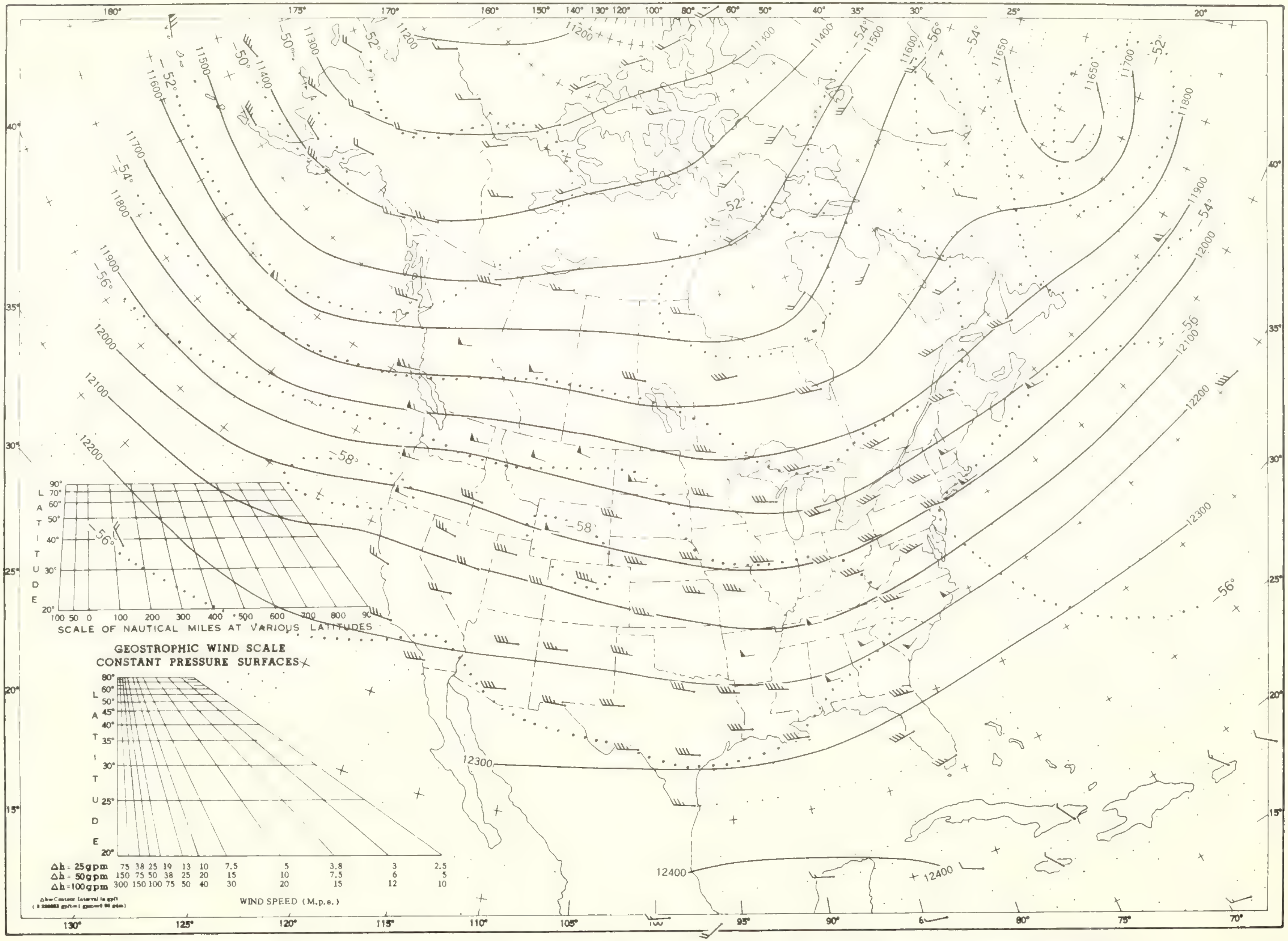
Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XIV. 300-mb. Surface, 1200 GMT, October 1968. Average Height and Temperature, and Resultant Winds.



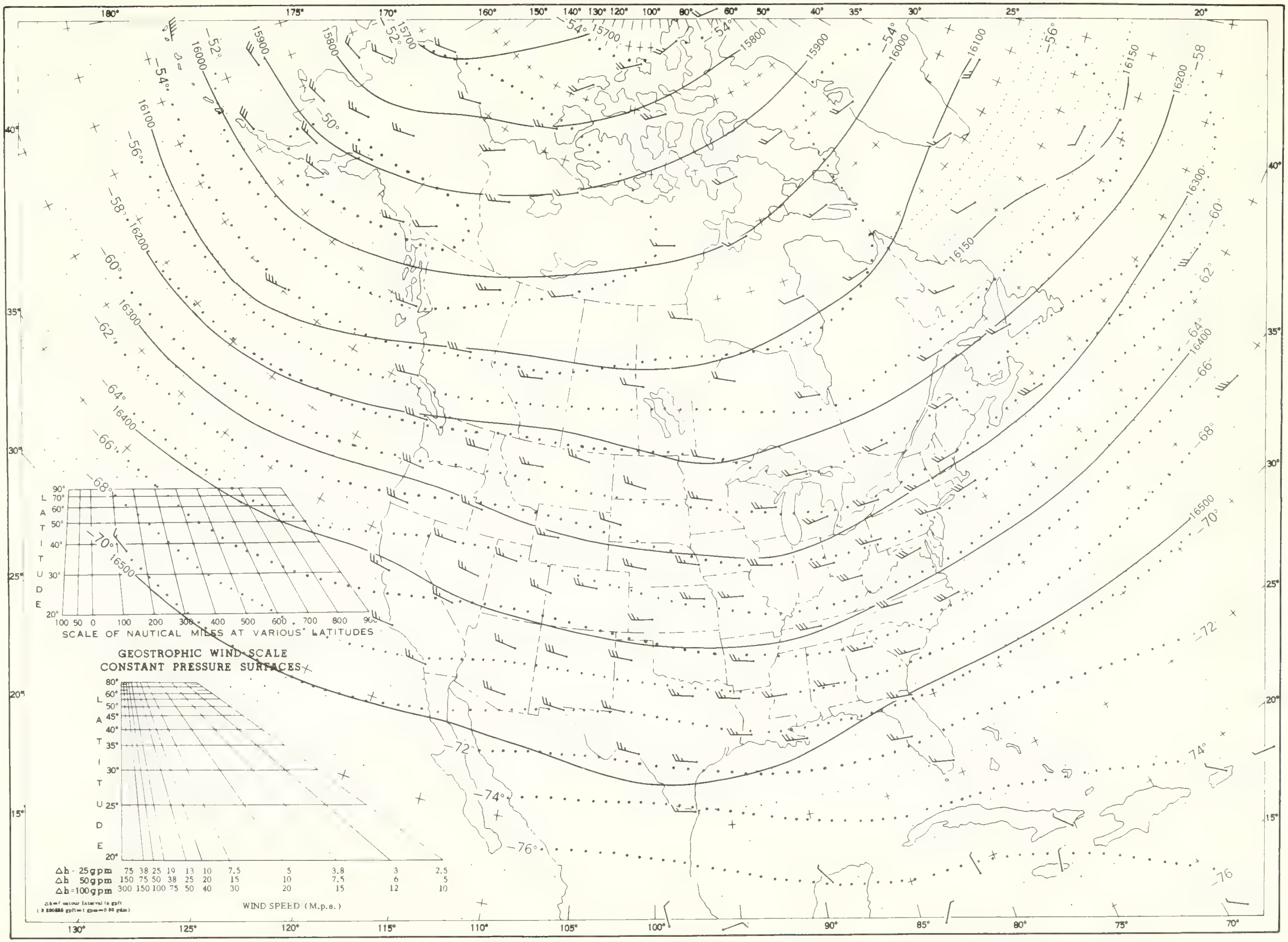
Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XV. 200-mb. Surface, 1200 GMT, October 1968. Average Height and Temperature, and Resultant Winds.



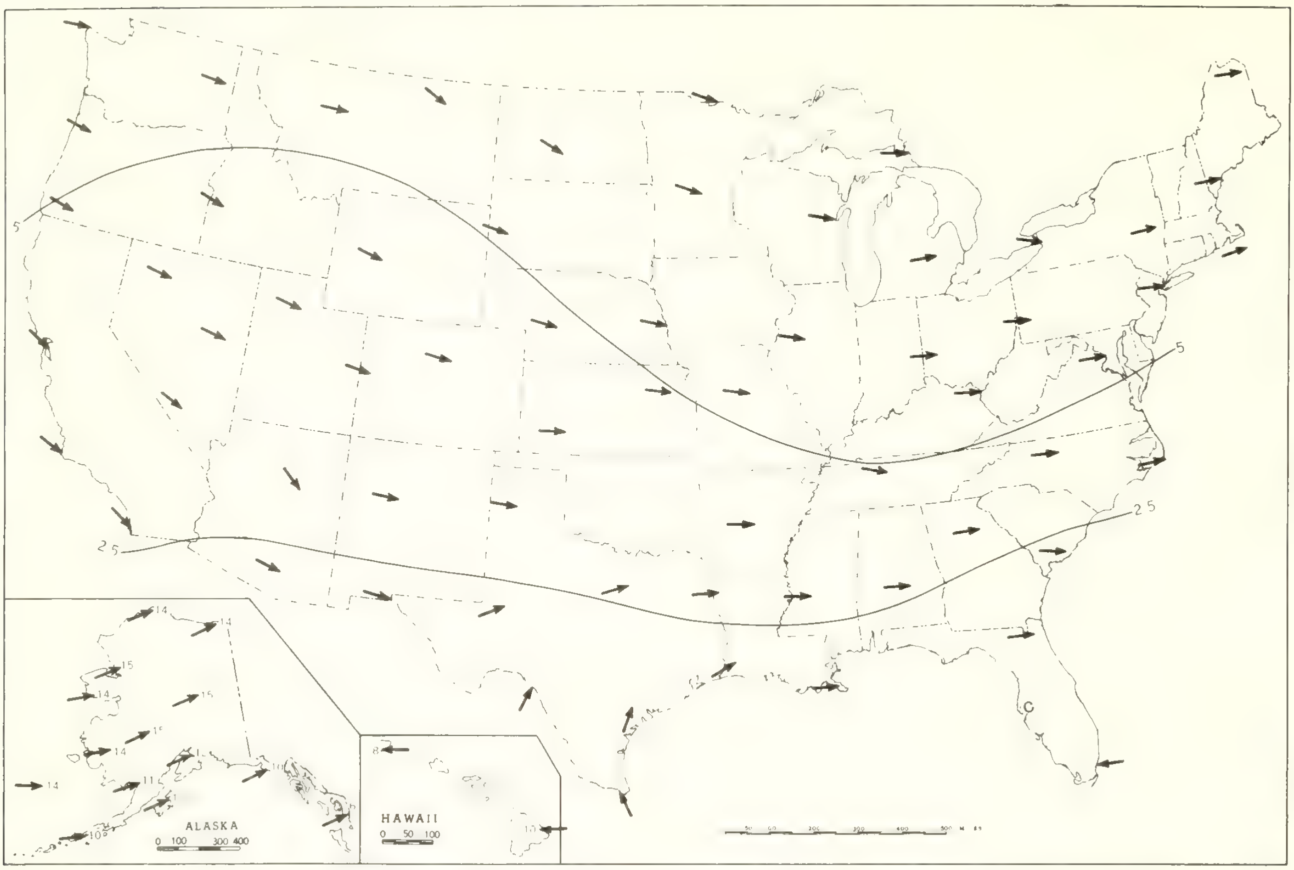
Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XVI. 100-mb. Surface, 1200 GMT, October 1968. Average Height and Temperature, and Resultant Winds.

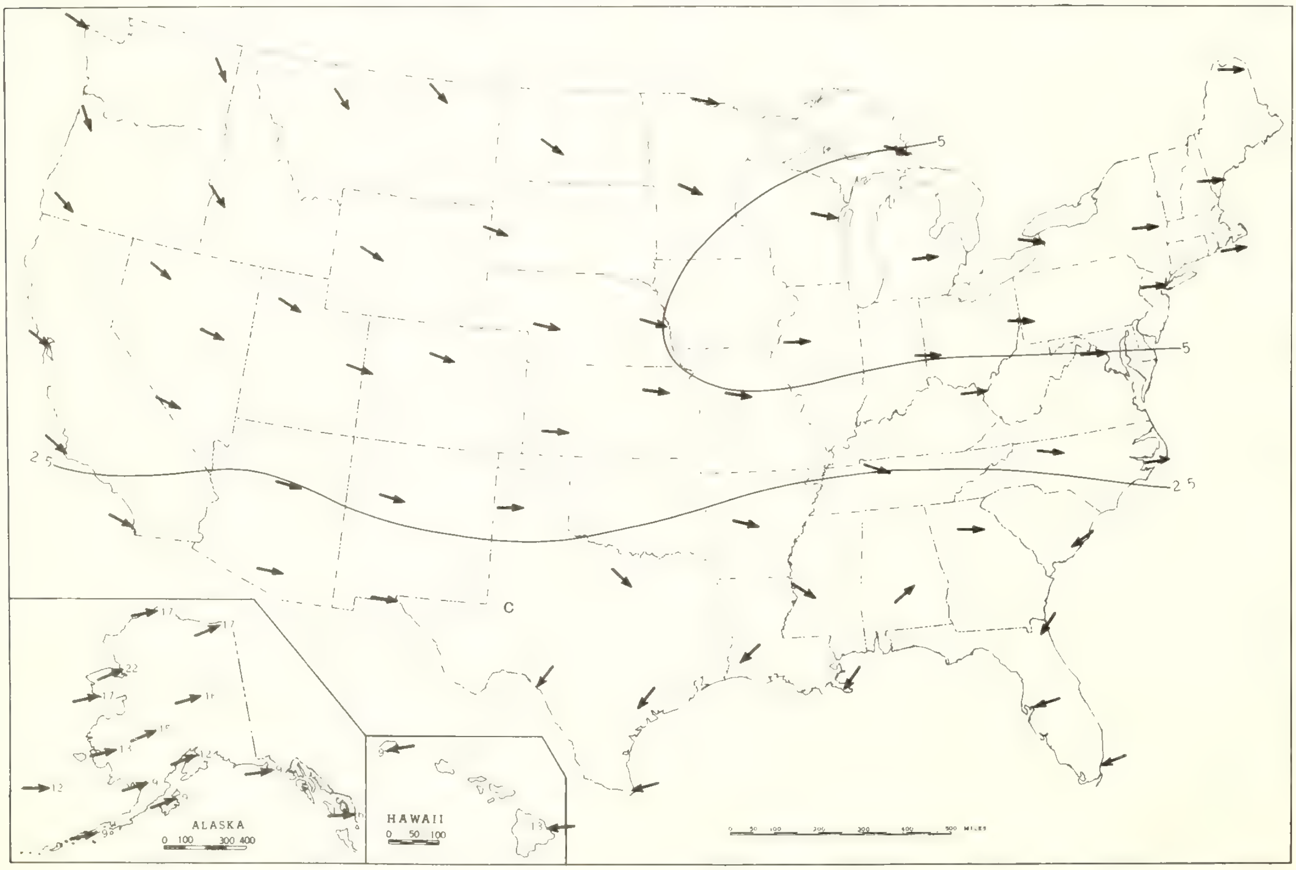


Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XVII. A. 50-mb. Surface, 1200 GMT, October 1968. Resultant Winds.



B. 30-mb. Surface, 1200 GMT, October 1968. Resultant Winds.



Wind speed (isotachs) in meters per second. Arrows show resultant wind direction. All wind data are based on rawin observations.

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CLIMATOLOGICAL DATA

NATIONAL SUMMARY

NOVEMBER 1968
Volume 19 No. 11

Asheville 1969

CONTENTS

NOTE: Delayed data and corrections will be carried in the June and December issues of this publication. An explanatory page "Description of Charts" will be carried in the January and July issues.

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CLIMATOLOGICAL DATA

NATIONAL SUMMARY

Volume 19 No. 11 NOVEMBER 1968

GENERAL SUMMARY OF WEATHER CONDITIONS

HIGHLIGHTS:

1. The "rainy season" continued in the Far Pacific Northwest with deep snows in the Cascades.
2. A vicious storm, the worst in many years, blasted the Northeast.
3. Heavy rains fell from Texas to the Great Lakes in the last week of the month.

TEMPERATURE.--November temperatures averaged above normal from Washington to Arizona, over the northern Rockies, the northern Great Plains, the Great Lakes region, the Ohio River Valley, and the Middle Atlantic States, and below normal over the central and southern Rocky Mountains, the central and southern Great Plains, the Deep South, and New England.

Mild weather prevailed over much of the Nation at the beginning of November. Minimums dropped to below freezing at some mountain stations but remained above 32° over most of the rest of the Country. Afternoon temperatures ranged mostly from the 40's and 50's in the north to the 80's over the Gulf States and along the Atlantic coast as far north as Washington, D. C.

A cooling trend occurred from the Rocky Mountains to the Atlantic Ocean at the beginning of the second week. Afternoon temperatures remained in the 40's from the Great Lakes to the Gulf of Mexico on the 11th but, by the following morning, freezing temperatures occurred as far south as Houston, Texas. The frigid air continued to pour into the Deep South. On November 12, Atlanta, Ga., was no warmer than Bismarck, N. Dak., both registering 39° as their highest temperature for the date. By the following morning, the minimum temperatures for the two locations were: Bismarck, 26°; Atlanta, 25°. At this time of year, 39° is about normal for the early morning temperature at Atlanta and the midafternoon temperature at Bismarck. After a few days of chilly weather, the East warmed with temperatures returning to the 50's along the Ohio River and the 80's in Florida.

Another blast of arctic air penetrated the Deep South in the 3d week of November. The temperature at Gainesville, Fla., plummeted from 79° on the afternoon of the 18th to 30° on the morning of the 20th. A warming trend had begun over the northern Great Plains. On the afternoon of the 20th, Havre, Mont., with 65° was 9° warmer than Tampa, Fla., and the following morning Bristol, Tenn., with a temperature of 17°, was 23° colder than Minot, N. Dak. The East soon warmed again with 50° temperatures common in Pennsylvania on the 24th.

Above-normal temperatures prevailed over most of the West at the beginning of the last week of November but a cooling trend dropped weekly averages to below normal. Subzero readings occurred at the higher elevations in the central Rockies near the end of the month. Frazer, Colo., registered 33° below zero on the 30th. Temperatures in the final week of the month averaged above normal from the State of Washington to New York and southeastward to Florida. The northern Great Plains averaged 6° to 11° above normal, although the average temperatures were slightly cooler than in the previous week. Mild weather continued in the East with minimum temperatures above freezing as far north as Kentucky, West Virginia, and Pennsylvania on the 30th. Afternoon temperatures on November 30 in the East ranged from near 40° from Lower Michigan to Pennsylvania to the balmy 80's in Florida.

PRECIPITATION.--Rains fell almost daily in the northern Pacific coastal areas with snow in the Cascades as the "rainy season" which began shortly before mid-October continued. The rainy season usually can be expected to continue in the Far Northwest until spring. November precipitation totals exceeded 12 inches along the Washington and Oregon coast. Snow accumulated to 36 to 48 inches above 3,000 feet in the Cascades.

Showers fell early in November in the central and southern Rockies and the central and southern Great Plains. The most substantial amounts fell in extreme northeastern Oklahoma, southwestern Missouri, and nearby portions of Kansas and Arkansas where daily totals measured on the morning of the 3d ranged up to 3.50 inches, that amount falling at Joplin, Mo.

Heavy thunderstorm activity and a few tornadoes occurred in Mississippi and Alabama on November 3. The most damaging injured 18 persons and demolished or extensively damaged homes, a school complex, and business buildings in southern Alabama in several communities near Mobile.

As the storm activity subsided in the Deep South, showers developed along the southern portion of the Atlantic coast with spots in the Carolinas, Georgia, and Florida receiving an inch or more of rain on the 4th.

A series of storms brought rain and snow to the Northeast during the second week of November. The first "northeaster" of the season brought rain, snow, and wind to New England early on the 8th. Snow was widespread on that date falling in portions of 30 States from Washington to Maine and southward to New Mexico and the Texas Panhandle. Other storms struck New England at 2-day intervals. The third of the series produced generous rains from the lower Mississippi River Valley to the Atlantic Ocean on the 11th before moving rapidly up the Atlantic coast and dumping rain along the coast and Piedmont and heavy snow from the southern Appalachians to New England on the 12th. More than a foot of snow piled up on the Carolina mountains--15 inches at Caesars Head, S. C. Winds gusted at more than 60 m.p.h. at New York City airports and over 100 m.p.h. at Wallops Island, Va. This was the largest and most dangerous storm in several years. The storm began to weaken late on the 12th after the high tides and 30-foot breakers along the coast had driven hundreds of persons from their homes. Damages along the coast from North Carolina to New England were estimated in the millions of dollars.

About the time the huge storm in the Northeast began to weaken, a new storm developed in the Southwest. Heavy snow fell in Arizona, New Mexico, Colorado, Wyoming, and Nebraska. Snow clogged roads at the higher elevations; rain soaked the valleys and spread eastward over the western Great Plains. At the transition levels, where the rain mixed with the snow, roads became extremely slick and travel hazardous.

At midmonth, a front extended from a center over

the southern Great Plains northeastward to another storm center over Lower Michigan. Moist Gulf air fed this system and widespread rain fell from the lower Mississippi River Valley to New England with snow along the northern edge of the rain belt. Thunderstorms with hail and high winds developed from Texas to the mid-Mississippi River Valley.

While tornadoes were occurring in Louisiana, Mississippi, Alabama, and Georgia on the 17th, a heavy snowstorm swept across the northern States from the Dakotas to New England. Duluth, Minn., received 17 inches of snow on that date. Gale-force winds accompanied the snow in the lee of the Great Lakes. Flurries occurred as far south as the southern Appalachians.

Most sections of the Nation were sunny and dry from the 20th to 23d. A storm began shaping up in the West, however, on the 24th. It deepened on the 25th and dumped several inches of snow in the Colorado Rockies. It then moved to the Great Plains, bringing snow from the central Rocky Mountains to the northern Great Plains and moderate to heavy rains from eastern Texas to the Great Lakes. Flash floods occurred in small streams in Tennessee and Mississippi. The month ended with high pressure and sunny skies over most of the Nation. The main exceptions included the Far Northwest where rainy weather prevailed through most of the month and the South Central States where some precipitation totals on November 30 exceeded 3 inches, with snow north and west of the rain area.

CONDENSED CLIMATOLOGICAL SUMMARY

NOVEMBER 1968

Section	Temperature						Precipitation			
	Monthly extremes						Monthly extremes			
	Station	Highest	Date	Station	Lowest	Date	Station	Greatest	Station	Least
		°F			°F			In.		In.
Alabama	2 Stations	89	4+	Russellville 2	15	13	Camp Hill 2NW	7.23	Fort Morgan	1.85
Alaska	do	55	6+	Chalkyitsik	-44	24	Little Port Walter	27.56	2 Stations	.08
Arizona	Alamo No 1	95	10	Hawley Lake	-4	26	Payson 12NNE	3.48	4 Stations	.00
Arkansas	2 Stations	81	2+	Mammoth Spring	16	20	Lead Hill	13.58	Star City 4ENE	2.64
California	Avila Beach	95	10	Bodie	-9	14	Klamath	16.20	14 Stations	.00
Colorado	Holly	85	1	Fraser	-35	27	Wolf Creek Pass 4W	4.06	Brandon	.00
Connecticut	2 Stations	76	2	West Thompson Dam	16	28	Wepawaug Reservoir	7.33	Cream Hill	3.57
Delaware	do	80	2	Georgetown 5SW	24	21	Bridgeville 1NW	4.37	Selbyville	2.86
Florida	Tamiami Trl 40 Mi Bend	90	18+	Steinhatchee McCain Tr	21	22+	Hillsborough Rvr St Pk	6.01	Cornwell 4NW	.31
Georgia	Camilla	87	2	2 Stations	15	21	Helen 1ESE	7.83	Nahunta	1.83
Hawaii	Mauna Kea Beach 98	95	4	Mauna Loa Slope Obs	34	28+	Wahiawa Mountain 990	28.50	2 Stations	.00
Idaho	2 Stations	65	1	Kilgore	-16	17	Mullan FAA	5.89	Lifton Pumping Station	.28
Illinois	Mt Carmel Waterworks	84	1	Tiskilwa	15	13	Prairie DuRocher 1WSW	8.68	Galena	.75
Indiana	Jeffersonville	86	1	2 Stations	16	21+	New Castle	5.82	Monroeville 3ENE	2.31
Iowa	3 Stations	83	1	Winterset 3NW	-6	12	Albia	4.58	Sioux City 4N	.22
Kansas	Ashland	84	1	Syracuse 2W	9	11	Pittsburg	9.12	Atwood	.19
Kentucky	3 Stations	83	2+	Cumberland	14	21	Hickman 1E	5.75	Jeremiah	.99
Louisiana	Book	88	2	3 Stations	22	19+	Urania	13.24	Burds	2.83
Maine	2 Stations	59	5+	Squa Pan Dam	-12	30	Saco	9.05	Ripogenus Dam	3.18
Maryland	La Plata 1W	82	2	Sines Deep Creek 2	15	14	Catoctin Mountain Park	D 5.79	Potomac Filter Plant	2.27
Massachusetts	2 Stations	70	2	Birch Hill Dam	13	28	Chester 2	8.43	Nantucket WBAP	4.51
Michigan	4 Stations	77	3+	Kincheloe AFB	4	30	Hillsdale	5.39	Eagle Harbor Coast GD	.10
Minnesota	St Peter 2SW	74	1	Karlstad	-6	29	Duluth WBAP	3.10	Ada	T
Mississippi	Crystal Springs 4NNE	87	2	Tupelo 2WNW	19	13	Sledge	9.83	Amory 4W	2.32
Missouri	Saint Louis University	89	1	Tarkio	0	12	Cassville Ranger Sta	10.73	Mayville 2E	.88
Montana	2 Stations	73	20	Lakeview	-15	17	Troy 18N	5.13	Winifred	.00
Nebraska	Nebraska City	83	1	Fort Robinson	-1	18	Falls City	1.90	Wauneta	.00
Nevada	2 Stations	84	9+	Mountain City RS	-3	26	Emigrant Pass Hwy Sta	3.25	5 Stations	.00
New Hampshire	Keene	67	2	Mount Washington	-2	14	Mount Washington	16.07	Jefferson 5SSW	2.99
New Jersey	Hammonton 2NNE	80	3	2 Stations	18	22+	Long Branch 2N	7.17	Glassboro	2.56
New Mexico	Jal	85	1	Wolf Canyon	-12	30	Cloudcraft Ranger Sta	3.14	Villanueva	T
New York	New York Cntrl Park WB	77	2	2 Stations	5	28	Boonville 2SSW	9.36	Elizabethtown	2.68
North Carolina	Pinehurst Srn-Pines	86	1	Gillespie Gap	2	20	Brevard	7.14	Wilbar 2NW	1.88
North Dakota	2 Stations	69	1	Kensal Wildlife Refuge	-7	12	Selfridge	1.32	2 Stations	T
Ohio	Cinn Lunken FAA AP	81	1	New Lexington 2NW	14	14	Hiram	D 5.98	Summerfield 3NE	1.71
Oklahoma	2 Stations	85	5+	3 Stations	13	18+	Spiro	10.66	Boise City 2E	.29
Oregon	Fern Ridge Dam	69	21	Fremont	3	30	Valsetz	23.93	Paisley	.78
Pennsylvania	Farrell Sharon	80	1	Coudersport 5NW	12	10	Quakertown	6.13	Pittsburgh WBAP	2.07
Puerto Rico	Alex Hamilton Fld FAA	96	4	Guineo Reservoir	58	13	Maricao	24.96	Culebra Island	2.69
Rhode Island	Greenville	67	2	Kingston	19	21+	Newport	7.17	Block Island WBAP	5.41
South Carolina	Aiken	84	2	Ninety Nine Islands	16	21	Pickens 5SE	9.28	Georgetown	1.31
South Dakota	Pine Ridge	71	12	2 Stations	-2	18	Dumont 2ENE	2.03	Porcupine 16NW	.06
Tennessee	Union City	84	1	Mountain City No 2	8	14	Parsons Water Plant	9.42	Greenville Exp Sta	1.58
Texas	Mission	94	6+	2 Stations	16	30+	Crockett	10.34	Benavides 7S	.00
Utah	Saint George	77	3+	Hardware Ranch	-10	29	Silver Lake Brighton	4.12	5 Stations	.00
Vermont	3 Stations	66	3+	2 Stations	6	28+	Mount Mansfield	10.20	Saint Albans Bay	3.14
Virginia	Boykins	85	2	Monterey	[illegible]	20	Chase City	5.57	Wytheville 1S	1.52
Washington	2 Stations	65	24+	Chesaw 4NNW	7	17	Rainier Paradise RS	19.27	Chesaw 4NNW	.88
West Virginia	Moorefield 2SSE	82	1	2 Stations	9	21+	Rowlesburg 1	5.75	Bluestone Dam	1.55
Wisconsin	Arlington	77	1	do	0	27	Kenosha	3.48	Spring Valley	.31
Wyoming	2 Stations	70	20+	Bondurant 3NW	-28	17	Alta 1NNW	2.83	3 Stations	T

\+ And also on an earlier date or dates.

NOTE: Dates in the above Condensed Climatological Summary apply to the period 24 hours prior to time of observation. In some cases the actual occurrence is on the calendar date preceding that shown. (See individual Climatological Data for times of observations).

D Water equivalent of snowfall wholly or partly estimated, using a ratio of 1 inch water equivalent to every 10 inches of snowfall.

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	No. of days: Max. 90 F. or above	No. of days: Min. 32 F. or below	Average dew point	Average relative humidity	Precipitation: Total	Departure from normal	Greatest in 24 hours	No. of days: .01 inch or more	No. of days: With thunderstorms	Snow, Sleet: Total	Snow, Sleet: Maximum depth on ground	Wind: Resultant speed	Resultant direction	Fastest mile: Speed	Fastest mile: Direction	Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	Ft.	Mb.	Mb.	F.	F.	F.	F.	F.		F.				F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
ALABAMA																																
BIRMINGHAM	620	995.6	1018.4	61	39	50.3	- 3.0	80	2+	23	13	0	11	41	73	4.66	1.13	1.23	12	2	T	0	1.6	27	37	SW	28	7	9	14	6.4	53
HUNTSVILLE	624	994.6	1018.0	60	41	50.6	- 0.2	80	1	22	13	0	8	41	74	3.84	0.19	1.84	10	2	T	T	1.8	26	30	22	28	6	9	15	6.5	
MOBILE	211	1010.5	1018.4	67	46	56.3	- 2.6	82	3	32	20+	0	2	48	76	4.05	0.70	1.39	12	3	0.0	0	1.3	1	35	24	28	12	3	15	5.7	
MONTGOMERY	183	1011.5	1018.7	65	42	53.3	- 0.9	82	2	24	13	0	7	44	76	5.90	2.88	2.64	11	3	T	0	2.1	28	29	W	28	11	6	13	5.6	50
ALASKA												B																				
ANCHORAGE	114	992.9	997.9	28	16	22.1	- 0.1	37	7+	- 5	30	0	30	17	77	1.08	0.05	0.54	6	0	14.7	14	2.8	2	20	2	1	2	8	20	7.8	24
ANNETTE	110	1002.0	1006.0	47	38	42.6	2.2	55	6	30	29	0	5	37	80	14.09	- 0.56	3.35	24	0	3.3	1	8.0	14	49	15	28	1	1	28	9.0	
BARROW	31			0	- 7	- 3.7	- 3.0	22	3+	-26	30+	0	30			0.54	0.31	0.20	7	0	7.0	12			35	5	19	V	V	V		
BARTER ISLAND	39	1012.2	1014.2	3	- 9	- 3.1	- 3.3	23	4+	-30	29+	0	30	-11	67	0.67	0.27	0.21	8	0	12.1	10	4.7	9	47	26	6	X	X	X		
BETHEL	125	989.8	995.4	26	11	18.6	1.4	45	3	-16	30	0	30	15	85	0.34	- 0.72	0.13	8	0	9.5	6	7.9	6	32	12	12	3	7	20	7.8	
COLD BAY	96	987.1	991.0	40	32	36.0	1.6	45	14	20	28	0	15	30	79	3.32	- 0.47	0.76	25	0	6.7	2	2.1	18	45	15	2	0	6	24	8.6	
FAIRBANKS	436	986.5	1004.4	11	- 6	2.3	- 1.6	33	2	-28	30	0	30	- 4	73	0.27	- 0.33	0.09	9	0	8.0	7	2.9	1	13	34	21	7	7	16	7.0	
JUNEAU	12	1002.0	1002.9	39	30	34.1	- 0.2	48	7	14	16+	0	21	33	95	5.34	- 0.72	1.63	25	0	8.7	2	8.1	11	58	11	28	1	3	26	9.1	20
KING SALMON	49	991.9	993.9	33	20	26.2	4.2	46	6	0	27+	0	21	20	77	0.91	- 0.55	0.53	8	0	8.9	4	6.7	7	36	9	3	4	3	23	8.1	
KOTZEBUE	10	1004.4	1004.9	11	1	5.8	- 1.6	28	3+	-30	30	0	30	- 1	71	0.09	- 0.27	0.05	4	0	4.5	5	12.5	8	40	9	24	8	8	14	6.1	
MC GRATH	344	988.8	1002.2	12	- 6	2.8	- 2.5	27	3	-27	30	0	30	- 4	70	0.25	- 0.83	0.10	6	0	10.1	9	0.4	34	13	12	23+	5	7	18	7.3	
NOME	13	999.0	999.7	21	8	14.5	- 2.0	34	4	-24	30	0	30	4	61	0.61	- 0.55	0.19	9	0	7.9	9	7.5	4	28	7	11	7	4	19	7.1	33
ST. PAUL ISLAND	22	989.8	990.7	37	30	33.3	0.4	42	15+	13	27	0	19	30	85	2.59	0.09	0.78	25	0	10.2	4	5.7	1	61	29	11	2	4	24	8.6	
SHEMYA	122	996.6	1000.3	37	30	33.6	- 2.2	41	16+	23	26	0	24	27	75	0.99	- 1.73	0.25	17	0	6.6	3	11.1	32	58	35	14	0	7	23	8.5	
YAKUTAT	28	997.6	998.7	38	27	32.3	- 1.5	48	8+	6	15	0	21	28	85	13.91	- 2.12	2.50	28	0	10.6	4	6.9	10	37	12	8	1	3	26	9.0	
ARIZONA																																
FLAGSTAFF	7006	787.3	1018.3	49	23	35.7	- 0.4	63	11	9	30	0	29	18	55	0.87	- 0.13	0.57	3	1	4.3	3	0.3	12	23	4	26	15	7	8	4.1	
PHOENIX	1117	976.0	1014.9	73	45	59.2	1.1	84	11	34	30+	0	0	37	50	0.91	0.42	0.53	3	1	0.0	0	2.3	11	28Y	N	28	15	6	9	3.9	75
TUCSON	2584	926.5	1014.6	71	45	58.3	0.2	85	11	33	26	0	0	31	42	1.86	1.24	1.86	2	2	0.0	0	3.1	16	31	E	29	17	4	9	3.9	85
WINSLOW	4895	852.4	1018.9	55	30	42.5	1.2	70	24	14	30	0	21	21	49	0.70	0.34	0.36	2	1	0.0	0	1.4	25	25	25	15	14	7	9	4.4	
YUMA	194	1008.1	1015.3	77	50	63.4	1.7	87	10	37	28	0	0	34	37	T	- 0.12	T	0	0	0.0	0	4.3	35	38	NW	26	20	2	8	3.3	87
ARKANSAS																																
FORT SMITH	447	1001.0	1017.8	59	38	48.1	- 1.9	78	2	21	12	0	10	39	73	9.02	5.84	2.09	10	3	T	0	1.9	1	40	NW	15	4	5	21	7.9	35
LITTLE ROCK	257	1007.8	1017.6	61	42	51.2	1.7	79	2	27	19	0	7	41	70	5.30	1.18	2.09	11	3	0.0	0	2.3	28	31	W	28	7	3	20	7.1	39
CALIFORNIA																																
BAKERSFIELD	475	1002.7	1020.5	64	47	55.7	- 0.2	77	11	34	29+	0	0	47	75	0.40	- 0.09	0.36	4	0	0.0	0	1.1	35	18	34	12	6	6	18	6.8	
BISHOP	4108	876.1		64	28	45.9	0.1	79	9	14	29	0	24			0.01	- 0.52	0.01	1		0.0	0						18	6	6	3.7	
BLUE CANYON	5280			50	36	43.0	- 2.7	64	19	26	30+	0	8			9.99	3.24	3.36	15		27.0	8			27	24	11	6	6	18	7.2	
EUREKA U	43			58	46	51.8	0.6	65	8	38	13	0	0			5.88	1.27	1.38	19		0.0	0			38	NW	29	2	4	24	8.6	31
FRESNO	328	1008.5	1020.3	60	43	51.9	- 1.9	73	11+	31	29+	0	2	47	87	1.94	0.99	1.12	8	0	0.0	0	0.6	36	29	NW	12	3	12	15	6.9	45
LONG BEACH	34	1015.9	1017.3	72	50	61.1	- 0.1	85	8	38	29	0	0	47	66	0.37	- 0.66	0.28	4	0	0.0	0	1.3	28	35	34	25	11	10	9	5.2	
LOS ANGELES	105	1013.2	1016.7	70	54	61.7	0.6	83	20	43	29	0	0	48	69	0.24	- 0.85	0.19	4	0	0.0	0	1.6	27	38Y	N	25	12	11	7	4.8	
LOS ANGELES U	270			73	54	63.3	0.6	87	10	46	29+	0	0			0.37	- 0.71	0.31	3		0.0	0			28	N	25	17	7	6	3.9	68
MT SHASTA R	3544			48	32	40.3	- 1.5	64	10	18	30	0	19			2.75	- 1.22	0.85	14		10.9	5										
OAKLAND	6	1020.3	1020.4	61	50	55.1	0.4	70	9	40	27	0	0	48	80	2.44	0.71	0.94	12	0	0.0	0	1.1	33	26	15	14	6	6	18	6.9	
RED BLUFF	342	1008.1	1020.8	61	44	52.7	- 1.8	74	9	33	27	0	0	42	71	2.36	0.07	0.93	11	0	T	T	2.7	33	30	N	13	7	2	21	7.4	47
SACRAMENTO	17	1019.6	1020.3	60	45	52.3	- 0.6	71	9	31	28	0	1	47	85	2.49	1.04	1.20	9	0	0.0	0	1.1	32	29	N	13	8	3	19	7.2	54
SANDBERG R	4517	864.9		54	38	46.2	- 2.8	68	21	26	25	0	8	27	56	0.19	- 0.73	0.15	3		1.6	T			47	1	24	13	7	10	4.6	
SAN DIEGO	13	1015.9	1016.8	70	54	61.7	- 0.1	80	20+	45	28	0	0	51	71	0.36	- 0.54	0.28	5	0	0.0	0	2.0	31	27	S	15	12	11	7	4.8	81
SAN FRANCISCO	8	1019.6	1020.4	61	47	54.4	- 0.4	71	9	39	29	0	0	47	79	2.47	0.90	1.15	12	0	0.0	0	1.8	30	35	NW	24	5	8	17	7.1	
SAN FRANCISCO U	52			61	51	56.2	- 1.2	72	10	46	30+	0	0			2.67	0.67	0.82	14		0.0	0			28	SE	14					59
SANTA MARIA	236			70	45	57.5	1.4	84	9	36	29+	0	0			0.76	- 0.26	0.66	3		0.0	0						14	9	7	4.0	
STOCKTON	22	1019.6	1020.8	59	45	51.9	- 1.1	71	8	32	29	0	1	46	82	2.63	1.46	1.23	11	0	0.0	0	1.0	26	28	16	14	6	3	21	7.5	
COLORADO																																
ALAMOSA	7536	770.4		46	11	28.5	- 1.0	61	12	- 6	27	0	30			0.28	- 0.01	0.22	5		2.8	1						11	12	7	5.0	
COLORADO SPRINGS	6145	810.4	1019.3	45	24	34.5	- 3.0	67	22	10	18+	0	24	20	61	1.32	0.92	0.56	7	0	12.3	5	4.7	3	26	1	23	10	6	14	5.8	
DENVER	5283	835.4	1016.7	48	23	35.7	- 2.0	71	12	10	29	0	27	22	63	0.71	0.02	0.34	5	0	5.8	2	1.1	18	32	NW	25	11	7	12	5.8	62
GRAND JUNCTION	4855	854.0	1020.1	48	28	38.0	- 0.8	62	4	14	30	0	24	22	58	0.42	- 0.16	0.29	5	0	0.2	T	2.0	10	32	NW	9	11	6	13	5.7	57
PUEBLO	4684	855.4	1017.0	54	27	40.3	0.3	73	12	8	30	0	20	25	58	0.43	- 0.10	0.26	5	0	4.0	2	2.0	2	34	N	10	9	11	10	5.5	63

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No. of days: Max. 90 F. or above	Temperature: No. of days: Min. 32 F. or below	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No. of days: .01 inch or more	Precipitation: No. of days: With thunderstorms	Snow, Sleet: Total	Snow, Sleet: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile: Speed	Wind: Fastest mile: Direction	Wind: Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	No. of days (sunrise to sunset): Partly cloudy, 4-7	No. of days (sunrise to sunset): Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	Ft.	Mb.	Mb.	F.	F.	F.	F.	F.		F.				F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
CONNECTICUT																																
BRIDGEPORT	7	1012.5	1013.1	52	39	45.4	0.9	76	2	28	30	0	2	36	70	6.59	2.57	1.69	17	1	1.3	1	6.3	33	44	7	12	1	10	19	7.9	
HARTFORD	169	1006.1	1012.9	46	31	38.9	- 2.4	70	2	22	30	0	21	30	72	5.46	1.62	1.28	18	0	7.9	4	4.5	32	30	NW	29	1	5	24	8.4	28
NEW HAVEN	6	1012.9		51	36	43.5	0.1	75	2	26	30	0	6			6.56	2.51	1.52	22		2.6	1			29	NW	25+	1	11	18	7.8	39
DELAWARE																																
WILMINGTON	74	1011.5	1014.4	55	39	47.0	1.6	76	2	27	21	0	6	36	67	3.92	0.39	1.12	12	0	T	T	3.5	29	35	4	12	2	10	18	7.8	
DIST.OF COLUMBIA																																
WASH NATL AP	10	1012.5	1014.8	58	42	50.0	2.3	80	2	28	21	0	2	38	66	3.62	0.78	1.29	11	2	T	T	2.8	31	40	NW	12	5	8	17	7.2	34
FLORIDA																																
APALACHICOLA U	13			66	50	58.0	- 3.3	78	3	34	13	0	0			2.40	- 0.18	0.89	6	1	0.0	0			36	NW	11	14	8	8	4.2	55
DAYTONA BEACH	31	1017.6	1018.8	72	51	61.6	- 3.7	82	18	36	13	0	0	51	71	2.43	0.10	0.98	5	2	0.0	0	1.9	28	31	24	11	9	13	8	4.6	
FORT MYERS	15	1018.0	1018.2	77	56	66.8	- 2.4	85	28	40	21	0	0	57	76	2.88	1.68	1.70	5	2	0.0	0	2.8	5	29	27	9	15	9	6	3.9	
JACKSONVILLE	20	1017.6	1018.6	72	49	60.2	- 1.5	84	16	33	21	0	0	49	71	1.30	- 0.39	0.63	4	0	0.0	0	2.7	28	41	SW	11	14	7	9	4.4	65
KEY WEST	4	1016.6	1017.2	77	68	72.9	- 1.2	84	4	57	21	0	0	65	78	3.92	1.12	2.55	5	1	0.0	0	6.0	6	30	W	11	9	10	11	5.4	71
LAKELAND U	214			73	55	63.7	- 3.2	82	28	37	13	0	0			1.92	0.33	1.24	7		0.0	0						13	12	5	4.0	69
MIAMI	7	1016.9	1017.3	79	63	71.0	- 1.4	86	18	46	20+	0	0	60	70	1.21	- 1.62	0.78	5	1	0.0	0	2.5	5	29	22	11	7	16	7	5.3	
ORLANDO	108	1014.6	1018.8	74	52	63.4	- 2.5	84	4	36	13	0	0	53	73	2.82	1.25	1.76	6	3	0.0	0	1.4	34	46	26	11	12	13	5	4.3	
PENSACOLA	112	1014.2	1018.3	65	46	55.8	- 3.7	79	17	31	13	0	1	48	77	3.11	- 0.13	0.83	11		0.0	0	2.1	2	36	NW	11	10	5	15	6.1	60
TALLAHASSEE	55	1016.6	1018.8	69	41	54.8	- 4.4	81	3+	24	21+	0	9	47	80	4.07	1.63	2.07	7	1	0.0	0	1.5	2	21	16	28+	12	8	10	4.7	
TAMPA	19	1018.0	1018.3	73	51	62.3	- 4.5	82	3	35	13	0	0	52	74	3.14	1.68	1.73	6	2	0.0	0	1.8	5	26	27	11	14	8	8	4.5	74
WEST PALM BEACH	15	1016.9	1017.7	76	59	67.7	- 4.8	85	18+	41	13	0	0	56	69	2.51	- 0.35	1.25	4	1	0.0	0	1.8	4	31	27	11	8	13	9	5.4	
GEORGIA																																
ATHENS	802	988.2	1017.5	61	40	50.7	- 0.8	79	2+	25	21	0	9	40	71	6.57	3.64	2.51	11	3	2.2	2	3.0	26	21	24	17+	9	7	14	6.2	
ATLANTA	1010	980.7	1018.0	61	40	50.1	- 1.1	79	2+	25	21+	0	10	41	74	4.81	1.85	1.79	11	2	1.0	1	3.7	29	27	SE	28	9	7	14	6.3	61
AUGUSTA	145	1012.2	1017.5	66	41	53.6	- 0.5	82	2+	25	21	0	6	42	71	3.07	0.89	1.09	10	1	T	0	2.5	26	29	28	12	9	8	13	5.9	
COLUMBUS	385			64	41	52.1	- 2.0	80	2+	20	21	0	9	41	70	4.34	1.75	1.17	10		T	0	1.6	28	17	18	28+	11	4	15	6.0	
MACON	354	1005.1	1018.3	65	40	52.3	- 3.1	82	2	23	21	0	9	41	69	3.78	1.33	1.63	10	2	T	0	2.3	27	30	S	28	11	5	14	5.7	52
ROME	637			61	35	47.9	- 1.3	79	1	19	21	0	14			4.22	0.80	1.12	11		T	0										
SAVANNAH	46	1016.3	1018.0	68	42	54.8	- 2.5	80	28+	25	21	0	8	44	71	2.59	0.54	1.16	5	0	0.0	0	3.4	25	29	W	12	11	6	13	5.7	68
HAWAII																																
HILO	27	1015.2	1016.4	84	68	76.2	3.0	87	7	65	7	0	0	68	80	10.22	- 3.15	3.93	20	0	0.0	0	2.8	19	19	E	12+	10	14	6	5.2	50
HONOLULU	7	1015.2	1015.7	86	71	78.8	2.9	90	8+	67	28+	3	0	68	74	5.64	3.48	3.24	6	0	0.0	0	6.5	7	36	NE	28	14	9	7	4.6	63
KAHULUI	48	1013.2	1015.4	88	66	77.4	2.4	92	13	62	17+	12	0	67	74	4.86	3.34	4.48	8	1	0.0	0	6.8	5	30	NE	29+	20	6	4	3.4	73
LIHUE	103	1011.5	1016.6	81	70	75.7	1.2	84	12+	66	16+	0	0	70	84	8.62	4.09	4.42	17	3	0.0	0	4.4	7	32	NE	28	5	17	8	5.7	54
IDAHO																																
BOISE	2838	919.1	1020.8	49	35	42.0	3.4	59	11+	28	28+	0	8	33	73	1.50	0.30	0.43	13	1	1.3	T	2.3	13	27	SE	29	5	7	18	7.4	36
LEWISTON	1413			49	35	41.8	2.0	59	20	27	16+	0	9			2.01	0.78	0.84	12		T	T						3	6	21	8.0	
POCATELLO	4454	865.6	1022.0	42	25	33.4	- 1.6	57	11+	9	29	0	28	25	72	0.92	- 0.07	0.35	11	0	5.1	2	4.9	22	40	S	9	1	9	20	8.2	33
ILLINOIS																																
CAIRO U	314			55	42	48.5	0.6	76	1	27	20	0	4			5.01	1.14	2.72	12		T	0			53	SW	28	4	6	20	7.8	27
CHICAGO O HARE	658	991.2	1015.9	47	33	40.0	1.9	71	1	22	20	0	16	32	73	3.70	1.53	1.76	9	0	0.7	T	3.1	30	45	5	28	3	4	23	8.0	
CHICAGO MIDWAY	607	992.9	1015.8	48	36	41.7	1.8	74	1	25	20	0	11	33	73	4.34	2.14	1.56	8	0	0.8	T	3.3	29	42	NE	28	2	6	22	8.1	25
MOLINE	582	994.9	1016.8	45	30	37.3	- 1.9	69	1	17	13	0	20	30	76	3.29	1.34	1.50	9	0	5.9	3	3.4	29	26	N	28	4	3	23	8.1	36
PEORIA	652	992.2	1016.5	48	33	40.4	0.7	70	1	21	13+	0	14	32	75	2.99	0.85	1.80	12	0	1.5	T	3.0	31	33	NW	28	2	6	22	8.3	30
ROCKFORD	724	988.5	1015.9	45	31	37.8	0.7	65	1	19	30	0	20	31	75	2.80	0.43	0.96	8	0	4.5	3	3.7	31	25	4	28	5	5	20	7.7	
SPRINGFIELD	588	993.9	1016.5	49	34	41.3	- 0.5	74	1	19	13	0	15	34	76	3.08	0.72	1.47	12	0	0.7	T	3.2	28	34	SW	28	3	6	21	8.1	30
INDIANA																																
EVANSVILLE	381	1002.7	1017.0	54	38	45.9	1.1	78	1	21	13	0	10	39	77	4.60	1.44	1.81	14	2	0.3	T	2.7	25	36	S	28	4	6	20	8.0	35
FORT WAYNE	791	984.8	1015.4	48	34	41.0	2.1	76	1	24	11	0	14	33	74	3.58	1.03	1.08	11	0	T	T	4.3	26	40	SW	28	3	3	24	8.3	35
INDIANAPOLIS	792	986.1	1015.8	50	36	42.9	2.0	75	1	22	13	0	13	36	78	4.74	1.65	1.49	14	1	0.6	T	3.0	26	39	SW	28	2	3	25	8.4	18
SOUTH BEND	773	986.5	1015.1	46	35	40.7	1.6	74	1	25	20	0	8	33	76	4.41	1.76	1.20	17	0	8.8	2	3.7	27	23	22	21+	2	2	26	8.8	

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	No. of days: Max. 90 F. or above	No. of days: Min. 32 F. or below	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	No. of days: .01 inch or more	No. of days: With thunderstorms	Snow, Sleet: Total	Snow, Sleet: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Fastest mile: Speed	Fastest mile: Direction	Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	Ft.	Mb.	Mb.	F.	F.	F.	F.	F.		F.				F.	%	In.	In.	In.			In	In.	M.p.h.		M.p.h.							%
IOWA																																
BURLINGTON	692			45	31	38.1	- 1.3	70	1	21	20+	0	21	32	79	3.51	1.63		10	0	5.0		3.5	31	23	32	28+	4	4	22	8.0	
DES MOINES	938	982.4	1018.2	42	27	34.8	- 2.3	67	1	8	12	0	23	27	73	1.90	0.14	1.37	8	0	13.5	10	3.3	33	26	NW	18	4	7	19	7.5	27
DUBUQUE	1056	976.6		43	28	35.8	1.0	66	1	16	30+	0	22			0.76	- 1.83	0.31	5		0.1	T						4	3	23	7.9	
SIOUX CITY	1095	977.3	1018.2	45	27	35.8	- 0.3	65	1	11	12	0	25	28	75	0.53	- 0.63	0.25	6	0	2.8	2	1.7	33	30	NW	18	7	4	19	7.0	45
WATERLOO	868	984.8	1017.4	42	26	33.7	- 1.0	64	1	16	27+	0	26	28	80	0.74	- 1.09	0.40	7	0	1.4	T	3.0	32	22	35	28+	4	5	21	7.8	
KANSAS																																
CONCORDIA	1470	963.8	1018.0	48	30	39.2	- 2.3	67	22+	18	19	0	19	31	75	1.29	0.31	0.65	7	0	0.1	T	2.2	32	37	S	25	7	8	15	6.3	49
DODGE CITY	2582	925.2	1017.6	50	31	40.8	- 2.0	69	22	21	27+	0	15	31	73	1.41	0.77	0.57	5	0	T	T	2.6	33	40	N	10	7	5	18	6.8	48
GOODLAND	3650	887.9	1017.0	50	26	38.0	0.0	73	22	13	11	0	23	25	66	0.34	- 0.15	0.15	5	0	1.6	1	3.9	28	32	33	17	8	9	13	6.1	
TOPEKA	876	985.8	1018.2	49	31	40.0	- 2.6	69	1	13	20	0	18	31	73	1.56	0.06	0.70	5	0	T	T	3.5	34	28	NW	10	7	3	20	7.3	38
WICHITA	1321	968.8	1017.7	51	33	41.7	- 2.7	71	1	20	30+	0	15	32	72	2.47	0.98	1.77	5	1	0.3	T	3.3	35	38	N	10	7	8	15	6.5	42
KENTUCKY																																
COVINGTON	869	984.1	1016.0	53	38	45.6	2.9	79	1	22	21	0	11	37	74	3.21	0.20	1.13	16	0	0.4	T	4.1	24	35	20	28	2	5	23	8.3	
LEXINGTON	966	980.7	1016.8	54	39	46.4	1.7	77	1	23	21	0	7	37	72	3.23	- 0.06	1.63	11	0	1.0	T	4.0	23	30	22	28	4	4	22	7.7	
LOUISVILLE	477	998.6	1016.4	56	40	48.0	3.3	82	1	23	21	0	10	38	71	3.34	0.14	1.53	13	0	0.3	T	3.6	27	50	SW	28	3	4	23	8.1	39
LOUISIANA																																
ALEXANDRIA	92	1014.2	1018.5	67	42	54.2	- 2.4	83	17+	27	12	0	6	48	82	8.84	4.06	2.94	13	5	0.0	0	1.3	31	26	31	15	7	13	10	5.6	
BATON ROUGE	64	1015.6	1018.4	66	43	54.4	- 4.5	82	2	29	13	0	4	46	77	6.81	2.72	1.67	12	3	0.0	0	1.1	8	28	16	15	9	7	14	5.7	
LAKE CHARLES	9	1016.9	1017.9	69	45	56.9	- 2.7	83	1	32	12	0	1	47	73	5.83	1.61	3.22	11	5	0.0	0	2.0	7	29	18	15	8	14	8	5.2	
NEW ORLEANS	3	1018.0	1018.7	67	44	55.5	- 4.5	81	16	28	13	0	5	49	80	4.97	1.63	1.17	12	2	0.0	0	1.3	4	29	7	9	13	4	13	5.3	
SHREVEPORT	254	1008.5	1017.8	64	43	53.7	- 2.0	83	1	28	12	0	2	44	72	5.85	1.64	1.65	9	6	0.0	0	1.2	25	32	25	15	10	6	14	5.6	53
MAINE																																
CARIBOU	624	988.8		34	22	28.2	- 2.0	45	5+	5	30	0	29			3.98	0.94	1.27	13		28.0	12						0	5	25	8.7	
PORTLAND	47	1010.2	1012.5	44	29	36.7	- 1.4	59	3	16	28	0	21	28	74	7.74	3.57	1.48	15	0	15.3	5	3.4	33	28	W	14	4	6	20	7.6	29
MARYLAND																																
BALTIMORE	148	1009.1	1014.7	56	40	48.2	2.7	78	2	24	21	0	6	35	64	3.85	0.72	1.41	12	0	4.3	T	3.8	29	35	W	29+	2	10	18	7.6	32
MASSACHUSETTS																																
BLUE HILL OBS R	629			47	34	40.1	- 1.9	61	24	24	21	0	15			7.27	2.74	1.90	15		0.4	T			59	E	12					30
BOSTON	15	1011.9	1013.0	49	39	43.8	- 1.1	63	24	32	30	0	1	33	67	6.74	2.81	1.79	16	1	0.4	T	4.9	31	54	NE	12	2	8	20	8.1	35
NANTUCKET	43	1011.9	1012.2	52	39	45.1	- 0.8	62	2	23	28	0	5	39	80	4.51	0.46	1.41	16	2	T	0	4.5	32	49	E	12	3	4	23	8.3	25
WORCESTER	986	975.3	1012.9	44	31	37.1	- 2.1	64	2	21	21	0	20	29	74	5.75	1.49	1.28	17	1	15.3	8	4.8	30	37	28	20	2	8	20	7.9	
MICHIGAN																																
ALPENA	689	988.2	1014.2	42	29	35.6	1.0	73	1	17	28	0	20	29	80	2.98	0.61	1.02	14	0	14.3	6	2.4	31	24	NE	16+	1	5	24	8.7	22
DETROIT	619			48	35	41.3	0.9	75	1	28	21+	0	10	31	67	3.22		1.53		1	T		4.7	29	29	29	19					
DETROIT M WAYNE CO	633	989.5	1014.0	49	33	41.0	1.7	77	1	20	10	0	15	32	71	3.31	1.04	1.52	10	1	T	T	4.3	28	37	SW	21	1	7	22	8.2	32
FLINT	770	985.4	1013.8	44	32	38.0	- 0.2	72	1	22	10	0	17	31	75	3.86	1.68	1.69	9	0	0.6	T	3.8	27	26	27	19+	3	6	21	8.2	
GRAND RAPIDS	784	984.8	1014.5	45	31	37.9	0.6	70	1	21	13	0	17	31	77	4.28	1.79	1.59	12	0	4.2	2	3.0	28	37	NE	28	1	7	22	8.5	34
HOUGHTON LAKE	1149	971.6	1014.5	40	29	34.7	0.6	67	1	20	28	0	22	30	82	2.47	0.11	0.79	12	0	18.9	7	2.6	32	23	34	19+	2	6	22	8.5	
LANSING	841	982.4	1014.6	46	29	37.5	- 0.4	75	1	18	11	0	20	31	79	3.26	1.05	1.31	13	0	1.8	1	3.7	28	36	SW	21	1	11	18	8.0	28
MARQUETTE U	677			39	31	35.0	1.2	63	1	20	30	0	19			1.68	- 1.60	0.46	13		15.6	8			32	SW	30	2	3	25	8.7	27
MUSKEGON	627	991.2	1014.5	44	34	38.9	- 0.7	65	1	20	13	0	11	31	75	2.91	- 0.03	0.85	12	0	5.7	T	3.5	30	28	30	19	0	8	22	8.7	
SAULT STE MARIE	721	987.1	1014.5	37	26	31.6	- 1.7	61	1	8	29	0	27	26	80	1.99	- 1.34	0.62	17	0	21.1	10	3.4	2	35	N	21	0	4	26	9.1	19
MINNESOTA																																
DULUTH	1428	963.8	1016.9	35	23	28.9	1.6	52	3+	8	27+	0	29	23	77	3.10	1.32	2.64	11	0	21.8	18	2.3	32	36	E	17	2	3	25	8.7	28
INTERNATIONAL FALLS	1179	972.2	1016.8	33	20	26.3	2.5	51	3	3	26	0	30	23	85	0.48	- 0.98	0.24	7	0	7.7	6	0.6	35	23	29	23	0	3	27	9.3	
MINNEAPOLIS	834	985.8	1017.2	41	27	34.0	2.8	61	1	16	27	0	24	28	78	0.54	- 0.86	0.26	9	0	4.9	1	2.1	33	26	NW	21	5	4	21	8.0	30
ROCHESTER	1297	967.8	1016.7	41	26	33.8	2.3	63	1	13	27	0	25	27	76	0.52	- 1.05	0.19	11	0	4.5	1	3.2	29	25	30	23	7	2	21	7.5	
ST CLOUD	1034	978.0	1016.9	39	24	31.5	2.0	58	1	10	26	0	28		78	0.58	- 0.75	0.23	9		5.7	2						5	3	22	8.2	
MISSISSIPPI																																
JACKSON	310	1006.4	1018.4	64	41	52.7	- 2.8	83	2+	27	13	0	9	44	77	5.55	1.65	0.94	13	5	0.0	0	1.0	18	29	S	28+	9	5	16	6.1	42

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

NOVEMBER 1968

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No. of days: Max. 90 F. or above	Temperature: No. of days: Min. 32 F. or below	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No. of days: 01 inch or more	Precipitation: No. of days: With thunderstorms	Precipitation: Snow, Sleet: Total	Precipitation: Snow, Sleet: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile: Speed	Wind: Fastest mile: Direction	Wind: Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	No. of days (sunrise to sunset): Partly cloudy, 4-7	No. of days (sunrise to sunset): Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	Ft.	Mb.	Mb.	F.	F.	F.	F.	F.		F.				F.	%	In.	In.	In.			In.	In.	M.p.h		M.p.h.							%
MISSISSIPPI																																
MERIDIAN	290	1007.8	1019.2	64	40	51.9	- 2.2	81	2+	26	13	0	0	43	77	3.85	0.75	1.00	10	2	0.0	0	2.0	24	25	18	28	10	5	15	6.1	
MISSOURI																																
COLUMBIA	778	988.2	1016.8	50	35	42.6	- 0.7	73	1	20	20	0	10	34	74	3.36	1.09	1.25	10	0	0.4	T	1.8	31	35	NW	28	4	6	20	7.7	31
KANSAS CITY	742	990.2	1017.8	49	34	41.2	- 3.4	72	1	22	20	0	12	33	74	3.03	1.23	1.52	9	1	3.2	2	2.7	33	25	SE	25	7	5	18	7.4	38
ST JOSEPH	811			50	31	40.5	- 0.9	74	1	16	12	0	17			1.52	- 0.16		10	0	T		3.1	33	26	16	25	7	5	18	6.9	
ST LOUIS	535	996.3	1017.0	51	36	43.5	- 0.6	69	1	22	30	0	11	37	77	5.74	3.17	1.82	14	0	T	T	2.9	28	34	SW	28	3	3	24	8.1	26
SPRINGFIELD	1268	971.2	1017.3	51	34	42.2	- 2.8	71	1	19	20	0	18	34	76	7.59	4.83	3.04	14	2	1.2	T	0.4	23	26	SE	25+	3	4	23	8.4	31
MONTANA																																
BILLINGS	3567	890.6	1016.6	47	30	38.3	3.2	63	21	16	17	0	21	22	56	1.71	1.08	1.17	7	0	4.6	1	7.5	26	48	NW	22	6	6	18	7.0	35
GLASGOW	2284	932.3	1016.2	43	23	32.9	4.7	64	20	9	17	0	29	22	69	0.07	- 0.40	0.03	5	0	0.7	T	0.2	1	32	30	20	3	7	20	7.9	
GREAT FALLS	3662	886.9	1016.8	45	27	35.8	1.5	61	20	5	17	0	22	22	58	0.68	- 0.07	0.64	4	0	2.6	1	9.6	23	41	SW	23+	7	6	17	7.0	43
HAVRE	2584	921.8	1015.9	44	20	32.2	2.7	65	20	- 6	18	0	28	20	62	0.06	- 0.44	0.05	2	0	1.1	1	6.4	25	49	NW	20	2	8	20	8.0	45
HELENA	3828	880.8	1019.1	44	23	33.5	1.9	58	20	3	16	0	26	24	70	0.92	0.35	0.66	7	0	7.4	5	4.7	26	45	SW	22	3	12	15	7.0	36
KALISPELL	2965	912.3	1019.2	39	23	31.4	0.4	49	22+	11	17	0	28	25	78	1.55	0.12	0.56	10	0	11.1	5	1.6	19	20	19	29+	4	4	22	8.0	
MILES CITY	2629	921.4	1016.5	43	26	34.5	1.9	63	20	5	18	0	25	25	71	0.72	0.29		8	0	2.2		3.4	28								
MISSOULA	3190	905.9	1020.4	42	26	33.7	3.2	53	20	13	17	0	25	27	79	0.55	- 0.35	0.30	8	0	1.5	1	1.2	30	23	SW	12	0	8	22	8.4	30
NEBRASKA																																
GRAND ISLAND	1841	950.6	1018.1	47	27	36.8	- 0.4	68	22	15	19	0	25	28	74	0.61	- 0.15	0.31	7	0	1.7	1	2.7	29	29	36	10	6	8	16	6.9	
LINCOLN U	1150			46	30	38.1	- 2.7	67	22+	19	11	0	19			1.30	0.04	0.56	8		1.7	1			38	S	25	7	7	16	6.7	40
NORFOLK	1544			45	26	35.3	- 0.6	64	1	10	11	0	26			0.38	- 0.53	0.14	4		1.3	1						8	3	19	7.1	
NORTH PLATTE	2775	917.7	1018.0	47	22	34.4	- 1.1	69	22	10	11	0	28	24	70	0.46	- 0.04	0.38	5	0	0.3	T	2.7	31	34	NW	17	6	12	12	6.2	48
OMAHA	977	981.7	1018.0	47	28	37.4	- 1.5	69	1	10	12+	0	22	30	78	1.50	0.24	0.61	7	0	4.7	5	2.1	34	31	SE	25	7	3	20	7.1	46
SCOTTSBLUFF	3957	879.1	1017.8	49	22	35.5	- 0.3	71	12	6	18	0	27	22	63	0.19	- 0.27	0.10	4	0	1.1	T	4.5	32	30	33	17	8	7	15	6.2	
VALENTINE	2587			45	25	34.9	1.3	64	3	9	18	0	25			0.41	- 0.08	0.24	7		1.7	1			33	NW	17	6	10	14	6.5	49
NEVADA																																
ELKO	5050	846.9	1020.4	48	28	38.2	4.0	69	11	10	26	0	19	28	70	1.56	0.68	0.37	13	0	3.3	3	1.8	24	30	29	24	3	5	22	7.9	
ELY	6253	810.0	1020.1	49	21	34.8	1.1	64	21	7	29+	0	29	21	63	0.22	- 0.37	0.09	8	1	1.9	1	2.1	23	32	W	24	5	15	10	6.2	51
LAS VEGAS	2162	940.7	1017.9	67	42	54.5	2.0	77	9+	23	29	0	2	23	32	0.02	- 0.29	0.02	1	0	0.0	0	2.0	30	37	N	26	18	6	6	3.5	83
RENO	4404	868.6	1020.2	54	28	40.8	2.5	74	11	15	28	0	22	29	65	0.73	0.16	0.54	6	0	1.3	1	0.9	31	39	S	29	3	10	17	7.4	50
WINNEMUCCA	4301	870.6	1020.4	50	30	40.2	4.4	68	9	18	28+	0	19	29	65	2.54	1.74	0.98	15	0	6.1	3	0.8	19	30	S	24	2	6	22	8.2	20
NEW HAMPSHIRE																																
CONCORD	342	1000.0	1013.0	43	27	34.8	- 2.8	59	24	8	28	0	23	28	78	5.24	1.52	1.24	18	2	11.6	7	3.9	32	34	NW	13	2	7	21	8.2	32
MT WASHINGTON OBS	6262			24	10	17.0	- 3.3	38	2	- 2	14	0	30			16.07	9.46	6.07	27	1	86.6	8			122Y	E	12	3	4	23	8.4	22
NEW JERSEY																																
ATLANTIC CITY	64	1011.2	1013.7	53	35	43.8	- 2.9	75	2	18	21	0	13	35	73	3.10	- 0.56	0.84	11		T	T	4.3	28	39	6	12	2	11	17	7.5	29
ATLANTIC CITY U	11			54	43	48.4	0.1	75	2	29	21	0	3			3.08	- 0.71	1.21	11						62	E	12					
NEWARK	7	1012.5	1013.4	53	39	45.7	0.3	76	2	28	21	0	2	37	73	4.38	1.01	1.16	15	0	0.4	T	5.4	29	39	4	12	1	9	20	8.3	
TRENTON U	56			52	40	46.4	0.6	73	2	30	21	0	1			4.46	1.30	1.29	15		0.5	T			40	NE	12	1	11	18	8.1	31
NEW MEXICO																																
ALBUQUERQUE	5311	838.5	1017.3	54	31	42.8	- 0.8	70	1	13	30	0	18	24	51	0.59	0.21	0.32	4	1	T	T	1.0	1	42	E	29+	12	5	13	5.1	65
CLAYTON	4969			52	28	40.3	- 1.4	76	4	17	30+	0	22			0.31	- 0.02	0.10	5		2.3	2						9	7	14	6.1	
RATON	6379			49	23	35.7	- 1.8	68	22	4	30	0	29			1.80	1.41	0.66	8		13.8	7						8	7	15	6.3	
ROSWELL	3617	891.6		62	27	44.7	- 1.2	79	4	12	28	0	22	28	59	1.11	0.77	0.84	7	0	8.5	3	0.5	33	25	NW	9	10	8	12	5.6	58
NEW YORK																																
ALBANY	275	1003.1	1013.9	47	30	38.5	- 0.6	71	2	17	30+	0	20	29	68	5.48	2.78	1.36	21	2	13.5	7	3.6	30	32	W	29	2	3	25	8.7	20
BINGHAMTON	1590	953.9	1013.7	42	31	36.7	- 1.3	62	2	24	30+	0	19	31	81	5.62	3.11	2.04	18	0	15.2	10	3.0	26	35	W	13	1	1	28	9.2	17
BUFFALO	705	987.1	1013.2	47	34	40.7	1.6	66	1	28	20	0	13	35	83	4.47	0.87	0.98	17	0	11.6	4	4.2	28	34	W	28+	1	2	27	9.2	21
J.F. KENNEDY	13	1012.9	1013.5	52	41	46.6	0.4	73	2	32	30	0	1	37	70	6.84	3.33	1.92	17	1	T	0	5.2	31	44	5	12	2	8	20	8.2	
NEW YORK U	132	1009.5	1012.8	53	41	46.9	- 0.1	77	2	32	21	0	1	34	64	5.75	2.36	1.44	15	0	T	0	3.1	31	51	NE	12					33
NEW YORK LA GUARDIA	11	1011.5	1013.5	52	41	46.4	- 1.0	74	2	32	21	0	1	35	66	5.13	1.54	1.31	14	0	T	T	4.8	33	67	NE	12	1	8	21	8.3	
ROCHESTER	547	992.6	1013.2	48	34	41.2	1.1	67	2	27	21+	0	12	34	77	4.28	1.77	0.88	17	0	8.6	4	2.8	26	35	SW	28	1	0	29	9.4	17

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure		Temperature								No. of days			Average relative humidity	Precipitation			No. of days		Snow, Sleet		Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 90 F. or above	Min. 32 F. or below	Average dew point		Total	Departure from normal	Greatest in 24 hours	01 inch or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Fastest mile: Speed	Fastest mile: Direction	Fastest mile: Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	Ft.	Mb.	Mb.	F.	F.	F.	F.	F.		F.				F.	%	In.	In.	In			In.	In.	M.p.h.		M.p.h.							%
NEW YORK																																
SYRACUSE	410	998.3	1013.3	46	34	40.0	- 0.2	63	2	26	30+	0	13	34	79	4.07	1.17	0.79	19	1	16.5	9	2.1	28	36	W	29	1	3	26	9.3	9
NORTH CAROLINA																																
ASHEVILLE	2140	939.7	1016.7	57	35	46.0	1.4	77	2+	22	26	0	13	39	81	2.98	0.21	1.10	11	0	9.6	5	3.6	34	29	19	28	7	6	17	7.0	43
CAPE HATTERAS R	7	1015.6	1015.9	65	50	57.4	1.2	75	3+	36	14	0	0	48	73	4.21	0.12	1.53	9	0	0.0	0	6.4	27	54	SW	12	9	7	14	5.8	61
CHARLOTTE	736	988.8	1016.8	59	40	49.4	- 1.0	78	2	21	21	0	9	40	73	4.68	2.15	1.55	10	0	2.5	2	2.4	25	26	S	28	8	5	17	6.5	60
GREENSBORO	897	984.4	1016.5	59	39	48.9	1.0	79	2+	20	21	0	10	38	67	3.55	0.87	1.45	12	2	5.9	4	3.3	25	27	SW	28	7	6	17	6.9	50
RALEIGH	434	1000.0	1015.9	63	40	51.7	1.7	81	2	18	21	0	8	41	71	3.59	0.82	1.37	9	0	1.2	1	4.3	26	29	5	11	10	5	15	6.1	57
WILMINGTON	28	1015.6	1017.0	65	44	54.7	- 0.7	80	2	27	21	0	4	44	70	4.40	1.31	1.55	9	1	0.0	0	3.6	27	30	SW	11	12	6	12	5.2	58
NORTH DAKOTA																																
BISMARCK	1647	956.0	1017.5	42	22	32.0	3.1	61	3	10	15	0	29	23	70	0.56	- 0.03	0.22	6	0	2.4	1	1.4	30	28	W	21	8	2	20	7.1	46
FARGO	896	983.7	1017.6	39	23	31.0	2.9	54	2	9	19	0	29	26	83	0.37	- 0.47	0.21	6	0	3.9	1	1.6	34	28	SE	13+	4	5	21	8.0	29
WILLISTON	1899	946.2	1016.5	40	21	30.6	3.0	61	3	4	11	0	29	24	77	0.37	- 0.21	0.14	9	0	2.6	1	1.7	28	28	NW	21	5	8	17	7.3	39
OHIO																																
AKRON	1208	969.5	1014.6	50	36	42.9	2.1	77	1	23	10	0	11	35	76	3.86	1.61	1.01	15	1	2.4	1	4.3	25	29	20	28	0	7	23	8.7	
CINCINNATI OBS	761			52	39	45.6	1.0	79	1	25	21	0	8			3.71	0.76	1.16	15		T	T			28	SW	28					29
CLEVELAND	777	985.1	1014.8	49	36	42.4	1.1	76	1	27	21+	0	10	34	73	4.35	1.74	0.93	16	0	6.8	4	4.8	24	33	SW	21	0	5	25	8.9	21
COLUMBUS	812	985.1	1015.7	51	37	44.0	2.8	77	1	22	10	0	12	36	74	4.26	1.76	1.22	16	2	1.0	T	3.9	25	34	SW	29+	4	3	23	8.3	28
DAYTON	1002	979.0	1015.5	51	37	43.8	2.0	77	1	23	21	0	10	35	73	3.66	0.99	1.08	13	0	1.4	T	4.6	26	38	S	28	2	7	21	8.1	28
MANSFIELD	1295			50	36	42.9	3.5	78	1	25	13+	0	11	35	77	4.01	1.32	1.10	16	1	1.9	1	5.2	26	32	23	28	1	7	22	8.4	
TOLEDO	669	989.5	1015.3	49	33	40.6	2.0	78	1	23	13+	0	18	34	79	3.52	1.48	1.26	14	0	1.8	1	4.1	28	31	SW	28	2	7	21	8.4	38
YOUNGSTOWN	1178	971.2	1014.6	48	35	41.1	1.8	73	1	25	21	0	11	35	81	4.14	1.33	1.04	17	1	5.8	4	4.1	26	25	26	19+	0	7	23	9.0	
OKLAHOMA																																
OKLAHOMA CITY	1285	970.5	1017.5	56	36	46.2	- 2.2	78	1	25	12	0	10	36	72	4.11	2.55	1.60	8	3	1.4	1	2.0	35	33	NW	10	6	10	14	6.5	49
TULSA	650	992.9	1017.7	57	37	46.7	- 0.9	76	1	23	12	0	10	37	72	5.19	2.91	1.75	10	1	T	0	1.3	30	36	SW	13	4	7	19	7.4	41
OREGON																																
ASTORIA	8	1016.3	1016.8	53	41	47.1	0.8	59	11+	30	15	0	2	43	86	11.96	0.76	2.65	25	1	0.0	0	3.0	14	25	18	22+	1	2	27	9.1	
BURNS U	4151	875.0	1020.6	44	27	35.9	- 0.2	54	9+	16	14	0	24	31	82	2.22	1.06	0.56	15		4.8	2	1.8	29				2	5	23	8.3	
EUGENE	359	1005.1	1018.8	55	41	48.2	2.7	64	9	33	28	0	0	44	88	7.02	1.40	1.74	19	0	T	0	4.5	17	27	16	24	0	4	26	9.1	
MEACHAM	4050	877.4	1019.8	38	29	33.6	- 0.8	50	1	20	30	0	22			5.78	1.63	2.00	19		18.3	6			22	30	22+	1	6	23	8.7	
MEDFORD	1298	972.6	1021.0	51	39	44.8	2.4	62	9	27	30	0	4	41	88	3.04	0.44	0.55	20	0	T	T	0.2	31	24	23	29	0	4	26	9.4	
PENDLETON	1482	965.1	1019.6	49	36	42.6	1.3	61	11	30	1	0	3	35	77	2.06	0.66	0.63	10	0	T	0	2.8	25	29	26	29+	2	6	22	8.2	
PORTLAND	21	1016.9	1018.2	54	40	46.5	1.4	62	9+	31	15+	0	3	42	83	6.23	0.90	1.65	22	0	0.0	0	4.9	14	37	SW	29	1	3	26	9.1	24
SALEM	196	1010.8	1018.4	53	38	45.3	0.1	61	20+	28	15+	0	6	43	90	6.49	0.78	1.30	21	0	T	T	5.2	19	25	15	21	0	5	25	9.1	
SEXTON SUMMIT R	3836	884.9	1019.2	44	35	39.4	- 3.4	53	8	24	30	0	11			5.15	0.77	1.28	22		17.6	7			59	19	29	1	4	25	9.0	
PACIFIC AREA																																
JOHNSTON	7	1012.9	1013.5	85	77	81.2	1.6	87	12	73	28	0	0	72	74	1.28	- 0.78	0.60	16	1	0.0	0	13.9	8	33	SE	21	7	16	7	5.2	63
KOROR R	94	1006.1	1009.8	88	77	82.5	1.3	90	28+	72	9	11	0	75	81	8.15	- 4.78	3.06	13	1	0.0	0	3.6	32	31	NW	10	0	4	26	9.1	69
KWAJALEIN	8	1008.8	1009.6	87	77	82.4	1.1	90	13	75	23+	1	0	76	81	10.34	- 1.79	2.58	27	0	0.0	0	8.9	8	28	4	5	1	5	24	8.9	
MAJURO	10	1009.8	1010.1	86	76	81.1	0.6	88	3+	73	17	0	0	75	81	11.97	- 3.95	2.47	25	3	0.0	0	5.2	7	26	E	18	1	5	24	8.9	51
PAGO PAGO	12	1011.5	1011.7	86	75	80.8		88	30+	72	18+	0	0	74	81	4.27		1.69	16	1	0.0	0	7.6	12	21	SE	24	5	17	8	6.0	63
PONAPE R	123	1004.1	1009.3	88	72	80.1	0.2	91	12	69	29+	8	0	75	87	9.32	- 7.53	2.27	21	2	0.0	0	1.9	14	17	NW	20	0	8	22	8.4	52
TAGUAC GUAM R	361			85	71	78.0	- 1.3	88	15	65	5	0	0			11.92	1.63	3.18	21		0.0	0			38	NE	23	0	9	21	8.3	36
TRUK MOEN ISLAND	5	1008.8	1009.1	87	74	80.8	0.0	90	28+	72	30	2	0	76	85	6.91	- 5.45	1.76	24	4	0.0	0	1.2	10	26	SW	8	0	7	23	8.7	66
WAKE	11	1012.9	1013.0	87	77	81.9	1.5	89	23+	73	14+	0	0	72	75	4.29	1.21	2.02	14	1	0.0	0	12.5	9	26	NE	15+	4	12	14	6.6	72
YAP R	44	1006.8	1008.7	87	75	81.2	- 0.3	89	27+	70	5	0	0	75	82	3.59	- 7.56	1.67	16	3	0.0	0	1.8	31	19	N	18	0	5	25	8.9	54
PENNSYLVANIA																																
ALLENTOWN	387	999.7	1014.0	50	35	42.3	0.4	72	2	26	21+	0	10	33	72	4.32	0.99	1.15	12	0	7.2	5	3.8	30	30	27	29	1	9	20	8.5	
ERIE	731	986.8	1013.9	49	36	42.4	1.2	73	1	27	21	0	7	34	74	4.71	1.35	1.12	17	0	9.8	4	4.7	25	39	30	19	0	6	24	9.2	
HARRISBURG	338	1001.4	1014.3	52	38	44.9	1.5	74	2	27	23+	0	4	34	69	3.38	0.43	1.03	15	0	3.0	3	2.9	29	34	NW	13	1	5	24	8.6	23
PHILADELPHIA	5	1012.9	1013.7	53	39	45.6	1.3	75	2	26	21	0	6	35	68	4.17	0.77	1.28	12	0	0.4	T	3.7	32	45	NE	12	1	10	19	8.3	32
PITTSBURGH	1137	969.9	1014.6	49	34	41.3	0.5	72	1	21	14	0	13	33	75	2.07	- 0.17	0.41	17	2	2.7	2	5.1	26	30	26	29	0	5	25	9.1	23
READING U	266			52	40	46.1	1.0	74	2	30	21	0	1			4.05	0.65	1.10	12		3.3	2			49	S	28	0	10	20	8.2	23

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure		Temperature								No. of days			Average relative humidity	Precipitation			No. of days		Snow, Sleet		Wind		Fastest mile			No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 90 F. or above	Min. 32 F. or below	Average dew point		Total	Departure from normal	Greatest in 24 hours	01 inch or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	Ft.	Mb.	Mb.	F.	F.	F.	F.	F.		F.				F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
PENNSYLVANIA																																
SCRANTON	930	979.3	1014.2	46	35	40.7	1.1	69	2	26	30	0	11	34	78	3.40	0.46	0.57	16	0	10.9	7	2.5	27	29	S	29	0	3	27	9.1	19
WILLIAMSPORT	524	994.9	1014.3	50	35	42.9	1.8	72	2	26	23	0	10	37	81	4.50	1.05	1.52	14	1	7.5	7	3.0	29	26	28	20+	1	1	28	9.2	
RHODE ISLAND																																
BLOCK ISLAND	110			51	40	45.3	0.1	63	2	27	30	0	2			5.41	1.70	1.80	13		0.0	0						2	10	18	7.9	
PROVIDENCE	51	1010.5	1012.7	51	34	42.4	- 0.6	66	2	24	21	0	11	33	72	6.22	2.11	1.57	15	1	0.1	T	4.9	33	36	36	10	3	4	23	8.2	29
SOUTH CAROLINA																																
CHARLESTON	40	1015.9	1017.5	66	42	53.7	- 2.2	79	3+	26	21	0	6	43	70	2.67	0.58	1.49	5	1	0.0	0	3.3	25	36Y	NE	11	11	5	14	5.7	66
CHARLESTON U	9			65	50	57.3	- 1.3	78	3	34	13	0	0			2.52	0.60	1.62	7		0.0	0			42	F	11					
COLUMBIA	213	1009.1	1017.4	66	42	53.6	- 0.1	82	2	23	21	0	7	43	73	5.21	2.85	1.99	7	1	T	0	3.0	28	23	29	12+	11	5	14	5.9	52
GNVLE-SPARTANBURG	957	982.4	1017.5	60	39	49.5	- 1.8	80	2	21	21	0	8	39	73	5.07	2.23	2.62	10	0	1.9	1	2.4	27	32	S	28	8	6	16	6.4	44
SOUTH DAKOTA																																
ABERDEEN	1296	969.5	1017.6	41	24	32.4	2.1	60	3	6	11	0	28	26	78	0.83	0.09	0.44	7	0	3.7	2	1.3	31	26	14	13	4	8	18	7.4	
HURON	1282	969.9	1017.6	43	25	33.9	2.7	60	3	7	11	0	24	27	76	0.43	- 0.25	0.17	6	0	3.4	1	1.6	28	34	SE	13	9	3	18	6.9	53
RAPID CITY	3162	903.8	1017.2	47	24	35.5	0.4	67	20	9	18	0	27	22	62	0.46	0.05	0.17	8	0	2.7	1	4.8	33	42	NW	17	5	12	13	6.8	43
SIOUX FALLS	1418	964.8	1017.5	43	24	33.5	0.9	60	4+	11	19	0	27	25	74	0.39	- 0.61	0.17	5	0	1.9	1	3.0	30	28	21	30	7	5	18	7.1	
TENNESSEE																																
BRISTOL	1507	962.8	1017.7	56	35	45.2	- 0.7	75	2+	17	21	0	14	35	71	1.89	- 0.62	0.78	12	0	2.9	T	2.3	28	29	30	19	2	8	20	8.1	
CHATTANOOGA	665	992.9	1017.8	60	39	49.7	0.3	80	1	23	21+	0	9	41	76	2.81	- 0.84	1.07	10	0	T	0	1.5	27	28	NW	12	6	8	16	6.6	45
KNOXVILLE	980	981.4	1016.9	58	39	48.1	- 0.6	77	1	22	21	0	9	38	71	2.00	- 1.24	0.58	12	0	0.3	T	2.2	26	29	S	28	4	6	20	7.7	42
MEMPHIS	258	1007.5	1017.7	60	42	50.9	0.8	80	1	25	13	0	6	41	70	4.89	0.51	2.82	10	2	0.0	0	2.7	24	34	SW	28	5	5	20	7.3	54
NASHVILLE	590	995.3	1017.4	59	39	48.7	0.2	80	1	19	13	0	9	38	70	5.39	2.11	3.34	10	0	T	0	2.9	24	42	SW	28	2	9	19	7.6	42
OAK RIDGE R	905			57	38	47.3	0.0	79	1	21	21	0	9			2.24	- 1.53	1.16	12		0.4	T			45Y		28	6	4	20	7.6	
TEXAS																																
ABILENE	1762	955.3	1017.2	64	41	52.6	- 0.4	85	1	28	28	0	6	37	60	4.60	3.49	1.99	6	1	8.1	2	2.2	24	40	S	2	8	9	13	6.1	55
AMARILLO	3604	891.0	1015.7	57	34	45.4	- 0.6	77	4	22	30+	0	13	30	61	0.92	0.26	0.50	5	2	0.3	T	2.6	31	35	N	23+	8	7	15	6.4	48
AUSTIN	597	995.9	1018.1	68	44	55.8	- 3.0	84	2+	32	12	0	1	44	68	4.91	2.79	2.22	6	4	0.0	0	1.4	35	34	NW	26	11	10	9	5.0	57
BROWNSVILLE	19	1015.9	1016.4	78	58	68.0	0.4	88	6+	41	12	0	0	58	72	0.85	- 0.47	0.70	4	1	0.0	0	2.2	13	35	SE	26	9	11	10	5.5	47
CORPUS CHRISTI	41	1015.6	1017.3	73	52	62.6	- 1.5	84	15+	37	19	0	0	53	73	1.34	- 0.38	0.83	6	0	0.0	0	3.6	8	40	SE	26	9	11	10	5.2	61
DALLAS	481	1000.0	1017.7	64	44	54.0	- 0.9	84	1	32	19	0	1	41	63	4.26	1.56	1.25	9	2	T	T	1.4	24	33	NW	2	9	8	13	5.6	59
DEL RIO	1026	980.7	1017.2	70	47	58.5	- 0.3	87	5	31	28	0	1	43	62	2.19	1.57	0.91	5	1	0.0		2.8	9	24	32	27	14	8	8	4.7	
EL PASO	3918	882.2	1015.1	64	38	51.0	- 0.2	79	1	31	27+	0	6	31	52	1.35	1.02	0.74	7	0	7.0	7	1.3	29	36	N	2	15	3	12	4.6	73
FORT WORTH	537	997.3	1017.9	65	43	53.9	- 0.9	83	1	28	12	0	5	43	70	4.58	2.12	1.69	10	1	T	T	1.7	27	30	36	26	9	7	14	5.9	
GALVESTON U	7			67	57	62.0	- 1.0	80	17	44	9	0	0			4.73	1.17	2.53	10		0.0	0			37	NE	8					60
HOUSTON	50	1015.9	1018.0	71	48	59.7	- 1.1	85	15+	32	12	0	1	48	69	2.71	- 1.15	0.91	10	3	0.0	0	1.1	36	29	16	26+	13	3	14	5.4	55
LUBBOCK	3254	903.8	1016.5	58	35	46.6	- 1.3	76	1	24	28	0	11	33	64	2.67	2.13	1.57	4	2	1.2	T	1.6	27	32	36	10	8	9	13	6.2	
MIDLAND	2851	917.4	1016.5	62	37	49.6	- 2.9	80	1	24	28	0	10	33	58	2.32	1.85	1.21	6	1	4.5	T	1.1	20	32	3	26	12	5	13	5.4	
PORT ARTHUR	16	1017.6	1018.3	70	48	58.9	- 0.8	83	17+	29	12	0	1	48	68	5.69	2.23	1.84	11	5	0.0	0	1.1	5	47	S	6	10	12	8	4.9	58
SAN ANGELO	1903	949.9	1017.0	66	40	53.3	- 1.5	85	1	28	19	0	5	39	64	3.55	2.77	1.54	5	1	8.8	3	3.2	22	35	19	25	10	9	11	5.5	
SAN ANTONIO	788	989.5	1017.9	69	44	56.4	- 3.1	84	2	30	19	0	2	44	67	4.58	3.21	1.94	9	4	0.0	0	1.5	36	34	NW	10	11	10	9	4.9	65
VICTORIA	104	1013.5	1017.7	72	48	60.2	- 2.2	87	1	33	12	0	0	50	72	4.24	1.88	1.28	7	4	0.0	0	2.3	6	47Y	S	26	15	4	11	4.8	
WACO	501	999.7	1018.0	66	46	55.9	- 0.9	84	2+	33	12	0	0	42	64	4.77	2.58	1.31	7	1	T	0	2.5	23	29	32	10	10	10	10	5.3	
WICHITA FALLS	994	980.0	1017.2	64	38	50.7	- 1.8	84	1	25	12	0	9	39	70	4.05	2.63	2.58	9	4	T	0	1.4	30	40	36	26	7	9	14	6.4	
UTAH																																
MILFORD	5028	848.3		51	25	37.9	1.8	66	3	9	29	0	27			0.27	- 0.25	0.15	7		3.1	2						7	12	11	5.6	
SALT LAKE CITY	4220	874.4	1020.9	48	29	38.5	1.8	66	3	20	26+	0	22	27	67	1.32	0.02	0.52	10	1	8.7	2	2.8	17	38	NW	24	7	7	16	7.0	49
WENDOVER	4237	873.7	1021.3	47	31	39.0	1.4	62	9	15	29	0	18			0.16	- 0.13	0.04	6		T	T										
VERMONT																																
BURLINGTON	332	1000.7	1013.4	38	27	32.2	- 3.1	60	2	10	28	0	26	26	78	4.37	1.75	0.89	20	2	18.8	7	1.5	32	30	S	24	2	1	27	9.0	27
VIRGINIA																																
LYNCHBURG	916			58	37	47.4	0.4	81	1	15	21	0	12			3.32	0.74	1.21	13		11.6	4			29	SW	29+	7	8	15	6.5	46
NORFOLK	22	1013.9	1015.1	62	44	52.9	1.5	81	2	30	21	0	3	41	66	3.56	0.51	1.09	11	1	T	0	3.4	26	47	NE	12	7	9	14	6.5	49

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Date	Temperature: Lowest	Date	No. of days: Max. 90 F. or above	No. of days: Min. 32 F. or below	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	No. of days: 01 inch or more	No. of days: With thunderstorms	Snow, Sleet: Total	Snow, Sleet: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Fastest mile: Speed	Fastest mile: Direction	Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	Ft.	Mb.	Mb.	F.	F.	F.	F.	F.		F.				F.	%	In.	In.	In.			In	In.	M.p.h.		M.p.h.							%
VIRGINIA																																
RICHMOND	164	1009.1	1015.2	63	40	51.3	2.8	84	2	20	21	0	8	39	65	3.87	0.83	1.87	12	0	1.2	1	2.3	27	25	N	12	8	8	14	6.5	46
ROANOKE	1149	973.2	1015.6	57	39	48.1	1.4	79	1	25	21	0	7	35	65	2.82	0.12	1.03	14	0	13.8	3	5.7	29	35	31	12	5	8	17	7.2	
WALLOPS ISLAND	9			57	43	49.9		80	2	26	21	0	4			2.84		0.96	8		0.0	0			76Y	ENE	12					
WASHINGTON																																
OLYMPIA	195	1009.5	1016.9	52	37	44.5	0.7	61	18	27	14	0	6	41	86	7.96	0.29	1.81	22	0	0.0	0	4.4	21	24	20	26+	0	3	27	9.1	
QUILLAYUTE	179	1007.8	1015.1	51	40	45.6	1.0	57	19+	29	4	0	1	43	92	13.54	0.22	2.15	28	3	T	0	3.0	15	32	SW	11	0	4	26	9.3	3
SEATTLE TACOMA	400	1000.0	1016.7	52	42	46.8	2.9	59	19+	35	4	0	0	41	82	5.86	0.51	1.60	17	1	0.0	0	5.3	16	31	S	22	1	1	28	9.3	29
SPOKANE	2356	933.0	1018.5	40	29	34.9	- 0.8	48	22	16	16	0	22	30	83	2.35	0.11	1.03	12	0	1.2	1	3.8	18	28	SW	22	2	3	25	8.6	18
STAMPEDE PASS R	3958	878.1		34	28	30.7	- 0.7	44	20	22	30+	0	29			13.12	0.54	2.18	24		82.6	45						0	3	27	9.4	
WALLA WALLA U	949			50	37	43.7	1.4	65	11	32	29+	0	2			2.64	0.92	0.81	12		0.8	1			28	S	29	1	5	24	8.7	17
YAKIMA	1052	980.0	1019.4	48	31	39.7	2.3	58	22+	22	30	0	17	33	80	1.32	0.36	0.58	9	0	T	T	2.3	27	29	22	22	3	6	21	8.1	
WEST INDIES																																
SAN JUAN P.R.	13	1011.9	1014.4	86	73	79.5	1.3	90	3	69	22	1	0	73	82	11.11	4.62	3.72	20	5	0.0	0	4.4	9	32	NE	27	5	19	6	5.3	68
SWAN ISLAND	28			84	76	80.2	0.1	87	11+	71	19	0	0			10.53	3.14	6.72	16		0.0	0						3	12	15	7.4	
WEST VIRGINIA																																
BECKLEY	2504	926.5	1016.4	50	36	42.8	0.6	71	1	18	21	0	14	35	76	3.17	0.17	1.03	15	2	11.0	6	5.0	25	31	18	28	3	5	22	8.4	
CHARLESTON	939	981.4	1015.7	56	38	46.8	1.5	77	1	23	21	0	10	38	73	2.47	- 0.32	0.69	13	1	4.3	2	4.2	23	22	17	28	3	5	22	8.4	
ELKINS	1970	943.8		52	33	42.2	1.5	73	1	15	14	0	15			3.20	0.45	0.97	17		11.9	8			30	30	19	1	4	25	9.1	
HUNTINGTON	827	985.8	1016.4	56	39	47.1	1.6	79	1	24	21	0	11	38	74	2.41	- 0.05	0.60	14	1	1.5	T	3.9	23	25	27	19	3	3	24	8.4	
PARKERSBURG U	615			54	39	46.8	2.0	78	1	26	14	0	12			2.46	0.10	0.50	13		T	T			31	W	28+					26
WISCONSIN																																
GREEN BAY	682	989.2	1015.4	42	28	34.8	0.6	65	1	18	27	0	25	27	74	1.01	- 0.90	0.48	8	0	2.4	1	4.9	32	32	NW	19	6	5	19	7.4	42
LA CROSSE	651	991.9	1017.1	43	29	35.7	1.5	65	1	20	12	0	23	29	77	0.61	- 1.33	0.21	8	0	1.0		2.4	30								
MADISON	858	983.7	1016.0	43	28	35.6	1.6	65	1	18	27	0	22	29	76	1.74	- 0.40	0.68	9	0	0.5	T	4.1	31	27	NW	19	5	3	22	7.6	35
MILWAUKEE	672	989.8	1015.4	45	31	38.1	2.3	68	1	20	20	0	19	31	74	2.56	0.38	0.98	9	0	0.3	T	4.8	30	40	N	28	5	6	19	7.4	38
WYOMING																																
CASPER	5338	836.4	1017.7	44	20	32.0	- 1.6	61	3	6	29+	0	26	18	60	0.56	- 0.15	0.28	4	0	4.9	2	10.3	23	39	21	12	6	10	14	6.6	
CHEYENNE	6126	810.4	1017.5	45	23	34.0	- 0.2	63	12	7	29+	0	27	15	49	0.71	0.09	0.41	4	0	6.0	5	8.8	30	42	W	25	10	11	9	5.0	59
LANDER	5563	828.0	1018.7	41	20	30.4	- 0.6	59	12	2	29	0	29	16	60	0.46	- 0.46	0.28	4	0	8.2	4	1.8	26	40	NW	9	5	8	17	6.6	56
SHERIDAN	3964	878.1	1018.1	45	21	33.1	- 0.3	68	20	5	26	0	29	21	64	0.91	0.11	0.40	11	0	6.9	1	4.2	30	38	NW	22	6	8	16	6.9	47

Data from airport unless otherwise specified. U indicates Urban, R indicates Rural, sites.

Precipitation data in column headed "Greatest in 24 hours" are computed on a 24-hour basis without regard to calendar day - data may include precipitation with a measurable amount from the last day of the previous month or the first day of the following month.

Wind directions under resultant direction are in tens of degrees.

Value entered in column "Fastest Mile" is the highest observed 1-minute wind speed when the direction is in tens of degrees. These stations are not equipped with a recording anemometer from which "Fastest Mile" data can be evaluated.

B Number of days maximum 70°F. or above for Alaskan Stations.
Y Peak Gust.
\+ And also on an earlier date or dates.
Ø Station pressures apply to elevations shown in the "Elevations - Station Pressure" table of the annual issue of this publication.

V Sun below horizon November 19 - 30, inclusive.
X Sun below horizon November 24 - 30, inclusive.

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure: Station ○	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	No. of days: Max 32.2 °C or above	No. of days: Min 0 C or lower	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	No. of days: 25 mm or more	No. of days: With thunderstorms	Snow, Sleet: Total	Snow, Sleet: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Fastest mile (1.6 kilometers): Speed	Fastest mile: Direction	Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	M.	Mb.	Mb	C.	C.	C.	C.	C		C				C.	%	Mm.	Mm.	Mm			Mm.	Mm	M.p.s		M.p.s							%
ALABAMA																																
BIRMINGHAM	189	995.6	1018.4	16.1	3.9	10.2	-1.7	26.7	2+	- 5.0	13	0	11	5.0	73	118	29	31	12	2	T	0	0.7	27	16.5	SW	28	7	9	14	6.4	53
HUNTSVILLE	190	994.6	1018.0	15.6	5.0	10.3	-0.1	26.7	1	- 5.6	13	0	8	5.0	74	98	5	47	10	2	T	T	0.8	26	13.4	22	28	6	9	15	6.5	
MOBILE	64	1010.5	1018.4	19.4	7.8	13.5	-1.4	27.8	3	0.0	20+	0	2	8.9	76	103	18	35	12	3	0	0	0.6	1	15.6	24	28	12	3	15	5.7	
MONTGOMERY	56	1011.5	1018.7	18.3	5.6	11.8	-0.5	27.8	2	- 4.4	13	0	7	6.7	76	150	73	67	11	3	T	0	0.9	28	13.0	W	28	11	6	13	5.6	50
ALASKA												B																				
ANCHORAGE	35	992.9	997.9	- 2.2	- 8.9	- 5.5	-0.1	2.8	7+	-20.6	30	0	30	- 8.3	77	27	1	14	6	0	373	356	1.3	2	8.9	2	1	2	8	20	7.8	24
ANNETTE	34	1002.0	1006.0	8.3	3.3	5.9	1.2	12.8	6	- 1.1	29	0	5	2.8	80	358	- 14	85	24	0	84	25	3.6	14	21.9	15	28	1	1	28	9.0	
BARROW	9			-17.8	-21.7	-19.8	-1.7	- 5.6	3+	-32.2	30+	0	30			14	8	5	7	0	178	305			15.6	5	19	V	V	V		
BARTER ISLAND	12	1012.2	1014.2	-16.1	-22.8	-19.5	-1.8	- 5.0	4+	-34.4	29+	0	30	-23.9	67	17	7	5	8	0	307	254	2.1	9	21.0	26	6	X	X	X		
BETHEL	38	989.8	995.4	- 3.3	-11.7	- 7.4	0.8	7.2	3	-26.7	30	0	30	- 9.4	85	9	- 18	3	8	0	241	152	3.5	6	14.3	12	12	3	7	20	7.8	
COLD BAY	29	987.1	991.0	4.4	0.0	2.2	0.9	7.2	14	- 6.7	28	0	15	- 1.1	79	84	- 12	19	25	0	170	51	0.9	18	20.1	15	2	0	6	24	8.6	
FAIRBANKS	133	986.5	1004.4	-11.7	-21.1	-16.5	-0.9	0.6	2	-33.3	30	0	30	-20.0	73	7	- 8	2	9	0	203	178	1.3	1	5.8	34	21	7	7	16	7.0	
JUNEAU	4	1002.0	1002.9	3.9	- 1.1	1.2	-0.1	8.9	7	-10.0	16+	0	21	0.6	95	136	- 18	41	25	0	221	51	3.6	11	25.9	11	28	1	3	26	9.1	20
KING SALMON	15	991.9	993.9	0.6	- 6.7	- 3.2	2.3	7.8	6	-17.8	27+	0	21	- 6.7	77	23	- 14	13	8	0	226	102	3.0	7	16.1	9	3	4	3	23	8.1	
KOTZEBUE	3	1004.4	1004.9	-11.7	-17.2	-14.6	-0.9	- 2.2	3+	-34.4	30	0	30	-18.3	71	2	- 7	1	4	0	114	127	5.6	8	17.9	9	24	8	8	14	6.1	
MC GRATH	105	988.8	1002.2	-11.1	-21.1	-16.2	-1.4	- 2.8	3	-32.8	30	0	30	-20.0	70	6	- 21	3	6	0	257	229	0.2	34	5.8	12	23+	5	7	18	7.3	
NOME	4	999.0	999.7	- 6.1	-13.3	- 9.7	-1.1	1.1	4	-31.1	30	0	30	-15.6	61	15	- 14	5	9	0	201	229	3.4	4	12.5	7	11	7	4	19	7.1	33
ST. PAUL ISLAND	7	989.8	990.7	2.8	- 1.1	0.7	0.2	5.6	15+	-10.6	27	0	19	- 1.1	85	66	2	20	25	0	259	102	2.5	1	27.3	29	11	2	4	24	8.6	
SHEMYA	37	996.6	1000.3	2.8	- 1.1	0.9	-1.2	5.0	16+	- 5.0	26	0	24	- 2.8	75	25	- 44	6	17	0	168	76	5.0	32	25.9	35	14	0	7	23	8.5	
YAKUTAT	9	997.6	998.7	3.3	- 2.8	0.2	-0.8	8.9	8+	-14.4	15	0	21	- 2.2	85	353	- 54	64	28	0	269	102	3.1	10	16.5	12	8	1	3	26	9.0	
ARIZONA																																
FLAGSTAFF	2135	787.3	1018.3	9.4	- 5.0	2.1	-0.2	17.2	11	-12.8	30	0	29	- 7.8	55	22	- 3	14	3	1	109	76	0.1	12	10.3	4	26	15	7	8	4.1	
PHOENIX	340	976.0	1014.9	22.8	7.2	15.1	0.6	28.9	11	1.1	30+	0	0	2.8	50	23	11	13	3	1	0	0	1.0	11	12.5Y	N	28	15	6	9	3.9	75
TUCSON	788	926.5	1014.6	21.7	7.2	14.6	0.1	29.4	11	0.6	26	0	0	- 0.6	42	47	31	47	2	2	0	0	1.4	16	13.9	E	29	17	4	9	3.9	85
WINSLOW	1492	852.4	1018.9	12.8	- 1.1	5.8	0.7	21.1	24	-10.0	30	0	21	- 6.1	49	18	9	9	2	1	0	0	0.6	25	11.2	25	15	14	7	9	4.4	
YUMA	59	1008.1	1015.3	25.0	10.0	17.4	0.9	30.6	10	2.8	28	0	0	1.1	37	T	- 3	T	0	0	0	0	1.9	35	17.0	NW	26	20	2	8	3.3	87
ARKANSAS																																
FORT SMITH	136	1001.0	1017.8	15.0	3.3	8.9	-1.1	25.6	2	- 6.1	12	0	10	3.9	73	229	148	53	10	3	T	0	0.8	1	17.9	NW	15	4	5	21	7.9	35
LITTLE ROCK	78	1007.8	1017.6	16.1	5.6	10.7	0.9	26.1	2	- 2.8	19	0	7	5.0	70	135	30	53	11	3	0	0	1.0	28	13.9	W	28	7	3	20	7.1	39
CALIFORNIA																																
BAKERSFIELD	145	1002.7	1020.5	17.8	8.3	13.2	-0.1	25.0	11	1.1	29+	0	0	8.3	75	10	- 2	9	4	0	0	0	0.5	35	8.0	34	12	6	6	18	6.8	
BISHOP	1252	876.1		17.8	- 2.2	7.7	0.1	26.1	9	-10.0	29	0	24			T	- 13	T	1		0	0						18	6	6	3.7	
BLUE CANYON	1609			10.0	2.2	6.1	-1.5	17.8	19	- 3.3	30+	0	8			254	82	85	15		686	203			12.1	24	11	6	6	18	7.2	
EUREKA U	13			14.4	7.8	11.0	0.3	18.3	8	3.3	13	0	0			149	32	35	19		0	0			17.0	NW	29	2	4	24	8.6	31
FRESNO	100	1008.5	1020.3	15.6	6.1	11.1	-1.1	22.8	11+	- 0.6	29+	0	2	8.3	87	49	25	28	8	0	0	0	0.3	36	13.0	NW	12	3	12	15	6.9	45
LONG BEACH	10	1015.9	1017.3	22.2	10.0	16.2	-0.1	29.4	8	3.3	29	0	0	8.3	66	9	- 17	7	4	0	0	0	0.6	28	15.6	34	25	11	10	9	5.2	
LOS ANGELES	32	1013.2	1016.7	21.1	12.2	16.5	0.3	28.3	20	6.1	29	0	0	8.9	69	6	- 22	5	4	0	0	0	0.7	27	17.0Y	N	25	12	11	7	4.8	
LOS ANGELES U	82			22.8	12.2	17.4	0.3	30.6	10	7.8	29+	0	0			9	- 18	8	3		0	0			12.5	N	25	17	7	6	3.9	68
MT SHASTA R	1080			8.9	0.0	4.6	-0.8	17.8	10	- 7.8	30	0	19			70	- 31	22	14		277	127										
OAKLAND	2	1020.3	1020.4	16.1	10.0	12.8	0.2	21.1	9	4.4	27	0	0	8.9	80	62	18	24	12	0	0	0	0.5	33	11.6	15	14	6	6	18	6.9	
RED BLUFF	104	1008.1	1020.8	16.1	6.7	11.5	-1.0	23.3	9	0.6	27	0	0	5.6	71	60	2	24	11	0	T	T	1.2	33	13.4	N	13	7	2	21	7.4	47
SACRAMENTO	5	1019.6	1020.3	15.6	7.2	11.3	-0.3	21.7	9	- 0.6	28	0	1	8.3	85	63	26	30	9	0	0	0	0.5	32	13.0	N	13	8	3	19	7.2	54
SANDBERG R	1377	864.9		12.2	3.3	7.9	-1.6	20.0	21	- 3.3	25	0	8	- 2.8	56	5	- 19	4	3		41	T			21.0	1	24	13	7	10	4.6	
SAN DIEGO	4	1015.9	1016.8	21.1	12.2	16.5	-0.1	26.7	20+	7.2	28	0	0	10.6	71	9	- 14	7	5	0	0	0	0.9	31	12.1	S	15	12	11	7	4.8	81
SAN FRANCISCO	2	1019.6	1020.4	16.1	8.3	12.4	-0.2	21.7	9	3.9	29	0	0	8.3	79	63	23	29	12	0	0	0	0.8	30	15.6	NW	24	5	8	17	7.1	
SAN FRANCISCO U	16			16.1	10.6	13.4	-0.7	22.2	10	7.8	30+	0	0			68	17	21	14		0	0			12.5	SE	14					59
SANTA MARIA	72			21.1	7.2	14.2	0.8	28.9	9	2.2	29+	0	0			19	- 7	17	3		0	0						14	9	7	4.0	
STOCKTON	7	1019.6	1020.8	15.0	7.2	11.1	-0.6	21.7	8	0.0	29	0	1	7.8	82	67	37	31	11	0	0	0	0.4	26	12.5	16	14	6	3	21	7.5	
COLORADO																																
ALAMOSA	2297	770.4		7.8	-11.7	- 1.9	-0.6	16.1	12	-21.1	27	0	30			7	- T	6	5		71	25						11	12	7	5.0	
COLORADO SPRINGS	1873	810.4	1019.3	7.2	- 4.4	1.4	-1.7	19.4	22	-12.2	18+	0	24	- 6.7	61	34	23	14	7	0	312	127	2.1	3	11.6	1	23	10	6	14	5.8	
DENVER	1610	835.4	1016.7	8.9	- 5.0	2.1	-1.1	21.7	12	-12.2	29	0	27	- 5.6	63	18	1	9	5	0	147	51	0.5	18	14.3	NW	25	11	7	12	5.8	62
GRAND JUNCTION	1480	854.0	1020.1	8.9	- 2.2	3.3	-0.4	16.7	4	-10.0	30	0	24	- 5.6	58	11	- 4	7	5	0	5	T	0.9	10	14.3	NW	9	11	6	13	5.7	57
PUEBLO	1428	855.4	1017.0	12.2	- 2.8	4.6	0.2	22.8	12	-13.3	30	0	20	- 3.9	58	11	- 3	7	5	0	102	51	0.9	2	15.2	N	10	9	11	10	5.5	63
CONNECTICUT																																
BRIDGEPORT	2	1012.5	1013.1	11.1	3.9	7.4	0.5	24.4	2	- 2.2	30	0	2	2.2	70	167	65	43	17	1	33	25	2.8	33	19.7	7	12	1	10	19	7.9	

See footnotes at end of table

CLIMATOLOGICAL DATA
METRIC UNITS

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	No. of days: Max 32.2 °C or above	No. of days: Min. 0 C or lower	Average dew point	Average relative humidity	Precipitation: Total	Departure from normal	Greatest in 24 hours	No. of days: 25 mm or more	No. of days: With thunderstorms	Snow, Sleet: Total	Snow, Sleet: Maximum depth on ground	Wind: Resultant speed	Resultant direction	Fastest mile (1.6 kilometers): Speed	Direction	Date	No. of days (sunrise to sunset): Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	M.	Mb.	Mb.	C.	C.	C.	C.	C.		C.				C.	%	Mm.	Mm.	Mm			Mm	Mm	M.p.s.		M.p.s							%
CONNECTICUT																																
HARTFORD	52	1006.1	1012.9	7.8	- 0.6	3.8	-1.3	21.1	2	- 5.6	30	0	21	- 1.1	72	139	41	33	18	0	201	102	2.0	32	13.4	NW	29	1	5	24	8.4	28
NEW HAVEN	2	1012.9		10.6	2.2	6.4	0.1	23.9	2	- 3.3	30	0	6			167	64	39	22		66	25			13.0	NW	25+	1	11	18	7.8	39
DELAWARE																																
WILMINGTON	23	1011.5	1014.4	12.8	3.9	8.3	0.9	24.4	2	- 2.8	21	0	6	2.2	67	100	10	28	12	0	T	T	1.6	29	15.6	4	12	2	10	18	7.8	
DIST.OF COLUMBIA																																
WASH NATL AP	3	1012.5	1014.8	14.4	5.6	10.0	1.3	26.7	2	- 2.2	21	0	2	3.3	66	92	20	33	11	2	T	T	1.3	31	17.9	NW	12	5	8	17	7.2	34
FLORIDA																																
APALACHICOLA U	4			18.9	10.0	14.4	-1.8	25.6	3	1.1	13	0	0			61	- 5	23	6	1	0	0			16.1	NW	11	14	8	8	4.2	55
DAYTONA BEACH	9	1017.6	1018.8	22.2	10.6	16.4	-2.1	27.8	18	2.2	13	0	0	10.6	71	62	3	25	5	2	0	0	0.8	28	13.9	24	11	9	13	8	4.6	
FORT MYERS	5	1018.0	1018.2	25.0	13.3	19.3	-1.3	29.4	28	4.4	21	0	0	13.9	76	73	43	43	5	2	0	0	1.3	5	13.0	27	9	15	9	6	3.9	
JACKSONVILLE	6	1017.6	1018.6	22.2	9.4	15.7	-0.8	28.9	16	0.6	21	0	0	9.4	71	33	- 10	16	4	0	0	0	1.2	28	18.3	SW	11	14	7	9	4.4	65
KEY WEST	1	1016.6	1017.2	25.0	20.0	22.7	-0.7	28.9	4	13.9	21	0	0	18.3	78	100	28	65	5	1	0	0	2.7	6	13.4	W	11	9	10	11	5.4	71
LAKELAND U	65			22.8	12.8	17.6	-1.8	27.8	28	2.8	13	0	0			49	8	31	7		0	0						13	12	5	4.0	69
MIAMI	2	1016.9	1017.3	26.1	17.2	21.7	-0.8	30.0	18	7.8	20+	0	0	15.6	70	31	- 41	20	5	1	0	0	1.1	5	13.0	22	11	7	16	7	5.3	
ORLANDO	33	1014.6	1018.8	23.3	11.1	17.4	-1.4	28.9	4	2.2	13	0	0	11.7	73	72	32	45	6	3	0	0	0.6	34	20.6	26	11	12	13	5	4.3	
PENSACOLA	34	1014.2	1018.3	18.3	7.8	13.2	-2.1	26.1	17	- 0.6	13	0	1	8.9	77	79	- 3	21	11		0	0	0.9	2	16.1	NW	11	10	5	15	6.1	60
TALLAHASSEE	17	1016.6	1018.8	20.6	5.0	12.7	-2.4	27.2	3+	- 4.4	21+	0	9	8.3	80	103	41	53	7	1	0	0	0.7	2	9.4	16	28+	12	8	10	4.7	
TAMPA	6	1018.0	1018.3	22.8	10.6	16.8	-2.5	27.8	3	1.7	13	0	0	11.1	74	80	43	44	6	2	0	0	0.8	5	11.6	27	11	14	8	8	4.5	74
WEST PALM BEACH	5	1016.9	1017.7	24.4	15.0	19.8	-2.7	29.4	18+	5.0	13	0	0	13.3	69	64	- 9	32	4	1	0	0	0.8	4	13.9	27	11	8	13	9	5.4	
GEORGIA																																
ATHENS	244	988.2	1017.5	16.1	4.4	10.4	-0.4	26.1	2+	- 3.9	21	0	9	4.4	71	167	92	64	11	3	56	51	1.3	26	9.4	24	17+	9	7	14	6.2	
ATLANTA	308	980.7	1018.0	16.1	4.4	10.1	-0.6	26.1	2+	- 3.9	21+	0	10	5.0	74	122	47	45	11	2	25	25	1.7	29	12.1	SE	28	9	7	14	6.3	61
AUGUSTA	44	1012.2	1017.5	18.9	5.0	12.0	-0.3	27.8	2+	- 3.9	21	0	6	5.6	71	78	23	28	10	1	T	0	1.1	26	13.0	28	12	9	8	13	5.9	
COLUMBUS	117			17.8	5.0	11.2	-1.1	26.7	2+	- 3.3	21	0	9	5.0	70	110	44	30	10		T	0	0.7	28	7.6	18	28+	11	4	15	6.0	
MACON	108	1005.1	1018.3	18.3	4.4	11.3	-1.7	27.8	2	- 5.0	21	0	9	5.0	69	96	34	41	10	2	T	0	1.0	27	13.4	S	28	11	5	14	5.7	52
ROME	194			16.1	1.7	8.8	-0.7	26.1	1	- 7.2	21	0	14			107	20	28	11		T	0										
SAVANNAH	14	1016.3	1018.0	20.0	5.6	12.7	-1.4	26.7	28+	- 3.9	21	0	8	6.7	71	66	14	29	5	0	0	0	1.5	25	13.0	W	12	11	6	13	5.7	68
HAWAII																																
HILO	8	1015.2	1016.4	28.9	20.0	24.6	1.7	30.6	7	18.3	7	0	0	20.0	80	260	- 80	100	20	0	0	0	1.3	19	8.5	E	12+	10	14	6	5.2	50
HONOLULU	2	1015.2	1015.7	30.0	21.7	26.0	1.6	32.2	8+	19.4	28+	3	0	20.0	74	143	88	82	6	0	0	0	2.9	7	16.1	NE	28	14	9	7	4.6	63
KAHULUI	15	1013.2	1015.4	31.1	18.9	25.2	1.3	33.3	13	16.7	17+	12	0	19.4	74	123	85	114	8	1	0	0	3.0	5	13.4	NE	29+	20	6	4	3.4	73
LIHUE	31	1011.5	1016.6	27.2	21.1	24.3	0.7	28.9	12+	18.9	16+	0	0	21.1	84	219	104	112	17	3	0	0	2.0	7	14.3	NE	28	5	17	8	5.7	54
IDAHO																																
BOISE	865	919.1	1020.8	9.4	1.7	5.6	1.9	15.0	11+	- 2.2	28+	0	8	0.6	73	38	8	11	13	1	33	T	1.0	13	12.1	SE	29	5	7	18	7.4	36
LEWISTON	431			9.4	1.7	5.4	1.1	15.0	20	- 2.8	16+	0	9			51	20	21	12		T	T						3	6	21	8.0	
POCATELLO	1358	865.6	1022.0	5.6	- 3.9	0.8	-0.9	13.9	11+	-12.8	29	0	28	- 3.9	72	23	- 2	9	11	0	130	51	2.2	22	17.9	S	9	1	9	20	8.2	33
ILLINOIS																																
CAIRO U	96			12.8	5.6	9.2	0.3	24.4	1	- 2.8	20	0	4			127	29	69	12		T	0			23.7	SW	28	4	6	20	7.8	27
CHICAGO O HARE	201	991.2	1015.9	8.3	0.6	4.4	1.1	21.7	1	- 5.6	20	0	16	0.0	73	94	39	45	9	0	18	T	1.4	30	20.1	S	28	3	4	23	8.0	
CHICAGO MIDWAY	185	992.9	1015.8	8.9	2.2	5.4	1.0	23.3	1	- 3.9	20	0	11	0.6	73	110	54	40	8	0	20	T	1.5	29	18.8	NE	28	2	6	22	8.1	25
MOLINE	177	994.9	1016.8	7.2	- 1.1	2.9	-1.1	20.6	1	- 8.3	13	0	20	- 1.1	76	84	34	38	9	0	150	76	1.5	29	11.6	N	28	4	3	23	8.1	36
PEORIA	199	992.2	1016.5	8.9	0.6	4.7	0.4	21.1	1	- 6.1	13+	0	14	0.0	75	76	22	46	12	0	38	T	1.3	31	14.8	NW	28	2	6	22	8.3	30
ROCKFORD	221	988.5	1015.9	7.2	- 0.6	3.2	0.4	18.3	1	- 7.2	30	0	20	- 0.6	75	71	11	24	8	0	114	76	1.7	31	11.2	4	28	5	5	20	7.7	
SPRINGFIELD	179	993.9	1016.5	9.4	1.1	5.2	-0.3	23.3	1	- 7.2	13	0	15	1.1	76	78	18	37	12	0	18	T	1.4	28	15.2	SW	28	3	6	21	8.1	30
INDIANA																																
EVANSVILLE	116	1002.7	1017.0	12.2	3.3	7.7	0.6	25.6	1	- 6.1	13	0	10	3.9	77	117	37	46	14	2	8	T	1.2	25	16.1	S	28	4	6	20	8.0	35
FORT WAYNE	241	984.8	1015.4	8.9	1.1	5.0	1.2	24.4	1	- 4.4	11	0	14	0.6	74	91	26	27	11	0	T	T	1.9	26	17.9	SW	28	3	3	24	8.3	35
INDIANAPOLIS	241	986.1	1015.8	10.0	2.2	6.1	1.1	23.9	1	- 5.6	13	0	13	2.2	78	120	42	38	14	1	15	T	1.3	26	17.4	SW	28	2	3	25	8.4	18
SOUTH BEND	236	986.5	1015.1	7.8	1.7	4.8	0.9	23.3	1	- 3.9	20	0	8	0.6	76	112	45	30	17	0	224	51	1.7	27	10.3	22	21+	2	2	26	8.8	
IOWA																																
BURLINGTON	211			7.2	- 0.6	3.4	-0.7	21.1	1	- 6.1	20+	0	21	0.0	79	89	41		10	0	127		1.6	31	10.3	32	28+	4	4	22	8.0	

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Date	Temperature: Lowest	Date	No. of days: Max 32.2 °C or above	No. of days: Min 0 C or lower	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Greatest in 24 hours	No of days: 25 mm or more	No of days: With thunderstorms	Snow, Sleet: Total	Snow, Sleet: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Fastest mile (1.6 kilometers): Speed	Fastest mile: Direction	Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	M	Mb.	Mb.	C.	C.	C	C.	C.		C.				C.	%	Mm	Mm.	Mm			Mm	Mm	M p.s.		M.p.s							%
IOWA																																
DES MOINES	286	982.4	1018.2	5.6	- 2.8	1.6	-1.3	19.4	1	-13.3	12	0	23	- 2.8	73	48	4	35	8	0	343	254	1.5	33	11.6	NW	18	4	7	19	7.5	27
DUBUQUE	322	976.6		6.1	- 2.2	2.1	0.6	18.9	1	- 8.9	30+	0	22			19	- 46	8	5		T	T						4	3	23	7.9	
SIOUX CITY	334	977.3	1018.2	7.2	- 2.8	2.1	-0.2	18.3	1	-11.7	12	0	25	- 2.2	75	13	- 16	6	6	0	71	51	0.8	33	13.4	NW	18	7	4	19	7.0	45
WATERLOO	265	984.6	1017.4	5.6	- 3.3	0.9	-0.6	17.8	1	- 8.9	27+	0	26	- 2.2	80	19	- 28	10	7	0	36	T	1.3	32	9.8	35	28+	4	5	21	7.8	
KANSAS																																
CONCORDIA	448	963.8	1018.0	8.9	- 1.1	4.0	-1.3	19.4	22+	- 7.8	19	0	19	- 0.6	75	33	8	17	7	0	T	T	1.0	32	16.5	S	25	7	8	15	6.3	49
DODGE CITY	787	925.2	1017.6	10.0	- 0.6	4.9	-1.1	20.6	22	- 6.1	27+	0	15	- 0.6	73	36	20	14	5	0	T	T	1.2	33	17.9	N	10	7	5	18	6.8	48
GOODLAND	1113	887.9	1017.0	10.0	- 3.3	3.3	0.0	22.8	22	-10.6	11	0	23	- 3.9	66	9	- 4	4	5	0	41	25	1.7	28	14.3	33	17	8	9	13	6.1	
TOPEKA	267	985.8	1018.2	9.4	- 0.6	4.4	-1.4	20.6	1	- 7.8	20	0	18	- 0.6	73	40	2	18	5	0	T	T	1.6	34	12.5	NW	10	7	3	20	7.3	38
WICHITA	403	968.8	1017.7	10.6	0.6	5.4	-1.5	21.7	1	- 6.7	30+	0	15	0.0	72	63	25	45	5	1	8	T	1.5	35	17.0	N	10	7	8	15	6.5	42
KENTUCKY																																
COVINGTON	265	984.1	1016.0	11.7	3.3	7.6	1.6	26.1	1	- 5.6	21	0	11	2.8	74	82	5	29	16	0	10	T	1.8	24	15.6	20	28	2	5	23	8.3	
LEXINGTON	294	980.7	1016.8	12.2	3.9	8.0	0.9	25.0	1	- 5.0	21	0	7	2.8	72	82	- 2	41	11	0	25	T	1.8	23	13.4	22	28	4	4	22	7.7	
LOUISVILLE	145	998.6	1016.4	13.3	4.4	8.9	1.8	27.8	1	- 5.0	21	0	10	3.3	71	85	4	39	13	0	8	T	1.6	27	22.4	SW	28	3	4	23	8.1	39
LOUISIANA																																
ALEXANDRIA	28	1014.2	1018.5	19.4	5.6	12.3	-1.3	28.3	17+	- 2.8	12	0	6	8.9	82	225	103	75	13	5	0	0	0.6	31	11.6	31	15	7	13	10	5.6	
BATON ROUGE	20	1015.6	1018.4	18.9	6.1	12.4	-2.5	27.8	2	- 1.7	13	0	4	7.8	77	173	69	42	12	3	0	0	0.5	8	12.5	16	15	9	7	14	5.7	
LAKE CHARLES	3	1016.9	1017.9	20.6	7.2	13.8	-1.5	28.3	1	0.0	12	0	1	8.3	73	148	41	82	11	5	0	0	0.9	7	13.0	18	15	8	14	8	5.2	
NEW ORLEANS	1	1018.0	1018.7	19.4	6.7	13.1	-2.5	27.2	16	- 2.2	13	0	5	9.4	80	126	41	30	12	2	0	0	0.6	4	13.0	7	9	13	4	13	5.3	
SHREVEPORT	77	1008.5	1017.8	17.8	6.1	12.1	-1.1	28.3	1	- 2.2	12	0	2	6.7	72	149	42	42	9	6	0	0	0.5	25	14.3	25	15	10	6	14	5.6	53
MAINE																																
CARIBOU	190	988.8		1.1	- 5.6	- 2.1	-1.1	7.2	5+	-15.0	30	0	29			101	24	32	13		711	305						0	5	25	8.7	
PORTLAND	14	1010.2	1012.5	6.7	- 1.7	2.6	-0.8	15.0	3	- 8.9	28	0	21	- 2.2	74	197	91	38	15	0	389	127	1.5	33	12.5	W	14	4	6	20	7.6	29
MARYLAND																																
BALTIMORE	45	1009.1	1014.7	13.3	4.4	9.0	1.5	25.6	2	- 4.4	21	0	6	1.7	64	98	18	36	12	0	109	T	1.7	29	15.6	W	29+	2	10	18	7.6	32
MASSACHUSETTS																																
BLUE HILL OBS R	192			8.3	1.1	4.5	-1.1	16.1	24	- 4.4	21	0	15			185	70	48	15		10	T			26.4	E	12					30
BOSTON	5	1011.9	1013.0	9.4	3.9	6.6	-0.6	17.2	24	0.0	30	0	1	0.6	67	171	71	45	16	1	10	T	2.2	31	24.1	NE	12	2	8	20	8.1	35
NANTUCKET	13	1011.9	1012.2	11.1	3.9	7.3	-0.4	16.7	2	- 5.0	28	0	5	3.9	80	115	12	36	16	2	T	0	2.0	32	21.9	E	12	3	4	23	8.3	25
WORCESTER	301	975.3	1012.9	6.7	- 0.6	2.8	-1.2	17.8	2	- 6.1	21	0	20	- 1.7	74	146	38	33	17	1	389	203	2.1	30	16.5	28	20	2	8	20	7.9	
MICHIGAN																																
ALPENA	210	988.2	1014.2	5.6	- 1.7	2.0	0.6	22.8	1	- 8.3	28	0	20	- 1.7	80	76	15	26	14	0	363	152	1.1	31	10.7	NE	16+	1	5	24	8.7	22
DETROIT	189			8.9	1.7	5.2	0.5	23.9	1	- 2.2	21+	0	10	- 0.6	67	82		39		1	T		2.1	29	13.0	29	19					
DETROIT M WAYNE CO	193	989.5	1014.0	9.4	0.6	5.0	0.9	25.0	1	- 6.7	10	0	15	0.0	71	84	26	39	10	1	T	T	1.9	28	16.5	SW	21	1	7	22	8.2	32
FLINT	235	985.4	1013.8	6.7	0.0	3.3	-0.1	22.2	1	- 5.6	10	0	17	- 0.6	75	98	43	43	9	0	15	T	1.7	27	11.6	27	19+	3	6	21	8.2	
GRAND RAPIDS	239	984.8	1014.5	7.2	- 0.6	3.3	0.3	21.1	1	- 6.1	13	0	17	- 0.6	77	109	45	40	12	0	107	51	1.3	28	16.5	NE	28	1	7	22	8.5	34
HOUGHTON LAKE	350	971.6	1014.5	4.4	- 1.7	1.5	0.3	19.4	1	- 6.7	28	0	22	- 1.1	82	63	3	20	12	0	480	178	1.2	32	10.3	34	19+	2	6	22	8.5	
LANSING	256	982.4	1014.6	7.8	- 1.7	3.1	-0.2	23.9	1	- 7.8	11	0	20	- 0.6	79	83	27	33	13	0	46	25	1.7	28	16.1	SW	21	1	11	18	8.0	28
MARQUETTE U	206			3.9	- 0.6	1.7	0.7	17.2	1	- 6.7	30	0	19			43	- 41	12	13		396	203			14.3	SW	30	2	3	25	8.7	27
MUSKEGON	191	991.2	1014.5	6.7	1.1	3.8	-0.4	18.3	1	- 6.7	13	0	11	- 0.6	75	74	- 1	22	12	0	145	T	1.6	30	12.5	30	19	0	8	22	8.7	
SAULT STE MARIE	220	987.1	1014.5	2.8	- 3.3	- 0.2	-0.9	16.1	1	-13.3	29	0	27	- 3.3	80	51	- 34	16	17	0	536	254	1.5	2	15.6	N	21	0	4	26	9.1	19
MINNESOTA																																
DULUTH	435	963.8	1016.9	1.7	- 5.0	- 1.7	0.9	11.1	3+	-13.3	27+	0	29	- 5.0	77	79	34	67	11	0	554	457	1.0	32	16.1	E	17	2	3	25	8.7	28
INTERNATIONAL FALLS	359	972.2	1016.8	0.6	- 6.7	- 3.2	1.4	10.6	3	-16.1	26	0	30	- 5.0	85	12	- 25	6	7	0	196	152	0.3	35	10.3	29	23	0	3	27	9.3	
MINNEAPOLIS	254	985.8	1017.2	5.0	- 2.8	1.1	1.6	16.1	1	- 8.9	27	0	24	- 2.2	78	14	- 22	7	9	0	124	25	0.9	33	11.6	NW	21	5	4	21	8.0	30
ROCHESTER	395	967.8	1016.7	5.0	- 3.3	1.0	1.3	17.2	1	-10.6	27	0	25	- 2.8	76	13	- 27	5	11	0	114	25	1.4	29	11.2	30	23	7	2	21	7.5	
ST CLOUD	315	978.0	1016.9	3.9	- 4.4	- 0.3	1.1	14.4	1	-12.2	26	0	28		78	15	- 19	6	9		145	51						5	3	22	8.2	
MISSISSIPPI																																
JACKSON	94	1006.4	1018.4	17.8	5.0	11.5	-1.6	28.3	2+	- 2.8	13	0	9	6.7	77	141	42	24	13	5	0	0	0.4	18	13.0	S	28+	9	5	16	6.1	42
MERIDIAN	88	1007.8	1019.2	17.8	4.4	11.1	-1.2	27.2	2+	- 3.3	13	0	9	6.1	77	98	19	25	10	2	0	0	0.9	24	11.2	18	28	10	5	15	6.1	
MISSOURI																																
COLUMBIA	237	988.2	1016.8	10.0	1.7	5.9	-0.4	22.8	1	- 6.7	20	0	10	1.1	74	85	28	32	10	0	10	T	0.8	31	15.6	NW	28	4	6	20	7.7	31

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Date	Temperature: Lowest	Date	No. of days: Max 32.2 °C or above	No. of days: Min. 0 C or lower	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	No. of days: 25 mm or more	No. of days: With thunderstorms	Snow, Sleet: Total	Snow, Sleet: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Fastest mile (1.6 kilometers): Speed	Fastest mile: Direction	Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	M.	Mb.	Mb.	C.	C.	C.	C.	C.		C.				C.	%	Mm.	Mm.	Mm.			Mm	Mm	M.p.s.		M p s							%
MISSOURI																																
KANSAS CITY	226	990.2	1017.8	9.4	1.1	5.1	-1.9	22.2	1	-5.6	20	0	12	0.6	74	77	31	39	9	1	81	51	1.2	33	11.2	SE	25	7	5	18	7.4	38
ST JOSEPH	247			10.0	-0.6	4.7	-0.5	23.3	1	-8.9	12	0	17			39	-4		10	0	T		1.4	33	11.6	16	25	7	5	18	6.9	
ST LOUIS	163	996.3	1017.0	10.6	2.2	6.4	-0.3	20.6	1	-5.6	30	0	11	2.8	77	146	81	46	14	0	T	T	1.3	28	15.2	SW	28	3	3	24	8.1	26
SPRINGFIELD	386	971.2	1017.3	10.6	1.1	5.7	-1.6	21.7	1	-7.2	20	0	18	1.1	76	193	123	77	14	2	30	T	0.2	23	11.6	SE	25+	3	4	23	8.4	31
MONTANA																																
BILLINGS	1087	890.6	1016.6	8.3	-1.1	3.5	1.8	17.2	21	-8.9	17	0	21	-5.6	56	43	27	30	7	0	117	25	3.4	26	21.5	NW	22	6	6	18	7.0	35
GLASGOW	696	932.3	1016.2	6.1	-5.0	0.5	2.6	17.8	20	-12.8	17	0	29	-5.6	69	2	-10	1	5	0	18	T	0.1	1	14.3	30	20	3	7	20	7.9	
GREAT FALLS	1116	886.9	1016.8	7.2	-2.8	2.1	0.8	16.1	20	-15.0	17	0	22	-5.6	58	17	-2	16	4	0	66	25	4.3	23	18.3	SW	23+	7	6	17	7.0	43
HAVRE	788	921.8	1015.9	6.7	-6.7	0.1	1.5	18.3	20	-21.1	18	0	28	-6.7	62	2	-11	1	2	0	28	25	2.9	25	21.9	NW	20	2	8	20	8.0	45
HELENA	1167	880.8	1019.1	6.7	-5.0	0.8	1.1	14.4	20	-16.1	16	0	26	-4.4	70	23	9	17	7	0	188	127	2.1	26	20.1	SW	22	3	12	15	7.0	36
KALISPELL	904	912.3	1019.2	3.9	-5.0	-0.3	0.2	9.4	22+	-11.7	17	0	28	-3.9	78	39	3	14	10	0	282	127	0.7	19	8.9	19	29+	4	4	22	8.0	
MILES CITY	801	921.4	1016.5	6.1	-3.3	1.4	1.1	17.2	20	-15.0	18	0	25	-3.9	71	18	7		8	0	56		1.5	28								
MISSOULA	972	905.9	1020.4	5.6	-3.3	0.9	1.8	11.7	20	-10.6	17	0	25	-2.8	79	14	-9	8	8	0	38	25	0.5	30	10.3	SW	12	0	8	22	8.4	30
NEBRASKA																																
GRAND ISLAND	561	950.6	1018.1	8.3	-2.8	2.7	-0.2	20.0	22	-9.4	19	0	25	-2.2	74	15	-4	8	7	0	43	25	1.2	29	13.0	36	10	6	8	16	6.9	
LINCOLN U	351			7.8	-1.1	3.4	-1.5	19.4	22+	-7.2	11	0	19			33	1	14	8		43	25			17.0	S	25	7	7	16	6.7	40
NORFOLK	471			7.2	-3.3	1.8	-0.3	17.8	1	-12.2	11	0	26			10	-13	4	4		33	25						8	3	19	7.1	
NORTH PLATTE	846	917.7	1018.0	8.3	-5.6	1.3	-0.6	20.6	22	-12.2	11	0	28	-4.4	70	12	-1	10	5	0	8	T	1.2	31	15.2	NW	17	6	12	12	6.2	48
OMAHA	298	981.7	1018.0	8.3	-2.2	3.0	-0.8	20.6	1	-12.2	12+	0	22	-1.1	78	38	6	15	7	0	119	127	0.9	34	13.9	SE	25	7	3	20	7.1	46
SCOTTSBLUFF	1206	879.1	1017.8	9.4	-5.6	1.9	-0.2	21.7	12	-14.4	18	0	27	-5.6	63	5	-7	3	4	0	28	T	2.0	32	13.4	33	17	8	7	15	6.2	
VALENTINE	789			7.2	-3.9	1.6	0.7	17.8	3	-12.8	18	0	25			10	-2	6	7		43	25			14.8	NW	17	6	10	14	6.5	49
NEVADA																																
ELKO	1539	846.9	1020.4	8.9	-2.2	3.4	2.2	20.6	11	-12.2	26	0	19	-2.2	70	40	17	9	13	0	84	76	0.8	24	13.4	29	24	3	5	22	7.9	
ELY	1906	810.0	1020.1	9.4	-6.1	1.6	0.6	17.8	21	-13.9	29+	0	29	-6.1	63	6	-9	2	8	1	48	25	0.9	23	14.3	W	24	5	15	10	6.2	51
LAS VEGAS	659	940.7	1017.9	19.4	5.6	12.5	1.1	25.0	9+	-2.2	29	0	2	-5.0	32	1	-7	1	1	0	0	0	0.9	30	16.5	N	26	18	6	6	3.5	83
RENO	1342	868.6	1020.2	12.2	-2.2	4.9	1.4	23.3	11	-9.4	28	0	22	-1.7	65	19	4	14	6	0	33	25	0.4	31	17.4	S	29	3	10	17	7.4	50
WINNEMUCCA	1311	870.6	1020.4	10.0	-1.1	4.6	2.4	20.0	9	-7.8	28+	0	19	-1.7	65	65	44	25	15	0	155	76	0.4	19	13.4	S	24	2	6	22	8.2	20
NEW HAMPSHIRE																																
CONCORD	104	1000.0	1013.0	6.1	-2.8	1.6	-1.6	15.0	24	-13.3	28	0	23	-2.2	78	133	39	31	18	2	295	178	1.7	32	15.2	NW	13	2	7	21	8.2	32
MT WASHINGTON OBS	1909			-4.4	-12.2	-8.3	-1.8	3.3	2	-18.9	14	0	30			408	240	154	27	1	[illegible]	203			54.5Y	E	12	3	4	23	8.4	22
NEW JERSEY																																
ATLANTIC CITY	20	1011.2	1013.7	11.7	1.7	6.6	-1.6	23.9	2	-7.8	21	0	13	1.7	73	79	-14	21	11		T	T	1.9	28	17.4	6	12	2	11	17	7.5	29
ATLANTIC CITY U	3			12.2	6.1	9.1	0.1	23.9	2	-1.7	21	0	3			78	-18	31	11						27.7	E	12					
NEWARK	2	1012.5	1013.4	11.7	3.9	7.6	0.2	24.4	2	-2.2	21	0	2	2.8	73	111	26	29	15	0	10	T	2.4	29	17.4	4	12	1	9	20	8.3	
TRENTON U	17			11.1	4.4	8.0	0.3	22.8	2	-1.1	21	0	1			113	33	33	15		13	T			17.9	NE	12	1	11	18	8.1	31
NEW MEXICO																																
ALBUQUERQUE	1619	838.5	1017.3	12.2	-0.6	6.0	-0.4	21.1	1	-10.6	30	0	18	-4.4	51	15	5	8	4	1	T	T	0.4	1	18.8	L	29+	12	5	13	5.1	65
CLAYTON	1515			11.1	-2.2	4.6	-0.8	24.4	4	-8.3	30+	0	22			8	-1	3	5		58	51						9	7	14	6.1	
RATON	1944			9.4	-5.0	2.1	-1.0	20.0	22	-15.6	30	0	29			46	36	17	8		351	178						8	7	15	6.3	
ROSWELL	1102	891.6		16.7	-2.8	7.1	-0.7	26.1	4	-11.1	28	0	22	-2.2	59	28	20	21	7	0	216	76	0.2	33	11.2	NW	9	10	8	12	5.6	58
NEW YORK																																
ALBANY	84	1003.1	1013.9	8.3	-1.1	3.6	-0.3	21.7	2	-8.3	30+	0	20	-1.7	68	139	71	35	21	2	343	178	1.6	30	14.3	W	29	2	3	25	8.7	20
BINGHAMTON	485	953.9	1013.7	5.6	-0.6	2.6	-0.7	16.7	2	-4.4	30+	0	19	-0.6	81	143	79	52	18	0	386	254	1.3	26	15.6	W	13	1	1	28	9.2	17
BUFFALO	215	987.1	1013.2	8.3	1.1	4.8	0.9	18.9	1	-2.2	20	0	13	1.7	83	114	22	25	17	0	295	102	1.9	28	15.2	W	28+	1	2	27	9.2	21
J.F. KENNEDY	4	1012.9	1013.5	11.1	5.0	8.1	0.2	22.8	2	0.0	30	0	1	2.8	70	174	85	49	17	1	T	0	2.3	31	19.7	5	12	2	8	20	8.2	
NEW YORK U	40	1009.5	1012.8	11.7	5.0	8.3	-0.1	25.0	2	0.0	21	0	1	1.1	64	146	60	37	15	0	T	0	1.4	31	22.8	NE	12					33
NEW YORK LA GUARDIA	3	1011.5	1013.5	11.1	5.0	8.0	-0.6	23.3	2	0.0	21	0	1	1.7	66	130	39	33	14	0	T	T	2.1	33	30.0	NE	12	1	8	21	8.3	
ROCHESTER	167	992.6	1013.2	8.9	1.1	5.1	0.6	19.4	2	-2.8	21+	0	12	1.1	77	109	45	22	17	0	218	102	1.3	26	15.6	SW	28	1	0	29	9.4	17
SYRACUSE	125	998.3	1013.3	7.8	1.1	4.4	-0.1	17.2	2	-3.3	30+	0	13	1.1	79	103	30	20	19	1	419	229	0.9	28	16.1	W	29	1	3	26	9.3	9
NORTH CAROLINA																																
ASHEVILLE	652	939.7	1016.7	13.9	1.7	7.8	0.8	25.0	2+	-5.6	26	0	13	3.9	81	76	5	28	11	0	244	127	1.6	34	13.0	19	28	7	6	17	7.0	43
CAPE HATTERAS R	2	1015.6	1015.9	18.3	10.0	14.1	0.7	23.9	3+	2.2	14	0	0	8.9	73	107	3	39	9	0	0	0	2.9	27	24.1	SW	12	9	7	14	5.8	61

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure: Station O	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	No. of days: Max 32.2 °C or above	No. of days: Min 0 C or lower	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	No. of days: 25 mm or more	No. of days: With thunderstorms	Snow, Sleet: Total	Snow, Sleet: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Fastest mile (1.6 kilometers): Speed	Fastest mile: Direction	Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	M.	Mb.	Mb	C	C	C	C	C		C				C	%	Mm	Mm	Mm			Mm	Mm	M p s		M p s							%
NORTH CAROLINA																																
CHARLOTTE	224	988.8	1016.8	15.0	4.4	9.7	-0.6	25.6	2	- 6.1	21	0	9	4.4	73	119	55	39	10	0	64	51	1.1	25	11.6	S	28	8	5	17	6.5	60
GREENSBORO	273	984.4	1016.5	15.0	3.9	9.4	0.6	26.1	2+	- 6.7	21	0	10	3.3	67	90	22	37	12	2	150	102	1.5	25	12.1	SW	28	7	6	17	6.9	50
RALEIGH	132	1000.0	1015.9	17.2	4.4	10.9	0.9	27.2	2	- 7.8	21	0	8	5.0	71	91	21	35	9	0	30	25	1.9	26	13.0	S	11	10	5	15	6.1	57
WILMINGTON	9	1015.6	1017.0	18.3	6.7	12.6	-0.4	26.7	2	- 2.8	21	0	4	6.7	70	112	33	39	9	1	0	0	1.6	27	13.4	SW	11	12	6	12	5.2	58
NORTH DAKOTA																																
BISMARCK	502	956.0	1017.5	5.6	- 5.6	0.0	1.7	16.1	3	-12.2	15	0	29	- 5.0	70	14	- 1	6	6	0	61	25	0.6	30	12.5	W	21	8	2	20	7.1	46
FARGO	273	983.7	1017.6	3.9	- 5.0	- 0.6	1.6	12.2	2	-12.8	19	0	29	- 3.3	83	9	- 12	5	6	0	99	25	0.7	34	12.5	SE	13+	4	5	21	8.0	29
WILLISTON	579	946.2	1016.5	4.4	- 6.1	- 0.8	1.7	16.1	3	-15.6	11	0	29	- 4.4	77	9	- 5	6	9	0	66	25	0.8	28	12.5	NW	21	5	8	17	7.3	39
OHIO																																
AKRON	368	969.5	1014.6	10.0	2.2	6.1	1.2	25.0	1	- 5.0	10	0	11	1.7	76	98	41	26	15	1	61	25	1.9	25	13.0	20	28	0	7	23	8.7	
CINCINNATI OBS	232			11.1	3.9	7.6	0.6	26.1	1	- 3.9	21	0	8			94	19	29	15		T	T			12.5	SW	28					[illegible]
CLEVELAND	237	985.1	1014.8	9.4	2.2	5.8	0.6	24.4	1	- 2.8	21+	0	10	1.1	73	110	44	24	16	0	173	102	2.1	24	14.8	SW	21	0	5	25	8.9	21
COLUMBUS	247	985.1	1015.7	10.6	2.8	6.7	1.6	25.0	1	- 5.6	10	0	12	2.2	74	108	45	31	16	2	25	T	1.7	25	15.2	SW	29+	4	3	23	8.3	28
DAYTON	305	979.0	1015.5	10.6	2.8	6.6	1.1	25.0	1	- 5.0	21	0	10	1.7	73	93	25	27	13	0	36	T	2.1	26	17.0	S	28	2	7	21	8.1	28
MANSFIELD	395			10.0	2.2	6.1	1.9	25.6	1	- 3.9	13+	0	11	1.7	77	102	34	28	16	1	48	25	2.3	26	14.3	23	28	1	7	22	8.4	
TOLEDO	204	989.5	1015.3	9.4	0.6	4.8	1.1	25.6	1	- 5.0	13+	0	18	1.1	79	89	38	32	14	0	46	25	1.8	28	13.9	SW	28	2	7	21	8.4	38
YOUNGSTOWN	359	971.2	1014.6	8.9	1.7	5.1	1.0	22.8	1	- 3.9	21	0	11	1.7	81	105	34	26	17	1	147	102	1.3	26	11.2	26	19+	0	7	23	9.0	
OKLAHOMA																																
OKLAHOMA CITY	392	970.5	1017.5	13.3	2.2	7.9	-1.2	25.6	1	- 3.9	12	0	10	2.2	72	104	65	41	8	3	36	25	0.9	35	14.8	NW	10	6	10	14	6.5	49
TULSA	198	992.9	1017.7	13.9	2.8	8.2	-0.5	24.4	1	- 5.0	12	0	10	2.8	72	132	74	44	10	1	T	0	0.6	30	16.1	SW	13	4	7	19	7.4	41
OREGON																																
ASTORIA	2	1016.3	1016.8	11.7	5.0	8.4	0.4	15.0	11+	- 1.1	15	0	2	6.1	86	304	19	67	25	1	0	0	1.3	14	11.2	18	22+	1	2	27	9.1	
BURNS U	1265	875.0	1020.6	6.7	- 2.8	2.2	-0.1	12.2	9+	- 8.9	14	0	24	- 0.6	82	56	27	14	15		122	51	0.8	29				2	5	23	8.3	
EUGENE	109	1005.1	1018.8	12.8	5.0	9.0	1.5	17.8	9	0.6	28	0	0	6.7	88	178	36	44	19	0	T	0	2.0	17	12.1	16	24	0	4	26	9.1	
MEACHAM	1234	877.4	1019.8	3.3	- 1.7	0.9	-0.4	10.0	1	- 6.7	30	0	22			147	41	51	19		465	152			9.8	30	22+	1	6	23	8.7	
MEDFORD	396	972.6	1021.0	10.6	3.9	7.1	1.3	16.7	9	- 2.8	30	0	4	5.0	88	77	11	14	20	0	T	T	0.1	31	10.7	23	29	0	4	26	9.4	
PENDLETON	452	965.1	1019.6	9.4	2.2	5.9	0.7	16.1	11	- 1.1	1	0	3	1.7	77	52	17	16	10	0	T	0	1.3	25	13.0	26	29+	2	6	22	8.2	
PORTLAND	6	1016.9	1018.2	12.2	4.4	8.1	0.8	16.7	9+	- 0.6	15+	0	3	5.6	83	158	23	42	22	0	0	0	2.2	14	16.5	SW	29	1	3	26	9.1	24
SALEM	60	1010.8	1018.4	11.7	3.3	7.4	0.1	16.1	20+	- 2.2	15+	0	6	6.1	90	165	20	33	21	0	T	T	2.3	19	11.2	15	21	0	5	25	9.1	
SEXTON SUMMIT R	1169	884.9	1019.2	6.7	1.7	4.1	-1.9	11.7	8	- 4.4	30	0	11			131	20	33	22		447	178			26.4	19	29	1	4	25	9.0	
PACIFIC AREA																																
JOHNSTON	2	1012.9	1013.5	29.4	25.0	27.3	0.9	30.6	12	22.8	28	0	0	22.2	74	33	- 20	15	16	1	0	0	6.2	8	14.8	SE	21	7	16	7	5.2	63
KOROR R	29	1006.1	1009.8	31.1	25.0	28.1	0.7	32.2	28+	22.2	9	11	0	23.9	81	207	-121	78	15	1	0	0	1.6	32	13.9	NW	10	0	4	26	9.1	69
KWAJALEIN	2	1008.8	1009.6	30.6	25.0	28.0	0.6	32.2	13	23.9	23+	1	0	24.4	81	263	- 45	66	27	0	0	0	4.0	8	12.5	4	5	1	5	24	8.9	
MAJURO	3	1009.8	1010.1	30.0	24.4	27.3	0.3	31.1	3+	22.8	17	0	0	23.9	81	304	-100	63	25	3	0	0	2.3	7	11.6	E	18	1	5	24	8.9	51
PAGO PAGO	4	1011.5	1011.7	30.0	23.9	27.1		31.1	30+	22.2	18+	0	0	23.3	81	108		43	16	1	0	0	3.4	12	9.4	SE	24	5	17	8	6.0	63
PONAPE R	37	1004.1	1009.3	31.1	22.2	26.7	0.1	32.8	12	20.6	29+	8	0	23.9	87	237	-191	58	21	2	0	0	0.8	14	7.6	NW	20	0	8	22	8.4	52
TAGUAC GUAM R	110			29.4	21.7	25.6	-0.7	31.1	15	18.3	5	0	0			303	41	81	21		0	0			17.0	NE	23	0	9	21	8.3	36
TRUK MOEN ISLAND	2	1008.8	1009.1	30.6	23.3	27.1	0.0	32.2	28+	22.2	30	2	0	24.4	85	176	-138	45	24	4	0	0	0.5	10	11.6	SW	8	0	7	23	8.7	66
WAKE	3	1012.9	1013.0	30.6	25.0	27.7	0.8	31.7	23+	22.8	14+	0	0	22.2	75	109	31	51	14	1	0	0	5.6	9	11.6	NE	15+	4	12	14	6.6	72
YAP R	13	1006.8	1008.7	30.6	23.9	27.3	-0.2	31.7	27+	21.1	5	0	0	23.9	82	91	-192	42	16	3	0	0	0.8	31	8.5	N	18	0	5	25	8.9	54
PENNSYLVANIA																																
ALLENTOWN	118	999.7	1014.0	10.0	1.7	5.7	0.2	22.2	2	- 3.3	21+	0	10	0.6	72	110	25	29	12	0	183	127	1.7	30	13.4	27	29	1	9	20	8.5	
ERIE	223	986.8	1013.9	9.4	2.2	5.8	0.7	22.8	1	- 2.8	21	0	7	1.1	74	120	34	28	17	0	249	102	2.1	25	17.4	30	19	0	6	24	9.2	
HARRISBURG	103	1001.4	1014.3	11.1	3.3	7.2	0.8	23.3	2	- 2.8	23+	0	4	1.1	69	86	11	26	15	0	76	76	1.3	29	15.2	NW	13	1	5	24	8.6	23
PHILADELPHIA	2	1012.9	1013.7	11.7	3.9	7.6	0.7	23.9	2	- 3.3	21	0	6	1.7	68	106	20	33	12	0	10	T	1.7	32	20.1	NE	12	1	10	19	8.3	32
PITTSBURGH	347	969.9	1014.6	9.4	1.1	5.2	0.3	22.2	1	- 6.1	14	0	13	0.6	75	53	- 4	10	17	2	69	51	2.3	26	13.4	26	29	0	5	25	9.1	23
READING U	81			11.1	4.4	7.8	0.6	23.3	2	- 1.1	21	0	1			103	17	28	12		84	51			21.9	S	28	0	10	20	8.2	23
SCRANTON	283	979.3	1014.2	7.8	1.7	4.8	0.6	20.6	2	- 3.3	30	0	11	1.1	78	86	12	14	16	0	277	178	1.1	27	13.0	S	29	0	3	27	9.1	19
WILLIAMSPORT	160	994.9	1014.3	10.0	1.7	6.1	1.0	22.2	2	- 3.3	23	0	10	2.8	81	114	27	39	14	1	191	178	1.3	29	11.6	28	20+	1	1	28	9.2	
RHODE ISLAND																																
BLOCK ISLAND	34			10.6	4.4	7.4	0.1	17.2	2	- 2.8	30	0	2			137	43	46	13		0	0						2	10	18	7.9	
PROVIDENCE	16	1010.5	1012.7	10.6	1.1	5.8	-0.3	18.9	2	- 4.4	21	0	11	0.6	72	158	54	40	15	1	T	T	2.2	33	16.1	36	10	3	4	23	8.2	29

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure: Station	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	No. of days: Max 32.2 °C or above	No. of days: Min. 0 C or lower	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	No. of days: 25 mm. or more	No. of days: With thunderstorms	Snow, Sleet: Total	Snow, Sleet: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Fastest mile (1.6 kilometers): Speed	Fastest mile: Direction	Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	Partly cloudy 4-7	Cloudy 8-10	Sky cover tenths (sunrise to sunset)	Possible sunshine
	M.	Mb	Mb.	C	C.	C	C	C.		C.				C.	%	Mm.	Mm	Mm			Mm	Mm	M p s		M p s							%
SOUTH CAROLINA																																
CHARLESTON	12	1015.9	1017.5	18.9	5.6	12.1	-1.2	26.1	3+	- 3.3	21	0	6	6.1	70	68	15	38	5	1	0	0	1.5	25	16.1Y	NE	11	11	5	14	5.7	66
CHARLESTON U	3			18.3	10.0	14.1	-0.7	25.6	3	1.1	13	0	0			64	15	41	7		0	0			18.8	E	11					
COLUMBIA	65	1009.1	1017.4	18.9	5.6	12.0	-0.1	27.8	2	- 5.0	21	0	7	6.1	73	132	72	51	7	1	T	0	1.3	28	10.3	29	12+	11	5	14	5.9	52
GNVLE-SPARTANBURG	292	982.4	1017.5	15.6	3.9	9.7	-1.0	26.7	2	- 6.1	21	0	8	3.9	73	129	57	67	10	0	48	25	1.1	27	14.3	S	28	8	6	16	6.4	44
SOUTH DAKOTA																																
ABERDEEN	395	969.5	1017.6	5.0	- 4.4	0.2	1.2	15.6	3	-14.4	11	0	28	- 3.3	78	21	2	11	7	0	94	51	0.6	31	11.6	14	13	4	8	18	7.4	
HURON	391	969.9	1017.6	6.1	- 3.9	1.1	1.5	15.6	3	-13.9	11	0	24	- 2.8	76	11	- 6	4	6	0	86	25	0.7	28	15.2	SE	13	9	3	18	6.9	53
RAPID CITY	964	903.8	1017.2	8.3	- 4.4	1.9	0.2	19.4	20	-12.8	18	0	27	- 5.6	62	12	1	4	8	0	69	25	2.1	33	18.8	NW	17	5	12	13	6.8	43
SIOUX FALLS	432	964.8	1017.5	6.1	- 4.4	0.8	0.5	15.6	4+	-11.7	19	0	27	- 3.9	74	10	- 15	4	5	0	48	25	1.3	30	12.5	21	30	7	5	18	7.1	
TENNESSEE																																
BRISTOL	459	962.8	1017.7	13.3	1.7	7.3	-0.4	23.9	2+	- 8.3	21	0	14	1.7	71	48	- 16	20	12	0	74	T	1.0	28	13.0	30	19	2	8	20	8.1	
CHATTANOOGA	203	992.9	1017.8	15.6	3.9	9.8	0.2	26.7	1	- 5.0	21+	0	9	5.0	76	71	- 21	27	10	0	T	0	0.7	27	12.5	NW	[illegible]	6	8	16	6.6	45
KNOXVILLE	299	981.4	1016.9	14.4	3.9	8.9	-0.3	25.0	1	- 5.6	21	0	9	3.3	71	51	- 31	15	12	0	8	T	1.0	26	13.0	S	28	4	6	20	7.7	42
MEMPHIS	79	1007.5	1017.7	15.6	5.6	10.5	0.4	26.7	1	- 3.9	13	0	6	5.0	70	124	13	72	10	2	[illegible]	0	1.2	24	15.2	SW	28	5	5	20	7.3	54
NASHVILLE	180	995.3	1017.4	15.0	3.9	9.3	0.1	26.7	1	- 7.2	13	0	9	3.3	70	137	54	85	10	0	T	0	1.3	24	18.8	SW	28	2	9	19	7.6	[illegible]
OAK RIDGE R	276			13.9	3.3	8.5	0.0	26.1	1	- 6.1	21	0	9			57	- 39	29	12		10	T			20.1Y		28	6	4	20	7.6	
TEXAS																																
ABILENE	537	955.3	1017.2	17.8	5.0	11.4	-0.2	29.4	1	- 2.2	28	0	6	2.8	60	117	89	51	6	1	206	51	1.0	24	17.9	S	2	8	9	13	6.1	55
AMARILLO	1098	891.0	1015.7	13.9	1.1	7.4	-0.3	25.0	4	- 5.6	30+	0	13	- 1.1	61	23	7	13	5	2	8	T	1.2	31	15.6	N	23+	8	7	15	6.4	48
AUSTIN	182	995.9	1018.1	20.0	6.7	13.2	-1.7	28.9	2+	0.0	12	0	1	6.7	68	125	71	56	6	4	0	0	0.6	35	15.2	NW	26	11	10	9	5.0	57
BROWNSVILLE	6	1015.9	1016.4	25.6	14.4	20.0	0.2	31.1	6+	5.0	12	0	0	14.4	72	22	- 12	18	4	1	0	0	1.0	13	15.6	SE	26	9	11	10	5.5	47
CORPUS CHRISTI	12	1015.6	1017.3	22.8	11.1	17.0	-0.8	28.9	15+	2.8	19	0	0	11.7	73	34	- 10	21	6	0	0	0	1.6	8	17.9	SE	26	9	11	10	5.2	61
DALLAS	147	1000.0	1017.7	17.8	6.7	12.2	-0.5	28.9	1	0.0	19	0	1	5.0	63	108	40	32	9	2	T	T	0.6	24	14.8	NW	2	9	8	13	5.6	59
DEL RIO	313	980.7	1017.2	21.1	8.3	14.7	-0.2	30.6	5	- 0.6	28	0	1	6.1	62	56	40	23	5	1	0		1.3	9	10.7	32	27	14	8	8	4.7	
EL PASO	1194	882.2	1015.1	17.8	3.3	10.6	-0.1	26.1	1	- 0.6	27+	0	6	- 0.6	52	34	26	19	7	0	178	178	0.6	29	16.1	N	2	15	3	12	4.6	73
FORT WORTH	164	997.3	1017.9	18.3	6.1	12.2	-0.5	28.3	1	- 2.2	12	0	5	6.1	70	116	54	43	10	1	T	T	0.8	27	13.4	36	25	9	7	14	5.9	
GALVESTON U	2			19.4	13.9	16.7	-0.6	26.7	17	6.7	9	0	0			120	30	64	10		0	0			16.5	NE	8					60
HOUSTON	15	1015.9	1018.0	21.7	8.9	15.4	-0.6	29.4	15+	0.0	12	0	1	8.9	69	69	- 29	23	10	3	0	0	0.5	36	13.0	16	26+	13	3	14	5.4	55
LUBBOCK	992	903.8	1016.5	14.4	1.7	8.1	-0.7	24.4	1	- 4.4	28	0	11	0.6	64	68	54	40	4	2	30	T	0.7	27	14.3	36	10	8	9	13	6.2	
MIDLAND	869	917.4	1016.5	16.7	2.8	9.8	-1.6	26.7	1	- 4.4	28	0	10	0.6	58	59	47	31	6	1	114	T	0.5	20	14.3	3	26	12	5	13	5.4	
PORT ARTHUR	5	1017.6	1018.3	21.1	8.9	14.9	-0.4	28.3	17+	- 1.7	12	0	1	8.9	68	145	57	47	11	5	0	0	0.5	5	21.0	S	6	10	12	8	4.9	58
SAN ANGELO	580	949.9	1017.0	18.9	4.4	11.8	-0.8	29.4	1	- 2.2	19	0	5	3.9	64	90	70	39	5	1	224	76	1.4	22	15.6	19	25	10	9	11	5.5	
SAN ANTONIO	240	989.5	1017.9	20.6	6.7	13.6	-1.7	28.9	2	- 1.1	19	0	2	6.7	67	116	82	49	9	4	0	0	0.7	36	15.2	NW	10	11	10	9	4.9	65
VICTORIA	32	1013.5	1017.7	22.2	8.9	15.7	-1.2	30.6	1	0.6	12	0	0	10.0	72	108	48	33	7	4	0	0	1.0	6	21.0Y	S	26	15	4	11	4.8	
WACO	153	999.7	1018.0	18.9	7.8	13.3	-0.5	28.9	2+	0.6	12	0	0	5.6	64	121	66	33	7	1	T	0	1.1	23	13.0	32	10	10	10	10	5.5	
WICHITA FALLS	303	980.0	1017.2	17.8	3.3	10.4	-1.0	28.9	1	- 3.9	12	0	9	3.9	70	103	67	66	9	4	T	0	0.6	30	17.9	36	26	7	9	14	6.4	
UTAH																																
MILFORD	1533	848.3		10.6	- 3.9	3.3	1.0	18.9	3	-12.8	29	0	27			7	- 6	3	7		79	51						7	12	11	5.6	
SALT LAKE CITY	1286	874.4	1020.9	8.9	- 1.7	3.6	1.0	18.9	3	- 6.7	26+	0	22	- 2.8	67	34	1	13	10	1	221	51	1.3	17	17.0	NW	24	7	7	16	7.0	49
WENDOVER	1291	873.7	1021.3	8.3	- 0.6	3.9	0.8	16.7	9	- 9.4	29	0	18			4	- 3	1	6		T	T										
VERMONT																																
BURLINGTON	101	1000.7	1013.4	3.3	- 2.8	0.1	-1.7	15.6	2	-12.2	28	0	26	- 3.3	78	111	44	23	20	2	478	178	0.7	32	13.4	S	24	2	1	27	9.0	27
VIRGINIA																																
LYNCHBURG	279			14.4	2.8	8.6	0.2	27.2	1	- 9.4	21	0	12			84	19	31	13		295	102			13.0	SW	29+	7	8	15	6.5	46
NORFOLK	7	1013.9	1015.1	16.7	6.7	11.6	0.8	27.2	2	- 1.1	21	0	3	5.0	66	90	13	28	11	1	T	0	1.5	26	21.0	NE	12	7	9	14	6.5	49
RICHMOND	50	1009.1	1015.2	17.2	4.4	10.7	1.6	28.9	2	- 6.7	21	0	8	3.9	65	98	21	47	12	0	30	25	1.0	27	11.2	N	12	8	8	14	6.5	46
ROANOKE	350	973.2	1015.6	13.9	3.9	8.9	0.8	26.1	1	- 3.9	21	0	7	1.7	65	72	3	26	14	0	351	76	2.5	29	15.6	31	12	5	8	17	7.2	
WALLOPS ISLAND	3			13.9	6.1	9.9		26.7	2	- 3.3	21	0	4			72		24	8		0	0			34.0Y	ENE	12					
WASHINGTON																																
OLYMPIA	59	1009.5	1016.9	11.1	2.8	6.9	0.4	16.1	18	- 2.8	14	0	6	5.0	86	202	7	46	22	0	0	0	2.0	21	10.7	20	26+	0	3	27	9.1	
QUILLAYUTE	55	1007.8	1015.1	10.6	4.4	7.6	0.6	13.9	19+	- 1.7	4	0	1	6.1	92	344	6	55	28	3	T	0	1.3	15	14.3	SW	11	0	4	26	9.3	23
SEATTLE TACOMA	122	1000.0	1016.7	11.1	5.6	8.2	1.6	15.0	19+	1.7	4	0	0	5.0	82	149	13	41	17	1	0	0	2.4	16	13.9	S	22	1	1	28	9.3	29
SPOKANE	718	933.0	1018.5	4.4	- 1.7	1.6	-0.4	8.9	22	- 8.9	16	0	22	- 1.1	83	60	3	26	12	0	30	25	1.7	18	12.5	SW	22	2	3	25	8.6	18

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	No. of days: Max 32.2 °C or above	No. of days: Min 0 C or lower	Average dew point	Average relative humidity	Precipitation: Total	Departure from normal	Greatest in 24 hours	No of days: 25 mm or more	No of days: With thunderstorms	Snow, Sleet: Total	Snow, Sleet: Maximum depth on ground	Wind: Resultant speed	Resultant direction	Fastest mile (1.6 kilometers): Speed	Direction	Date	No of days (sunrise to sunset): Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	M	Mb	Mb	C.	C.	C	C	C		C.				C	%	Mm	Mm	Mm			Mm	Mm	M.p.s		M.p.s.							%
WASHINGTON																																
STAMPEDE PASS R	1206	878.1		1.1	- 2.2	- 0.7	-0.4	6.7	20	- 5.6	30+	0	29			333	14	55	24		2098	1143						0	3	27	9.4	
WALLA WALLA U	289			10.0	2.8	6.5	0.8	18.3	11	0.0	29+	0	2			67	23	21	12		20	25			12.5	5	29	1	5	24	8.7	17
YAKIMA	321	980.0	1019.4	8.9	- 0.6	4.3	1.3	14.4	22+	- 5.6	30	0	17	0.6	80	34	9	15	9	0	T	T	1.0	27	13.0	22	22	3	6	21	8.1	
WEST INDIES																																
SAN JUAN P.R.	4	1011.9	1014.4	30.0	22.8	26.4	0.7	32.2	3	20.6	22	1	0	22.8	82	282	117	94	20	5	0	0	2.0	9	14.3	NE	27	5	19	6	5.3	68
SWAN ISLAND	9			28.9	24.4	26.8	0.1	30.6	11+	21.7	19	0	0			267	80	171	16		0	0						3	12	15	7.4	
WEST VIRGINIA																																
BECKLEY	763	926.5	1016.4	10.0	2.2	6.0	0.3	21.7	1	- 7.8	21	0	14	1.7	76	81	4	26	15	2	279	152	2.2	25	13.9	18	28	3	5	22	8.4	
CHARLESTON	286	981.4	1015.7	13.3	3.3	8.2	0.8	25.0	1	- 5.0	21	0	10	3.3	73	63	- 8	18	13	1	109	51	1.9	23	9.8	17	28	3	5	22	8.4	
ELKINS	600	943.8		11.1	0.6	5.7	0.8	22.8	1	- 9.4	14	0	15			81	11	25	17		302	203			13.4	30	19	1	4	25	9.1	
HUNTINGTON	252	985.8	1016.4	13.3	3.9	8.4	0.9	26.1	1	- 4.4	21	0	11	3.3	74	61	- 1	15	14	1	38	T	1.7	23	11.2	27	19	3	3	24	8.4	
PARKERSBURG U	187			12.2	3.9	8.2	1.1	25.6	1	- 3.3	14	0	12			62	3	13	13		T	T			13.9	W	28+					26
WISCONSIN																																
GREEN BAY	208	989.2	1015.4	5.6	- 2.2	1.6	0.3	18.3	1	- 7.8	27	0	25	- 2.8	74	26	- 23	12	8	0	61	25	2.2	32	14.3	NW	19	6	5	19	7.4	42
LA CROSSE	198	991.9	1017.1	6.1	- 1.7	2.1	0.8	18.3	1	- 6.7	12	0	23	- 1.7	77	15	- 34	5	8	0	25		1.1	30								
MADISON	262	983.7	1016.0	6.1	- 2.2	2.0	0.9	18.3	1	- 7.8	27	0	22	- 1.7	76	44	- 10	17	9	0	13	T	1.8	31	12.1	NW	19	5	3	22	7.6	35
MILWAUKEE	205	989.6	1015.4	7.2	- 0.6	3.4	1.3	20.0	1	- 6.7	20	0	19	- 0.6	74	65	10	25	9	0	8	T	2.1	30	17.9	N	28	5	6	19	7.4	38
WYOMING																																
CASPER	1627	836.4	1017.7	6.7	- 6.7	0.0	-0.9	16.1	3	-14.4	29+	0	26	- 7.8	60	14	- 4	7	4	0	124	51	4.6	23	17.4	21	12	6	10	14	6.6	
CHEYENNE	1867	810.4	1017.5	7.2	- 5.0	1.1	-0.1	17.2	12	-13.9	29+	0	27	- 9.4	49	18	2	10	4	0	152	127	3.9	30	18.8	W	25	10	11	9	5.0	59
LANDER	1696	828.0	1018.7	5.0	- 6.7	- 0.9	-0.3	15.0	12	-16.7	29	0	29	- 8.9	60	12	- 12	7	4	0	208	102	0.8	26	17.9	NW	9	5	8	17	6.6	56
SHERIDAN	1208	878.1	1018.1	7.2	- 6.1	0.6	-0.2	20.0	20	-15.0	26	0	29	- 6.1	64	23	3	10	11	0	175	25	1.9	30	17.0	NW	22	6	8	16	6.9	47

Data from airport unless otherwise specified. U indicates Urban, R indicates Rural, sites.

Precipitation data in column headed "Greatest in 24 hours" are computed on a 24-hour basis without regard to calendar day - data may include precipitation with a measurable amount from the last day of the previous month or the first day of the following month.

Wind directions under resultant direction are in tens of degrees.

Value entered in column "Fastest Mile" is the highest observed 1-minute wind speed when the direction is in tens of degrees. These stations are not equipped with a recording anemometer from which "Fastest Mile" data can be evaluated.

B Number of days maximum 21.1°C. or above for Alaskan Stations.
Y Peak Gust.
\+ And also on an earlier date or dates.
Ø Station pressures apply to elevations shown in the "Elevations - Station Pressure" table of the annual issue of this publication.

Data in this table are obtained by conversion from data in the English Units table.

V Sun below horizon November 19 - 30, inclusive.
X Sun below horizon November 24 - 30, inclusive.

See footnotes at end of table

HEATING DEGREE DAYS

(Base 65°F.)

State and station	Current season: This month	Current season: Period July through this month	Normals: July through this month
ALABAMA			
BIRMINGHAM	[illegible]	[illegible]	[illegible]
HUNTSVILLE	[illegible]	537	565
MOBILE	284	334	255
MONTGOMERY	349	451	398
ALASKA			
ANCHORAGE	[illegible]	[illegible]	[illegible]
ANNETTE	664	1868	[illegible]
BARROW	2061	5912	6149
BARTER ISLAND	[illegible]	5901	5923
BETHEL	1365	3732	[illegible]
COLD BAY	865	2969	[illegible]
FAIRBANKS	1661	4116	4181
JUNEAU	[illegible]	2767	[illegible]
KING SALMON	1155	[illegible]	[illegible]
KOTZEBUE	1774	4355	[illegible]
MC GRATH	1863	4346	4154
NOME	[illegible]	4136	4219
ST. PAUL ISLAND	946	3584	[illegible]
SHEMYA	936	3326	3243
YAKUTAT	[illegible]	[illegible]	[illegible]
ARIZONA			
FLAGSTAFF	872	1895	[illegible]
PHOENIX	173	173	[illegible]
TUCSON	[illegible]	[illegible]	256
WINSLOW	[illegible]	969	962
YUMA	67	[illegible]	[illegible]
ARKANSAS			
FORT SMITH	508	[illegible]	[illegible]
LITTLE ROCK	412	[illegible]	[illegible]
CALIFORNIA			
BAKERSFIELD	277	[illegible]	[illegible]
BISHOP	567	823	[illegible]
BLUE CANYON	656	1244	[illegible]
EUREKA U	386	1401	[illegible]
FRESNO	387	472	[illegible]
LONG BEACH	[illegible]	[illegible]	[illegible]
LOS ANGELES	[illegible]	134	292
LOS ANGELES U	76	[illegible]	[illegible]
MT SHASTA R	737	1481	[illegible]
OAKLAND	290	518	[illegible]
RED BLUFF	364	455	[illegible]
SACRAMENTO	374	476	456
SANDBERG R	558	985	[illegible]
SAN DIEGO	104	113	[illegible]
SAN FRANCISCO	311	684	[illegible]
SAN FRANCISCO U	258	809	[illegible]
SANTA MARIA	225	454	704
STOCKTON	385	466	437
COLORADO			
ALAMOSA	[illegible]	[illegible]	2147
COLORADO SPRINGS	906	1538	1447
DENVER	871	1460	[illegible]
GRAND JUNCTION	804	1248	1129
PUEBLO	731	996	[illegible]
CONNECTICUT			
BRIDGEPORT	579	[illegible]	988
HARTFORD	775	1173	[illegible]
NEW HAVEN	641	934	[illegible]
DELAWARE			
WILMINGTON	532	744	[illegible]
DIST. OF COLUMBIA			
WASH NATL AP	445	[illegible]	[illegible]
FLORIDA			
APALACHICOLA U	217	259	169
DAYTONA BEACH	152	179	75
FORT MYERS	70	75	24
JACKSONVILLE	189	[illegible]	156
KEY WEST	4	4	[illegible]
LAKELAND U	114	132	57
MIAMI	32	32	[illegible]
ORLANDO	120	139	72
PENSACOLA	289	346	214
TALLAHASSEE	306	381	[illegible]
TAMPA	138	165	[illegible]
WEST PALM BEACH	60	66	6
GEORGIA			
ATHENS	424	579	532
ATLANTA	441	600	559
AUGUSTA	339	452	411
COLUMBUS	382	486	420
MACON	379	507	368
ROME	505	701	659
SAVANNAH	309	382	293
IDAHO			
BOISE	684	1244	[illegible]
LEWISTON	690	1279	1282
POCATELLO	942	1935	1565
ILLINOIS			
CAIRO U	[illegible]	694	[illegible]
CHICAGO O HARE	[illegible]	[illegible]	[illegible]
CHICAGO MIDWAY	691	1076	1160
MOLINE	826	1349	1217
PEORIA	732	1189	1178
ROCKFORD	809	1333	1366
SPRINGFIELD	[illegible]	[illegible]	[illegible]
INDIANA			
EVANSVILLE	569	876	892
FORT WAYNE	713	1218	[illegible]
INDIANAPOLIS	656	[illegible]	1129
SOUTH BEND	724	1203	[illegible]
IOWA			
BURLINGTON	797	1233	1163
DES MOINES	898	[illegible]	[illegible]
DUBUQUE	869	1516	[illegible]
SIOUX CITY	868	1365	[illegible]
WATERLOO	935	1611	[illegible]
KANSAS			
CONCORDIA	769	1089	1038
DODGE CITY	718	961	950
GOODLAND	803	1226	1278
TOPEKA	745	[illegible]	999
WICHITA	691	[illegible]	[illegible]
KENTUCKY			
COVINGTON	576	928	1035
LEXINGTON	552	[illegible]	902
LOUISVILLE	511	798	911
LOUISIANA			
ALEXANDRIA	[illegible]	377	[illegible]
BATON ROUGE	[illegible]	374	247
LAKE CHARLES	[illegible]	283	229
NEW ORLEANS	[illegible]	358	[illegible]
SHREVEPORT	346	403	344
MAINE			
CARIBOU	1097	2050	2255
PORTLAND	841	[illegible]	[illegible]
MARYLAND			
BALTIMORE	500	702	897
MASSACHUSETTS			
BLUE HILL OBS R	739	1173	1201
BOSTON	630	933	[illegible]
NANTUCKET	588	961	1032
WORCESTER	830	1323	1411
MICHIGAN			
ALPENA	575	1703	[illegible]
DETROIT	705	[illegible]	1185
DETROIT M WAYNE CO	714	[illegible]	1298
FLINT	804	1457	[illegible]
GRAND RAPIDS	805	1395	1436
HOUGHTON LAKE	[illegible]	1743	1867
LANSING	818	1461	1410
MARQUETTE U	890	1708	1843
MUSKEGON	778	1358	[illegible]
SAULT STE MARIE	996	2009	[illegible]
MINNESOTA			
DULUTH	1073	2133	2273
INTERNATIONAL FALLS	[illegible]	2275	2483
MINNEAPOLIS	[illegible]	1554	[illegible]
ROCHESTER	[illegible]	1739	1724
ST CLOUD	996	[illegible]	[illegible]
MISSISSIPPI			
JACKSON	[illegible]	462	361
MERIDIAN	[illegible]	506	[illegible]
MISSOURI			
COLUMBIA	664	949	[illegible]
KANSAS CITY	[illegible]	944	871
ST JOSEPH	730	995	[illegible]
ST LOUIS	[illegible]	949	938
SPRINGFIELD	678	1007	868
MONTANA			
BILLINGS	[illegible]	[illegible]	1591
GLASGOW	956	[illegible]	[illegible]
GREAT FALLS	867	1779	1803
HAVRE	975	1979	2047
HELENA	937	1989	1987
KALISPELL	999	2303	2144
MILES CITY	909	[illegible]	[illegible]
MISSOULA	935	2052	2097
NEBRASKA			
GRAND ISLAND	840	[illegible]	[illegible]
LINCOLN U	799	[illegible]	[illegible]
NORFOLK	886	1432	1390
NORTH PLATTE	911	[illegible]	[illegible]
OMAHA	824	[illegible]	[illegible]
SCOTTSBLUFF	878	1525	1473
VALENTINE	896	[illegible]	[illegible]
NEVADA			
ELKO	[illegible]	1529	1753
ELY	[illegible]	[illegible]	[illegible]
LAS VEGAS	[illegible]	[illegible]	465
RENO	721	1433	[illegible]
WINNEMUCCA	736	1557	1656
NEW HAMPSHIRE			
CONCORD	[illegible]	1566	[illegible]
MT WASHINGTON OBS	1434	4220	4147
NEW JERSEY			
ATLANTIC CITY	629	[illegible]	839
ATLANTIC CITY U	[illegible]	671	766
NEWARK	573	772	903
TRENTON	555	785	897
NEW MEXICO			
ALBUQUERQUE	[illegible]	882	883
CLAYTON	734	1073	1081
RATON	872	1496	1419
ROSWELL	603	[illegible]	793
NEW YORK			
ALBANY	787	1274	1374
BINGHAMTON	843	1505	1569
BUFFALO	722	1194	1414
J.F. KENNEDY	545	769	848
NEW YORK LA GUARDIA	554	753	778
NEW YORK U	538	724	[illegible]
ROCHESTER	710	[illegible]	1329
SYRACUSE	745	1258	1325
NORTH CAROLINA			
ASHEVILLE	[illegible]	883	[illegible]
CAPE HATTERAS R	228	302	351
CHARLOTTE	462	637	568
GREENSBORO	476	657	738
RALEIGH	396	547	[illegible]
WILMINGTON	312	415	365
NORTH DAKOTA			
BISMARCK	[illegible]	1948	[illegible]
FARGO	[illegible]	1878	1965
WILLISTON	1028	1972	[illegible]
OHIO			
AKRON	655	1069	1212
CINCINNATI OBS	580	918	914
CLEVELAND	672	1239	1192
COLUMBUS	624	1069	1151
DAYTON	629	1071	1090
MANSFIELD	655	1083	1310
TOLEDO	726	1246	1331
YOUNGSTOWN	[illegible]	1254	1328
OKLAHOMA			
OKLAHOMA CITY	561	713	677
TULSA	543	704	698
OREGON			
ASTORIA	[illegible]	1460	[illegible]
BURNS U	866	1871	1641
EUGENE	497	1011	1148
MEACHAM	935	2218	1994
MEDFORD	599	938	[illegible]
PENDLETON	664	1186	1172
PORTLAND	544	1122	1099
SALEM	581	1232	1111
SEXTON SUMMIT R	763	1724	1442
PENNSYLVANIA			
ALLENTOWN	672	[illegible]	1136
ERIE	671	1105	1232
HARRISBURG	593	891	[illegible]
PHILADELPHIA	576	824	972
PITTSBURGH	703	1196	1215
PITTSBURGH U	591	934	[illegible]
READING U	559	795	[illegible]
SCRANTON	725	1167	1347
WILLIAMSPORT	656	[illegible]	[illegible]
RHODE ISLAND			
BLOCK ISLAND	583	879	[illegible]
PROVIDENCE	672	1044	1144
SOUTH CAROLINA			
CHARLESTON	334	414	[illegible]
CHARLESTON U	244	304	244
COLUMBIA	339	460	[illegible]
GNVLE-SPARTANBURG	461	631	550
SOUTH DAKOTA			
ABERDEEN	970	1820	1807
HURON	926	1675	[illegible]
RAPID CITY	881	1557	1577
SIOUX FALLS	938	1607	[illegible]
TENNESSEE			
BRISTOL	590	858	[illegible]
CHATTANOOGA	452	[illegible]	629
KNOXVILLE	501	721	690
MEMPHIS	[illegible]	573	595
NASHVILLE	484	708	683
OAK RIDGE R	523	753	762
TEXAS			
ABILENE	387	429	465
AMARILLO	583	[illegible]	793
AUSTIN	294	301	256
BROWNSVILLE	73	73	[illegible]
CORPUS CHRISTI	144	147	[illegible]
DALLAS	343	379	[illegible]
DEL RIO	[illegible]	[illegible]	[illegible]
EL PASO	[illegible]	[illegible]	[illegible]
FORT WORTH	348	395	[illegible]
GALVESTON	142	146	[illegible]
HOUSTON	[illegible]	[illegible]	189
LUBBOCK	543	[illegible]	[illegible]
MIDLAND	456	516	468
PORT ARTHUR	207	227	[illegible]
SAN ANGELO	362	[illegible]	386
SAN ANTONIO	278	[illegible]	[illegible]
VICTORIA	188	[illegible]	[illegible]
WACO	294	316	313
WICHITA FALLS	431	[illegible]	480
UTAH			
MILFORD	806	1450	1409
SALT LAKE CITY	[illegible]	1411	1349
WENDOVER	773	1372	[illegible]
VERMONT			
BURLINGTON	[illegible]	1714	1730
VIRGINIA			
LYNCHBURG	523	765	[illegible]
NORFOLK	[illegible]	485	544
RICHMOND	403	564	745
ROANOKE	502	769	[illegible]
WALLOPS ISLAND	449	604	
WASHINGTON			
OLYMPIA	[illegible]	[illegible]	1395
QUILLAYUTE	576	1666	[illegible]
SEATTLE TACOMA	538	1235	1304
SPOKANE	897	1811	1574
STAMPEDE PASS R	1023	2851	[illegible]
WALLA WALLA U	633	1096	1078
YAKIMA	751	[illegible]	1434
WEST VIRGINIA			
BECKLEY	661	1240	1197
CHARLESTON	541	887	[illegible]
ELKINS	673	1282	1298
HUNTINGTON	532	859	905
PARKERSBURG U	539	[illegible]	[illegible]
WISCONSIN			
GREEN BAY	899	1617	1660
LA CROSSE	869	1434	1545
MADISON	873	1592	[illegible]
MILWAUKEE	799	1338	[illegible]
WYOMING			
CASPER	984	1866	1680
CHEYENNE	924	1748	1727
LANDER	1031	[illegible]	[illegible]
SHERIDAN	947	1881	1762

Data from airport unless otherwise specified.
U indicates Urban, R indicates Rural, sites.

STORM SUMMARY

NOVEMBER 1968

STATE	TORNADOES					HAILSTORMS				WINDSTORMS				LIGHTNING				‡ HEAVY SNOWSTORMS AND BLIZZARDS				# ICE STORMS				∅ ALL OTHER			
								†DAMAGE				†DAMAGE				†DAMAGE				†DAMAGE				†DAMAGE				†DAMAGE	
	NUMBER	DAYS	DEATHS	INJURIES	†DAMAGE	DEATHS	INJURIES	PROP-ERTY	CROPS	DEATHS	INJURIES	PROP-ERTY	CROPS	DEATHS	INJURIES	PROP-ERTY	CROPS	DEATHS	INJURIES	PROP-ERTY	CROPS	DEATHS	INJURIES	PROP-ERTY	CROPS	DEATHS	INJURIES	PROP-ERTY	CROPS
Alabama	3	2	1	29	6																								
Alaska										0	0	6	0																
Arizona	1	1	0	0	0																								
Arkansas *																													
California										0	0	5	0																
Colorado *																													
Connecticut										0	0	5	0					0	0	4	0					0	0	5	0
Delaware										0	0	6	0																
Florida	10	2	2	27	6																					0	4	6	0
Georgia	5	3	0	0	4																								
Hawaii																										0	0	?	4
Idaho *																													
Illinois N																													
Indiana										0	0	5	0													0	0	2	0
Iowa																		0	0	5	0								
Kansas *																													
Kentucky *																													
Louisiana	4	3	0	1	5					0	0	°5	C													0	0	4	0
Maine										0	0	5	0					1	0	5	0					0	0	3	0
Maryland										0	0	6	0	0	0	3	0	0	0	6	0								
Massachusetts										1	0	6	0					0	0	4	0					0	0	4	0
Michigan										0	0	4	0																
Minnesota *																													
Mississippi	6	3	0	14	5	0	0	0	?	0	1	°5	C													0	0	°6	C
Missouri *																													
Montana										0	0	4	0																
Nebraska *																													
Nevada *																													
New Hampshire										0	0	5	0					2	0	4	0					0	0	3	0
New Jersey												7																	
New Mexico *																													
New York												6																	
North Carolina										1	2	5	5					0	0	6	5								
North Dakota *																													
Ohio *																													
Oklahoma						0	0	4	4	0	0	4	0	0	0	4	0												
Oregon *																													
Pacific Area																										0	0	°?	C
Pennsylvania										0	1	5	0					6	6	5	0								
Puerto Rico																										5	0	°5	C
Rhode Island										0	0	5	0	0	1	4	0					0	0	4	0	0	0	5	0
South Carolina	1	1	0	0	4																								
South Dakota *																													
Tennessee										0	0	3	0					2	0	4	0					0	0	4	0
Texas	11	4	0	8	6	0	0	?	?	0	1	?	?	0	0	4	0												
Utah *																													
Vermont										0	0	4	0					0	0	4	0								
U.S. Virgin Is. *																													
Virginia																		0	0	6	0								
Washington *																													
West Virginia										0	0	3	0					0	0	3	0								
Wisconsin *																													
Wyoming *																													

° Includes crop damage
C Crop damage
N No report received by printing deadline

* No occurrence of storms or unusual weather phenomena.
‡ Includes heavy sleet storm.
\# Freezing drizzle and freezing rain, commonly known as glaze.
∅ For breakdown of "All Others", and for detailed listing of other storms, see the Environmental Data Service, ESSA, monthly publication STORM DATA.

† Storm damages are placed in categories varying from 1 to 9 as follows:
1 Less than $50
2 $50 to $500
3 $500 to $5,000
4 $5,000 to $50,000
5 $50,000 to $500,000
6 $500,000 to $5,000,000
7 $5,000,000 to $50,000,000
8 $50,000,000 to $500,000,000
9 $500,000,000 to $5,000,000,000

GENERAL SUMMARY OF RIVER AND FLOOD CONDITIONS

NOVEMBER 1968

Elmer R. Nelson, Office of Hydrology

The most significant flooding during November was the flooding that began in the Minnesota Basin during the last 10 days of October. The main loss was to field crops, corn, and soybeans. Flooding reported elsewhere was minor.

ATLANTIC SLOPE DRAINAGE

The Lumber River at Lumberton, N. C., rose above flood stage on the 12th and continued in flood to the 28th. It crested 1.6 feet above flood stage on the 20th. The Lumber River was near flood stage on the 10th when 1.5 inches of precipitation occurred in the basin upstream from Lumberton. Another inch of precipitation was reported on the morning of the 12th. The stream rose about 1 foot in 24 hours, exceeding flood stage on the 12th and continued rising slowly until it crested on the 20th.

MISSISSIPPI SYSTEM

Upper Mississippi Basin.--The flooding on the Minnesota River and tributaries during October and November was due to heavy rain on October 15-18. Rainfall occurred almost every day during the first 22 days of October. Rainfall totals of 4 to 6 inches were recorded over the Minnesota River drainage at and upstream from Mankato, Minn. The resulting runoff produced flood crests with overflows of 2 1/2 feet to near 8 feet along the lower end of the Cottonwood River and the Minnesota River from Mankato downstream through Savage.

The flood crests along the Minnesota River from Mankato, Minn., downstream through Savage, Minn., were the highest for any month of October since records began. The crests along the Mississippi River were second to those that occurred in October 1903 and were below flood stage at all locations. The prime loss was to field crops, corn, and soybeans. Based on U. S. Department of Agriculture estimates the value of the potential crops to be harvested dropped at least $16.5 million.

Ohio Basin.--The Harpeth River at Kingston Springs, Tenn., rose nearly 2 feet above flood stage on the 28th. This overflow was due to about 4 inches of rain on the 27-28th. Only farmland was affected.

White Basin.--The Black River exceeded flood stage by 2 feet at Black Rock, Ark., on the 29th. It receded within its banks on the 30th. The Cache River at Patterson, Ark., exceeded flood stage on the 30th. No damage resulted from the light flooding.

Arkansas Basin.--Minor flooding occurred on the Illinois River at Tahlequah, Okla., on the 28-30th and on the Poteau River at Panama, Okla., on the 27-29th. No damages resulted from the overflows.

Red Basin.--Minor flooding occurred on the headwaters of the Sulphur River in northeast Texas during the latter part of November. The Sulphur River exceeded flood stage at Hagansport, Tex., on Nov. 27 and continued in flood to Dec. 4.

Lower Mississippi Basin.--Heavy rain (2 to 5 inches) on the 27-28th resulted in sharp rises on all smaller streams with nearly 3 feet of overflow on the Coldwater River at Sarah, Miss., on the 28th. Due to the season of the year and the brevity of the flood, flood damages are expected to be light.

PACIFIC SLOPE DRAINAGE

Columbia Basin.--Heavy rains on the 7-9th caused minor flooding on Johnson Creek at Sycamore, Oreg., on the 8th. The more sluggish Coast Range Willamette tributaries rose sharply from this initial 2 1/2 days of rain, and crested near bankfull from additional rain on the 10-11th. The Pudding River at Aurora, Oreg., exceeded flood stage on the 13-14th, and crested 0.2 foot above flood stage on the 14th. The Willamette River at Salem, Oreg., crested 4.5 feet below bankfull stage.

FLOOD STAGE DATA

(All dates in November unless otherwise specified)

River and station	Flood stage	Above flood stages -dates		Crest *	
		From–	To–	Stage	Date
	Ft			Ft	
ATLANTIC SLOPE DRAINAGE					
Lumber: Lumberton, N. C.	8	12	28	#9.6	20
MISSISSIPPI SYSTEM					
Upper Mississippi Basin					
Crow: Delano, Minn.	8	Oct. 22	Oct. 29	9.3	Oct. 25
Cottonwood New Ulm (nr), Minn.	11	Oct. 17	Oct. 24	16.3	Oct. 19
Minnesota: Mankato, Minn.	19	Oct. 19	Oct. 25	21.8	Oct. 25
Chaska, Minn.	18	Oct. 21	3	24.4	Oct. 25
Jordan (nr), Minn.	20	Oct. 19	3	26.9	Oct. 24
Savage, Minn.	698	Oct. 20	4	705.2	Oct. 26
Mendota, Minn.	699	Oct. 24	Oct. 29	700.3	Oct. 26
Ohio Basin					
Harpeth: Kingston Springs, Tenn.	15	28	28	16.9	28

River and station	Flood stage	Above flood stages -dates		Crest *	
		From–	To–	Stage	Date
	Ft.			Ft.	
MISSISSIPPI SYSTEM					
White Basin					
Black: Black Rock, Ark.	14	29	30	16.0	29
Cache: Patterson, Ark.	7	30	1/		
Arkansas Basin					
Illinois: Tahlequah, Okla.	11	28	30	11.5	29
Poteau: Panama, Okla.	24	27	29	27.8	28
Red Basin					
Sulphur: Hagansport, Tex.	38	27	Dec. 4	45.1	28
Coldwater: Sarah, Miss.	18	28	28	20.7	28
PACIFIC SLOPE DRAINAGE					
Pudding: Aurora, Oreg.	20	13	14	20.2	14
Johnson Creek: Sycamore, Oreg.	8	8	8	8.3	8

* Provisional
\# Highest stage observed
1/ Continued at end of month

RAWINSONDE DATA

Average monthly values

ALBANY, N. Y. 1004 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	86	1.2	-2.1	30	1.1
1000	30	115			33	1.0
950	30	529	1.1	-1.5	29	3.9
900	30	963	-1.0	-3.0	30	6.2
850	30	1,418	-2.4	-6.1	29	7.6
800	30	1,900	-3.3	-9.9	28	10.6
750	30	2,410	-4.8	-13.2	28	12.2
700	30	2,950	-7.0	-16.2	28	13.6
650	30	3,526	-9.3	-19.6	27	16.3
600	30	4,143	-12.3	-22.3	27	17.9
550	30	4,800	-16.2	-25.4	27	20.1
500	30	5,515	-20.8	-29.7	27	22.2
450	30	6,284	-26.0	-34.4	27	25.4
400	30	7,130	-31.7	-40.5	27	27.6
350	30	8,062	-38.1	-44.1	27	27.2
300	30	9,108	-44.7		26	32.7
250	30	10,310	-51.0		27	34.1
200	30	11,746	-54.8		27	35.2
175	30	12,600	-54.6		27	32.9
150	30	13,586	-55.4		27	28.8
125	30	14,743	-57.6		27	24.3
100	30	16,141	-60.4		27	21.6
80	30	17,529	-60.3		27	17.5
70	30	18,361	-60.0		27	14.8
60	29	19,322	-60.4		27	12.4
50	28	20,461	-60.2		28	10.1
40	28	21,849	-60.5		29	8.1
30	27	23,643	-60.2		30	7.0
25	27	24,780	-60.0		31	7.2
20	25	26,176	-59.0		31	9.0
15	23	27,978	-57.2		32	10.1
10	18	30,555	-54.4		30	14.0
7						

ALBUQUERQUE, N. MEX. 839 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	1,619	1.9	-5.0	07	.8
1000	30	173				
950	30	591				
900	30	1,041				
850	30	1,509				
800	30	2,001	3.8	-8.5	31	2.5
750	30	2,523	1.0	-10.8	31	4.7
700	30	3,075	-2.3	-13.4	30	7.3
650	30	3,660	-5.2	-16.9	30	9.1
600	30	4,287	-7.9	-21.7	29	10.9
550	30	4,953	-12.0	-25.6	29	12.4
500	30	5,681	-17.0	-29.9	29	13.5
450	30	6,459	-22.1	-35.0	29	15.1
400	30	7,321	-28.1	-40.2	28	17.5
350	30	8,267	-35.1	-45.5	28	18.7
300	30	9,325	-42.8		28	19.9
250	30	10,537	-49.9		28	23.1
200	30	11,978	-55.2		28	23.1
175	30	12,825	-58.3		28	23.0
150	30	13,790	-60.9		28	20.7
125	30	14,915	-63.9		28	18.6
100	30	16,272	-66.2		28	14.7
80	30	17,625	-65.8		28	10.2
70	30	18,436	-65.0		28	7.8
60	30	19,379	-63.9		28	6.4
50	30	20,501	-62.2		29	5.0
40	30	21,885	-60.5		29	3.5
30	30	23,686	-58.5		32	2.4
25	29	24,835	-57.9		33	2.6
20	28	26,247	-56.2		36	2.8
15	26	28,092	-53.3		36	3.5
10	20	30,724	-48.7		33	5.0
7						

AMARILLO, TEXAS 891 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	1,095	2.7	-2.8	30	2.7
1000	30	151				
950	30	574				
900	30	1,019				
850	30	1,481	5.2	-3.7	30	4.8
800	30	1,975	3.9	-6.9	31	4.3
750	30	2,498	1.7	-9.6	30	4.9
700	30	3,052	-1.4	-12.6	29	7.2
650	30	3,637	-4.4	-16.1	28	9.4
600	30	4,267	-8.0	-20.0	28	12.0
550	30	4,936	-12.3	-24.5	28	13.8
500	30	5,661	-16.9	-29.2	27	15.6
450	30	6,441	-22.4	-34.3	27	16.9
400	30	7,301	-28.6	-37.9	27	19.8
350	30	8,245	-35.5	-44.7	27	20.1
300	30	9,302	-42.6		28	24.0
250	29	10,510	-50.2		28	27.5
200	29	11,948	-55.8		27	28.9
175	29	12,794	-58.2		27	29.3
150	29	13,758	-60.9		27	26.9
125	29	14,884	-63.3		28	23.7
100	28	16,249	-65.7		28	19.3
80	28	17,603	-66.0		28	12.8
70	28	18,414	-64.8		27	10.9
60	28	19,357	-63.8		28	7.7
50	28	20,479	-62.3		28	5.4
40	25	21,601	-60.7		27	3.1
30	24	23,658	-59.2		30	2.2
25	24	24,802	-58.1		32	3.1
20	22	26,207	-56.6		35	3.5
15	21	28,039	-54.2		33	3.6
10						
7						

* ANCHORAGE, ALASKA 993 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	45	-5.3	-8.3	02	1.4
1000	30	-9				
950	30	398	-2.5	-6.2	04	2.6
900	30	824	-3.4	-10.3	09	2.5
850	30	1,274	-6.0	-12.0	11	4.0
800	30	1,746	-8.6	-14.8	13	4.8
750	30	2,244	-11.7	-17.7	14	5.7
700	30	2,769	-14.8	-21.4	15	5.6
650	30	3,323	-18.1	-25.6	16	5.6
600	30	3,920	-22.1	-27.2	16	5.7
550	30	4,548	-26.7	-33.2	17	6.0
500	30	5,235	-31.6	-38.7	18	6.4
450	30	5,970	-36.8	-42.0	19	6.2
400	30	6,779	-42.2		19	5.9
350	30	7,671	-47.8		20	7.0
300	30	8,677	-53.0		21	8.4
250	30	9,847	-53.7		21	9.3
200	30	11,292	-50.7		22	8.9
175	30	12,164	-49.9		22	9.0
150	30	13,173	-49.5		22	8.9
125	30	14,368	-49.2		22	9.0
100	30	15,832	-49.1		22	7.9
80	30	17,296	-49.0		23	6.6
70	30	18,171	-49.1		22	6.1
60	30	19,182	-49.3		22	6.3
50	30	20,377	-49.5		22	5.7
40	29	21,842	-49.5		23	4.2
30	29	23,727	-49.0		23	3.1
25	28	24,917	-48.9		23	2.4
20	28	26,381	-49.1		23	1.4
15	21	28,254	-49.2		24	1.2
10	18	30,904	-48.7		28	2.0
7	9	33,313	-47.0			

* ANNETTE, ALASKA 1002 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	37	5.8	2.3	13	3.9
1000	30	55			13	3.7
950	30	470	2.7	-.1	15	8.0
900	30	909	-.3	-2.6	17	9.9
850	30	1,364	-3.2	-6.0	18	11.9
800	30	1,842	-5.7	-9.6	19	12.0
750	30	2,344	-8.4	-13.9	20	12.8
700	30	2,879	-11.8	-17.0	21	12.0
650	30	3,439	-15.3	-21.8	21	13.4
600	30	4,044	-19.1	[illegible]	21	13.4
550	30	4,684	-23.1	-30.1	22	13.1
500	30	5,360	-27.9	-34.4	23	14.5
450	30	6,126	-33.1	-38.6	24	15.0
400	30	6,949	-39.0	-40.2	25	17.3
350	30	7,653	-45.1		25	17.3
300	30	8,869	-50.7		25	19.7
250	30	10,048	-53.5		25	19.1
200	30	11,487	-52.3		25	18.9
175	30	12,350	-52.2		26	17.2
150	30	13,348	-52.3		25	16.0
125	30	14,526	-52.4		25	12.4
100	30	15,967	-52.7		25	11.5
80	29	17,402	-52.8		25	9.8
70	29	18,263	-52.9		25	7.5
60	28	19,257	-53.1		25	6.2
50	28	20,431	-53.2		26	4.7
40	28	21,868	-53.1		27	3.9
30	28	23,724	-52.5		33	1.9
25	28	24,902	-52.4		36	2.6
20	28	26,344	-52.2		35	3.6
15	22	28,204	-51.4		03	4.3
10	15	30,880	-49.5		04	6.7
7	10	33,219	-49.8		02	8.4

ATHENS, GEORGIA 989 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	246	6.0	3.6	26	1.2
1000	30	151				
950	30	576	9.2	3.1	27	5.9
900	30	1,022	7.5	-.1	26	7.1
850	30	1,492	5.8	-4.2	27	7.8
800	30	1,987	4.3	-9.8	26	9.6
750	30	2,509	2.7	-14.5	26	11.4
700	29	3,069	.2	-16.9	26	12.1
650	29	3,658	-2.4	-19.5	26	14.4
600	29	4,293	-5.5	-21.5	26	17.7
550	29	4,961	-9.5	-25.5	26	19.5
500	29	5,701	-14.6	-29.7	26	21.8
450	29	6,486	-20.2	-34.5	26	23.8
400	29	7,354	-26.5	-40.1	26	26.7
350	29	8,307	-33.0	-45.3	26	29.2
300	29	9,375	-40.6	-48.6	26	31.8
250	29	10,597	-48.1		26	36.7
200	28	12,056	-55.9		26	38.3
175	28	12,900	-58.9		26	37.9
150	28	13,859	-62.2		26	36.6
125	28	14,979	-64.9		27	29.4
100	28	16,328	-68.1		26	24.8
80	28	17,667	-67.8		26	17.8
70	28	18,472	-66.3		26	12.8
60	28	19,408	-64.7		27	9.6
50	28	20,525	-63.2		27	8.7
40	28	21,904	-60.9		28	7.4
30	28	23,698	-59.0		28	6.8
25	27	24,845	-57.3		29	6.2
20	25	26,255	-55.9		28	6.8
15	23	28,095	-53.3		27	10.0
10	19	30,730	-48.3		27	19.5
7	9	33,112	-43.8			
5						

* BARROW, ALASKA 1019 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	28	8	-18.8	-21.3	07	6.3
1000	28	144	-18.6	-21.4	07	9.1
950	28	532	-18.7	-21.4	07	11.5
900	28	929	-19.0	-22.4	07	11.1
850	28	1,355	-19.0	-24.1	08	10.6
800	28	1,806	-20.3	-26.6	08	10.6
750	28	2,286	-21.5	-28.3	08	9.6
700	28	2,790	-23.3	-31.5	08	7.7
650	28	3,331	-26.0	-33.9	08	6.2
600	28	3,906	-29.1	-36.9	08	4.8
550	28	4,523	-32.7	-40.1	08	3.4
500	28	5,190	-36.7	-44.1	10	1.6
450	28	5,914	-41.3	-45.1	16	1.2
400	28	6,704	-45.8		20	2.0
350	28	7,584	-50.6		22	2.8
300	28	8,581	-53.8		24	3.4
250	28	9,753	-52.7		24	4.6
200	28	11,201	-50.5		24	5.1
175	28	12,073	-49.9		23	5.4
150	28	13,080	-50.0		24	5.9
125	28	14,271	-50.1		24	6.5
100	27	15,730	-50.0		25	7.1
80	25	17,185	-50.3		25	7.2
70	25	18,055	-50.5		25	8.3
60	24	19,067	-50.3		25	8.6
50	23	20,262	-50.2		26	9.2
40	22	21,708	-50.3		26	10.4
30	12	23,518	-51.1			
25	6	24,715	-50.8			
20						
15						
10						
7						
5						

BARTER IS., ALASKA 1011 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	26	15	-17.9	-22.2	09	3.0
1000	26	97	-16.5	-19.8	09	4.0
950	26	482	-17.7	-19.7	08	6.0
900	26	887	-17.4	-20.1	09	6.6
850	26	1,316	-16.5	-20.0	09	6.0
800	26	1,772	-16.8	-21.1	10	4.3
750	26	2,256	-17.8	-23.1	12	2.6
700	26	2,770	-20.1	-26.0	15	1.4
650	26	3,314	-22.8	-30.0	20	.5
600	26	3,901	-26.1	-33.5	24	2.8
550	26	4,518	-30.0	-37.3	24	4.1
500	26	5,199	-34.4	-41.9	24	5.6
450	26	5,927	-38.9	-44.4	25	7.2
400	26	6,730	-43.9		25	8.5
350	25	7,615	-49.4		25	10.0
300	25	8,615	-53.9		25	11.1
250	25	9,786	-53.1		25	10.1
200	25	11,234	-50.6		25	8.2
175	25	12,108	-49.6		25	7.8
150	25	13,118	-49.4		25	6.1
125	25	14,313	-49.5		25	7.4
100	24	15,778	-49.2		25	8.0
80	24	17,240	-49.5		25	8.5
70	24	18,113	-49.7		26	8.4
60	24	19,123	-49.8		26	8.8
50	24	20,314	-50.0		26	9.0
40	24	21,771	-50.2		26	9.0
30	22	23,051	-50.3		26	10.3
25	22	24,839	-50.7		26	11.6
20	21	26,282	-51.2		27	12.0
15	18	28,138	-50.5		26	16.0
10						
7						
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BETHEL, ALASKA 990 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	39	-7.4	-9.2	06	3.5
1000	30	-38				
950	30	366	-3.8	-7.0	09	6.9
900	30	791	-4.3	-9.0	12	6.9
850	30	1,240	-6.8	-12.0	14	5.9
800	30	1,711	-9.6	-14.6	15	5.6
750	30	2,205	-12.7	-18.1	16	4.9
700	30	2,730	-16.0	-21.8	16	5.2
650	30	3,285	-19.7	-25.5	16	5.1
600	30	3,875	-23.7	-30.8	16	4.7
550	30	4,498	-28.2	-35.2	17	4.8
500	30	5,182	-33.1	-38.3	17	6.0
450	30	5,912	-38.0	-42.4	17	6.0
400	30	6,719	-43.2	-41.6	18	5.9
350	30	7,607	-48.8		19	6.5
300	30	8,608	-52.8		18	6.9
250	30	9,780	-53.5		19	6.7
200	30	11,225	-50.5		21	6.5
175	30	12,097	-49.5		20	6.6
150	30	13,108	-48.8		21	6.8
125	30	14,306	-48.3		22	6.3
100	30	15,773	-48.5		21	6.0
80	30	17,240	-48.7		21	6.6
70	30	18,117	-48.8		21	5.7
60	30	19,129	-49.0		22	5.0
50	30	20,325	-49.3		22	4.9
40	30	21,787	-49.4		22	4.7
30	30	23,673	-48.7		21	3.9
25	30	24,873	-48.7		19	4.1
20	26	26,333	-49.4		17	2.5
15	19	28,226	-49.9		20	1.0
10	6	30,815	-51.2			
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* BISMAPCK, N. DAK. 956 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	505	-2.6	-6.0	36	.5
1000	30	144				
950	30	549			34	.7
900	30	984	-1.2	-6.8	30	3.8
850	30	1,439	-2.0	-9.8	31	6.5
800	30	1,919	-4.3	-13.0	31	8.4
750	30	2,422	-6.9	-16.1	31	9.3
700	30	2,962	-9.6	-19.4	30	10.1
650	30	3,526	-12.5	-22.8	30	10.8
600	30	4,139	-16.0	-25.7	30	11.2
550	30	4,785	-20.0	-29.2	30	11.6
500	30	5,490	-24.5	-33.3	30	12.5
450	30	6,243	-29.6	-38.1	30	13.7
400	30	7,081	-35.5	-42.4	30	15.6
350	30	7,997	-42.5	-43.9	29	16.3
300	30	9,024	-48.7		29	20.3
250	30	10,210	-53.3		29	22.0
200	30	11,642	-54.3		29	21.6
175	30	12,498	-54.4		29	20.8
150	30	13,485	-54.5		29	18.8
125	30	14,649	-55.8		29	15.2
100	30	16,065	-56.9		29	13.6
80	30	17,474	-58.0		30	8.6
70	30	18,314	-58.1		30	8.2
60	30	19,286	-58.1		31	6.2
50	30	20,434	-58.1		31	5.2
40	30	21,841	-57.5		33	5.4
30	29	23,659	-56.7		01	5.1
25	29	24,816	-56.3		02	6.0
20	29	26,234	-55.7		02	7.2
15	28	28,062	-55.2		[illegible]	9.4
10	26	30,649	-53.8		01	11.3
7	17	32,930	-52.6		01	12.4
5	7	35,087	-49.3			

BOISE, IDAHO 919 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	867	3.7	.1	13	1.3
1000	30	178				
950	30	598				
900	30	1,040	3.9	-1.1	11	1.1
850	30	1,503	1.8	-3.4	20	1.3
800	30	1,990	-.7	-5.5	26	3.2
750	30	2,506	-3.2	-8.6	27	6.2
700	30	3,048	-5.7	-12.5	27	7.8
650	30	3,622	-8.8	-17.0	26	8.4
600	30	4,243	-12.3	-20.5	28	10.7
550	30	4,900	-16.3	-24.6	28	13.0
500	30	5,616	-20.7	-27.7	28	14.0
450	30	6,382	-25.9	-33.0	28	15.9
400	30	7,231	-32.1	-37.8	28	17.9
350	30	8,161	-39.1	-42.4	29	18.7
300	30	9,201	-46.6		29	21.4
250	30	10,393	-52.8		29	23.5
200	30	11,819	-56.4		29	23.8
175	30	12,665	-57.3		29	23.2
150	30	13,635	-59.3		29	19.4
125	30	14,773	-60.7		28	17.1
100	30	16,157	-62.0		28	13.4
80	30	17,538	-61.5		29	10.1
70	30	18,366	-61.2		30	7.2
60	30	19,322	-61.3		30	5.4
50	29	20,451	-60.4		32	3.5
40	27	21,843	-58.8		36	3.1
30	24	23,662	-57.1		04	4.1
25	24	24,819	-56.0		05	5.2
20	23	26,241	-54.7		06	7.3
15	18	28,076	-53.7		06	8.5
10	12	30,691	-51.9			
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BOOTHVILLE, LA. 1018 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	1	13.8	11.4	01	2.1
1000	30	150	14.4	10.3	02	2.0
950	30	582	12.0	6.1	30	.9
900	30	1,034	10.6	1.9	25	3.0
850	30	1,510	9.8	-3.0	26	5.0
800	30	2,012	8.5	-6.6	26	6.8
750	30	2,544	6.9	-9.1	26	9.3
700	30	3,108	4.0	-11.7	26	10.9
650	30	3,707	.6	-16.1	26	12.4
600	30	4,346	-2.3	-20.4	27	14.5
550	30	5,030	-6.5	-24.3	26	15.4
500	30	5,770	-11.4	-28.4	26	17.5
450	30	6,568	-16.9	-32.1	26	19.9
400	30	7,444	-23.3	-37.9	25	21.9
350	30	8,408	-30.3	-43.2	26	23.8
300	30	9,487	-38.1	-49.8	26	26.1
250	30	10,718	-47.0		26	28.9
200	30	12,166	-55.6		26	33.1
175	30	13,009	-59.9		25	32.3
150	30	13,961	-64.5		26	30.5
125	28	15,068	-67.7		26	25.5
100	28	16,400	-71.0		26	20.2
80	28	17,720	-70.4		26	14.8
70	28	18,517	-67.6		26	10.8
60	28	19,449	-65.5		27	7.4
50	28	20,564	-63.1		27	8.1
40	28	21,943	-60.9		27	9.5
30	25	23,745	-57.9		27	11.2
25	25	24,898	-56.5		28	12.4
20	25	26,318	-55.0		27	11.9
15	24	28,165	-51.4		27	14.0
10	22	30,831	-45.1		26	17.7
7	17	33,230	-40.2			

* BROWNSVILLE, TEXAS 1015 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	7	17.3	14.3	13	.5
1000	30	139	18.7	14.7	11	1.5
950	30	575	15.9	12.5	14	3.9
900	30	1,037	13.8	9.1	16	3.1
850	30	1,519	12.2	4.6	20	3.7
800	30	2,026	10.7	-1.2	23	5.2
750	30	2,562	8.7	-7.5	24	6.5
700	30	3,130	6.0	-10.7	26	7.5
650	30	3,729	2.5	-14.1	27	9.0
600	30	4,377	-1.2	-19.2	26	10.0
550	30	5,059	-5.5	-24.3	26	10.9
500	30	5,807	-10.6	-28.6	26	12.9
450	30	6,605	-16.3	-34.0	26	13.8
400	30	7,486	-22.9	-38.8	26	15.3
350	30	8,451	-29.8	-43.5	27	18.2
300	30	9,533	-37.5	-50.0	26	21.7
250	30	10,767	-46.8		26	24.7
200	30	12,218	-55.4		26	28.2
175	30	13,060	-60.2		25	27.9
150	30	14,009	-65.5		25	25.6
125	30	15,106	-69.8		25	21.3
100	29	16,427	-72.2		25	16.8
80	27	17,733	-73.2		25	12.1
70	26	18,518	-70.0		25	8.2
60	23	19,445	-65.8		25	6.7
50	23	20,562	-62.6		25	5.1
40	20	21,943	-60.4		26	4.5
30	20	23,745	-58.4		27	7.9
25	19	24,903	-57.2		27	9.2
20	18	26,318	-56.2		26	10.7
15	16	28,161	-52.6		27	12.1
10	13	30,842	-45.3		26	14.6
7	10	33,257	-38.5			

BUFFALO, N. Y. 987 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	218	3.1	1.1	30	2.1
1000	30	113				
950	30	530	2.4	-.2	28	4.9
900	30	965	.2	-3.0	28	6.6
850	30	1,422	-2.0	-5.7	28	8.0
800	30	1,902	-3.9	-10.5	27	9.7
750	30	2,412	-6.3	-12.8	28	11.6
700	30	2,948	-8.3	-15.6	27	13.1
650	30	3,520	-10.5	-17.5	27	14.7
600	30	4,134	-13.9	-21.6	27	16.7
550	30	4,789	-17.5	-25.7	27	18.3
500	30	5,499	-21.9	-30.2	27	21.3
450	30	6,264	-26.9	-34.8	27	23.8
400	30	7,107	-32.8	-40.4	27	25.8
350	30	8,035	-39.5	-45.6	27	28.9
300	30	9,074	-46.5		27	33.6
250	30	10,269	-52.3		26	33.9
200	30	11,703	-54.6		26	32.0
175	30	12,558	-54.8		26	30.6
150	30	13,542	-55.9		26	27.5
125	30	14,697	-58.0		25	25.2
100	30	16,096	-59.8		26	19.4
80	30	17,488	-60.5		26	18.3
70	29	18,318	-60.2		26	14.5
60	29	19,278	-60.5		26	13.4
50	28	20,414	-60.4		26	11.9
40	27	21,806	-60.3		27	8.5
30	26	23,602	-59.7		29	7.6
25	26	24,743	-59.3		31	7.7
20	25	26,138	-58.5		32	8.6
15	18	27,944	-56.8			
10	13	30,512	-53.3			
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CAPE HATTERAS, N. C. 1015 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	4	12.2	8.9	28	2.8
1000	30	128	13.3	6.5	28	4.3
950	30	558	[illegible]	4.1	[illegible]	6.8
900	30	1,009	8.5	1.9	26	7.8
850	30	1,480	6.3	-1.6	26	9.7
800	30	1,977	5.4	-8.4	26	11.4
750	30	2,504	3.4	-12.8	26	13.0
700	30	3,061	1.1	-16.0	26	15.8
650	30	3,652	-1.9	-18.4	26	18.4
600	30	4,287	-5.7	-21.0	26	20.5
550	30	4,959	-9.3	-25.1	26	22.2
500	30	5,697	-13.8	-28.7	26	24.2
450	30	6,486	-19.2	-33.9	26	26.6
400	30	7,357	-25.5	-38.8	25	29.6
350	30	8,313	-32.1	-44.0	26	31.7
300	30	9,386	-39.3	-48.6	26	34.9
250	30	10,513	-47.4		26	37.0
200	30	12,064	-54.5		26	39.5
175	30	12,912	-58.2		26	37.0
150	30	13,874	-61.4		26	37.2
125	30	14,996	-64.4		26	32.8
100	30	16,351	-66.6		26	24.0
80	29	17,697	-66.1		26	17.7
70	29	18,507	-64.9		26	14.3
60	28	19,451	-63.6		27	11.4
50	25	20,576	-62.2		27	9.8
40	25	21,960	-60.7		28	6.7
30	25	23,759	-58.3		29	7.6
25	25	24,910	-56.8		27	6.9
20	22	26,340	-54.9		27	9.3
15	17	28,207	-52.4		27	16.3
10	12	30,862	-47.3			
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See reference note at end of table

RAWINSONDE DATA

Average monthly values

NOVEMBER 1968

* CARIBOU, MAINE — 989 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	191	-3.0	-5.6	34	2.4
1000	30	102				
950	30	509	-4.1	-6.8	33	4.0
900	30	932	-6.5	-8.9	33	4.2
850	30	1,378	-7.4	-10.8	32	4.2
800	30	1,850	-8.7	-13.6	30	5.6
750	30	2,350	-10.1	-15.9	29	7.0
700	30	2,880	-11.7	-18.3	29	9.1
650	30	3,447	-14.4	-21.8	28	11.3
600	30	4,048	-17.5	-25.1	28	13.4
550	30	4,699	-20.7	-28.9	28	15.5
500	30	5,396	-24.7	-33.5	28	18.3
450	30	6,155	-29.5	-38.3	28	22.4
400	30	6,987	-34.9	-43.1	28	26.9
350	30	7,907	-41.2	-46.6	28	31.4
300	30	8,939	-47.4		27	32.5
250	30	10,131	-52.0		26	34.5
200	30	11,574	-52.2		26	33.6
175	30	12,438	-52.2		26	29.1
150	30	13,433	-53.1		27	27.3
125	30	14,603	-54.7		27	24.1
100	30	16,024	-56.7		27	20.0
80	29	17,432	-57.9		27	16.0
70	29	18,273	-58.2		27	14.1
60	29	19,242	-59.2		27	12.8
50	28	20,383	-60.0		28	10.5
40	27	21,770	-60.5		29	9.9
30	27	23,558	-61.2		30	10.1
25	27	24,089	-61.5		30	10.6
20	25	26,076	-61.1		30	11.8
15	22	27,371	-59.8		31	13.5
10	19	30,432	-56.3		30	17.0
7	11	32,726	-52.5		30	22.2
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CHARLESTON, S. C. — 1017 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	13	7.6	4.6	28	1.5
1000	30	149	11.4	5.8	28	2.4
950	30	577	10.8	3.1	27	4.5
900	30	1,028	8.9	-.1	26	5.4
850	30	1,500	7.5	-5.0	25	8.1
800	30	1,998	6.5	-10.0	26	9.0
750	30	2,525	4.6	-13.5	26	10.8
700	30	3,086	2.2	-16.3	26	12.7
650	30	3,680	-.7	-18.4	26	15.1
600	30	4,317	-4.1	-21.3	26	17.8
550	30	4,993	-8.5	-24.8	26	18.5
500	30	5,732	-13.3	-29.2	26	20.0
450	30	6,520	-18.6	-34.7	26	22.6
400	30	7,390	-24.3	-38.3	26	26.2
350	30	8,356	-31.2	-43.9	25	27.4
300	30	9,430	-39.1	-49.6	26	30.3
250	30	10,658	-47.3		26	33.9
200	30	12,109	-54.7		26	36.4
175	30	12,957	-58.3		26	36.4
150	30	13,917	-62.2		26	34.1
125	30	15,034	-65.9		26	29.3
100	30	16,379	-68.2		26	24.0
80	30	17,718	-67.8		26	18.7
70	30	18,524	-66.0		26	14.7
60	29	19,460	-64.7		27	12.0
50	29	20,577	-63.0		26	10.2
40	29	21,956	-61.0		27	8.8
30	28	23,751	-58.5		27	8.8
25	27	24,897	-56.8		27	9.7
20	25	26,316	-55.1		27	10.4
15	24	28,164	-51.9		27	13.7
10	20	30,826	-46.5		26	19.1
7	10	33,194	-43.0			
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* COLD BAY, ALASKA — 987 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	30	2.0	-1.3	27	.5
1000	30	-74				
950	30	337	.5	-4.2	26	.7
900	30	771	-2.7	-6.2	26	1.2
850	30	1,222	-5.8	-9.7	24	1.2
800	30	1,694	-8.7	-14.6	24	1.6
750	30	2,190	-12.0	-19.0	23	2.5
700	30	2,716	-15.4	-22.9	21	2.7
650	30	3,270	-19.0	-26.2	21	3.9
600	30	3,863	-23.0	-31.4	23	4.7
550	30	4,493	-27.4	-34.7	24	5.1
500	30	5,175	-32.1	-39.0	24	8.0
450	30	5,907	-37.4	-42.2	24	8.8
400	30	6,716	-42.7	-41.6	22	8.4
350	30	7,607	-48.1		21	10.1
300	30	8,613	-52.1		20	9.5
250	30	9,796	-51.2		21	8.6
200	29	11,244	-49.5		22	6.7
175	29	12,120	-49.1		22	7.0
150	29	13,132	-49.2		23	7.0
125	29	14,329	-48.9		22	5.9
100	29	15,794	-49.0		21	5.7
80	29	17,259	-49.1		21	5.0
70	29	18,135	-49.1		20	5.0
60	29	19,145	-49.5		20	4.8
50	29	20,338	-49.9		17	4.4
40	29	21,796	-49.9		16	3.8
30	28	23,673	-50.2		15	3.9
25	28	24,863	-50.0		14	4.3
20	28	26,322	-50.1		13	5.4
15	25	28,197	-50.0		13	5.5
10	20	30,857	-50.3		11	7.0
7	14	33,204	-49.6		12	5.7
5	9	35,420	-49.1			

COLUMBIA, MO. — 988 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	238	3.5	.6	36	.5
1000	30	137				
950	30	551	3.8	-.8	29	2.3
900	30	993	2.8	-2.8	29	4.3
850	30	1,456	1.4	-6.1	29	5.6
800	30	1,942	-.2	-9.6	29	6.7
750	30	2,453	-2.2	-12.6	29	7.7
700	30	3,004	-4.5	-15.7	29	9.5
650	30	3,578	-7.2	-18.6	28	11.4
600	30	4,206	-10.7	-21.4	28	12.1
550	30	4,863	-14.9	-25.2	28	12.6
500	30	5,587	-19.4	-29.8	28	14.9
450	30	6,356	-24.6	-35.2	28	17.8
400	30	7,212	-30.3	-39.5	27	20.3
350	30	8,149	-37.2	-44.0	27	22.8
300	30	9,198	-44.6		26	25.2
250	30	10,401	-51.4		26	28.9
200	30	11,836	-54.9		26	30.8
175	30	12,687	-56.3		26	30.2
150	30	13,662	-58.3		26	27.2
125	29	14,804	-60.0		27	22.8
100	29	16,188	-62.3		27	17.0
80	27	17,560	-63.1		27	13.8
70	26	18,382	-62.7		28	12.1
60	25	19,332	-62.1		28	9.1
50	24	20,458	-61.6		29	6.6
40	24	21,841	-60.9		30	4.6
30	23	23,637	-59.6		32	3.8
25	22	24,779	-58.8		33	4.7
20	20	26,181	-57.8		34	5.0
15	15	27,998	-56.2		36	5.5
10	10	30,601	-53.7			

DAYTON, OHIO — 980 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	297	4.2	2.4	28	1.6
1000	30	130				
950	30	548	4.3	.9	26	4.3
900	30	987	2.7	-1.5	27	7.3
850	30	1,449	.5	-3.5	27	8.3
800	30	1,934	-1.4	-7.8	27	9.9
750	30	2,446	-3.2	-11.3	27	11.4
700	30	2,992	-5.4	-14.8	26	13.2
650	30	3,567	-8.0	-18.0	27	14.1
600	30	4,190	-11.5	-20.5	27	15.8
550	30	4,851	-15.4	-25.0	27	18.3
500	30	5,567	-19.7	-29.5	27	20.6
450	30	6,339	-24.8	-34.9	26	23.3
400	30	7,190	-30.8	-41.3	26	26.6
350	30	8,124	-37.6	-44.6	26	29.1
300	30	9,171	-44.5		26	32.4
250	30	10,374	-51.2		26	36.1
200	30	11,809	-55.2		26	37.3
175	29	12,655	-56.3		26	36.2
150	29	13,631	-57.9		26	31.1
125	29	14,776	-59.9		26	27.2
100	29	16,163	-61.7		26	22.6
80	28	17,542	-62.4		27	16.5
70	28	18,366	-62.2		27	13.4
60	27	19,312	-61.8		27	9.4
50	27	20,440	-61.7		28	8.7
40	27	21,826	-60.5		29	5.9
30	25	23,620	-59.1		30	5.6
25	25	24,766	-58.3		30	5.4
20	23	26,172	-57.5		31	7.3
15	21	27,990	-55.5		30	8.9
10	15	30,587	-52.4			
7	5	32,926	-49.2			

DEL RIO, TEXAS — 981 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	314	10.7	6.3	08	1.4
1000	30	151				
950	30	581	11.9	4.9	13	3.1
900	30	1,033	10.8	3.0	18	4.1
850	30	1,509	9.7	-.2	21	3.4
800	30	2,011	8.3	-5.4	24	3.5
750	30	2,540	6.5	-7.2	25	6.3
700	30	3,106	3.3	-9.9	25	8.7
650	30	3,701	.0	-14.2	26	11.2
600	30	4,341	-3.6	-19.1	26	14.2
550	30	5,019	-7.7	-24.7	26	15.5
500	30	5,760	-12.6	-27.9	25	18.0
450	30	6,549	-18.2	-32.1	26	18.9
400	30	7,426	-24.4	-37.2	26	21.9
350	30	8,386	-31.4	-43.0	26	24.0
300	30	9,460	-39.4	-49.7	26	25.5
250	30	10,686	-48.1		26	28.2
200	30	12,132	-55.8		28	26.9
175	30	12,975	-59.4		27	27.0
150	30	13,932	-62.9		27	25.2
125	30	15,044	-66.8		27	21.3
100	29	16,380	-70.0		27	17.7
80	27	17,711	-69.2		27	11.3
70	27	18,510	-67.7		26	9.4
60	27	19,443	-65.0		26	7.7
50	27	20,562	-62.4		26	6.9
40	26	21,952	-60.1		26	8.6
30	25	23,755	-58.3		27	11.7
25	25	24,905	-57.1		28	11.8
20	25	26,319	-56.0		28	9.6
15	24	28,162	-52.6		28	9.6
10	19	30,817	-46.2		28	13.1
7	8	33,226	-39.2			

DENVER, COLO. — 836 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	1,611	-1.9	-6.2	17	1.3
1000	30	168				
950	30	585				
900	30	1,024				
850	30	1,482				
800	30	1,969	2.4	-8.3	31	1.4
750	30	2,488	-.1	-11.9	32	4.0
700	30	3,038	-3.6	-14.9	31	5.5
650	30	3,614	-7.4	-18.2	30	7.7
600	30	4,238	-11.6	-22.0	30	11.1
550	30	4,896	-15.6	-26.6	30	13.1
500	30	5,614	-20.2	-30.5	29	14.3
450	30	6,381	-25.0	-35.1	29	16.2
400	30	7,233	-31.0	-41.2	29	17.6
350	30	8,167	-37.7	-45.9	30	19.2
300	30	9,214	-45.2		29	19.9
250	30	10,412	-51.9		30	24.1
200	30	11,841	-56.0		29	24.4
175	30	12,687	-57.3		29	23.7
150	30	13,658	-59.4		28	21.4
125	30	14,793	-61.3		28	19.0
100	30	16,174	-63.0		28	15.6
80	30	17,545	-62.8		28	10.6
70	30	18,368	-62.4		28	7.0
60	30	19,320	-62.4		28	5.6
50	29	20,448	-60.7		30	4.2
40	29	21,840	-59.9		33	3.0
30	26	23,640	-58.1		01	2.5
25	25	24,789	-57.2		02	3.6
20	24	26,204	-55.8		02	5.6
15	18	28,058	-52.7		02	6.0
10	8	30,702	-50.6			

DODGE CITY, KANS. — 925 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	791	1.4	-1.6	32	1.9
1000	30	156				
950	30	573				
900	30	1,010	3.7	-3.1	32	3.5
850	30	1,475	3.7	-6.1	33	5.5
800	30	1,966	2.0	-9.7	32	6.0
750	30	2,487	-.3	-13.1	32	7.3
700	30	3,035	-3.2	-16.1	31	7.9
650	30	3,617	-6.7	-18.7	30	9.0
600	30	4,239	-10.2	-21.9	29	10.4
550	30	4,903	-14.0	-25.3	29	13.4
500	30	5,624	-18.6	-29.2	28	14.9
450	30	6,398	-24.2	-34.3	23	15.7
400	30	7,251	-30.3	-39.7	28	17.0
350	30	8,188	-37.2	-44.8	28	19.2
300	30	9,237	-44.8		28	21.8
250	30	10,439	-51.5		27	25.2
200	30	11,875	-55.1		27	26.8
175	30	12,725	-57.0		27	27.2
150	30	13,697	-58.9		27	24.7
125	30	14,834	-61.3		27	21.2
100	29	16,205	-64.5		28	15.6
80	29	17,571	-64.0		27	11.9
70	29	18,389	-63.5		28	9.0
60	28	19,338	-62.7		28	7.2
50	27	20,467	-61.7		28	4.9
40	25	21,851	-60.5		30	3.2
30	25	23,649	-58.7		35	2.4
25	25	24,798	-57.4		01	2.8
20	23	26,209	-56.5		36	3.9
15	17	28,043	-54.4		01	4.1
10	13	30,669	-51.1			

EL PASO, TEXAS — 883 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	1,193	6.6	-.6	30	1.3
1000	30	154				
950	30	582				
900	30	1,032				
850	30	1,505	8.8	-1.6	30	2.0
800	30	2,005	6.7	-4.2	29	3.9
750	30	2,529	3.8	-7.9	28	5.9
700	30	3,091	.6	-11.6	27	7.3
650	30	3,679	-2.2	-15.4	28	8.4
600	30	4,316	-5.2	-19.7	28	10.7
550	30	4,989	-9.4	-23.8	28	12.5
500	30	5,725	-14.6	-28.2	28	14.1
450	30	6,512	-20.0	-32.5	28	17.0
400	30	7,380	-26.2	-38.3	28	18.5
350	30	8,333	-33.2	-43.2	28	20.9
300	30	9,400	-40.7	-47.8	28	23.9
250	30	10,621	-48.7		27	25.5
200	29	12,063	-55.8		28	25.1
175	29	12,906	-59.4		28	24.1
150	29	13,865	-62.2		28	22.3
125	29	14,984	-65.2		28	19.6
100	29	16,333	-67.8		28	15.4
80	29	17,673	-67.7		20	10.9
70	29	18,478	-66.6		27	7.8
60	28	19,417	-64.6		27	6.5
50	28	20,536	-62.5		27	6.3
40	27	21,923	-60.7		28	5.2
30	25	23,726	-59.0		28	6.1
25	25	24,873	-57.7		29	6.1
20	24	26,285	-56.5		30	5.7
15	21	28,109	-54.2		30	4.2
10	16	30,745	-48.3		28	10.5
7	8	33,127	-42.7			

ELY, NEV. — 810 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	1,908	-2.5	-7.0	21	2.2
1000	29	203				
950	29	617				
900	29	1,057				
850	29	1,522				
800	29	2,007	.1	-5.6	23	1.4
750	29	2,521	-.9	-9.0	30	1.2
700	29	3,073	-3.6	-12.0	30	3.9
650	29	3,651	-6.4	-16.1	30	6.7
600	29	4,279	-9.4	-20.7	30	9.8
550	29	4,939	-13.3	-23.5	30	11.7
500	29	5,668	-17.9	-27.2	30	13.3
450	29	6,441	-23.4	-32.2	30	14.8
400	29	7,301	-29.4	-37.9	29	16.0
350	29	8,241	-36.4	-43.7	29	18.6
300	29	9,295	-43.8		29	22.1
250	29	10,499	-51.2		29	24.1
200	28	11,929	-56.3		30	26.0
175	28	12,774	-57.9		29	23.7
150	28	13,743	-59.8		29	22.9
125	28	14,874	-62.6		29	19.0
100	27	16,246	-64.3		29	14.4
80	27	17,612	-64.2		29	8.8
70	27	18,430	-63.4		29	6.6
60	27	19,380	-62.0		30	5.1
50	27	20,508	-61.6		32	3.8
40	26	21,890	-59.7		36	2.2
30	26	23,695	-57.8		05	3.7
25	25	24,849	-56.3		06	4.4
20	25	26,270	-54.8		05	5.3
15	24	28,113	-52.9		07	6.0
10	20	30,742	-50.0		05	3.8
7	9	33,052	-48.8			

* FAIRBANKS, ALASKA — 987 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	135	-17.6	-21.5	03	1.5
1000	30	37				
950	30	432	-11.2	-15.7	08	3.1
900	30	842	-10.5	-14.8	11	4.5
850	30	1,283	-10.0	-14.3	12	3.4
800	30	1,750	-10.9	-15.7	16	2.0
750	30	2,244	-12.9	-18.6	21	2.9
700	30	2,768	-15.6	-21.5	21	3.7
650	30	3,322	-19.0	-24.7	22	4.5
600	30	3,915	-23.1	-29.2	23	5.1
550	30	4,543	-27.7	-32.8	23	6.6
500	30	5,226	-32.4	-38.3	23	7.8
450	30	5,959	-37.4	-42.1	23	8.1
400	30	6,768	-43.0	-43.3	23	8.9
350	30	7,657	-49.3		23	9.5
300	30	8,656	-54.7		23	10.2
250	30	9,818	-55.4		23	10.0
200	30	11,256	-51.3		22	8.3
175	30	12,126	-50.4		23	8.5
150	30	13,133	-49.9		23	7.8
125	29	14,332	-49.9		23	7.7
100	29	15,792	-49.6		23	7.7
80	29	17,253	-49.6		23	7.0
70	29	18,126	-49.6		24	7.1
60	29	19,136	-49.9		24	6.5
50	29	20,327	-50.0		24	5.6
40	29	21,783	-50.1		26	5.2
30	29	23,664	-49.6		27	5.3
25	29	24,857	-49.5		27	5.2
20	29	26,318	-49.7		29	7.7
15	27	28,202	-50.2		28	7.5
10	19	30,856	-50.3		29	8.0
7	8	33,179	-50.6			

FLINT, MICH. — 985 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	234	1.9	-1.1	24	1.4
1000	30	115				
950	30	526	1.4	-2.1	29	3.4
900	30	963	-.4	-4.7	30	5.2
850	30	1,419	-2.2	-8.7	29	6.2
800	30	1,900	-4.1	-12.0	29	7.6
750	30	2,407	-5.8	-14.9	28	9.1
700	30	2,946	-8.0	-17.9	28	10.7
650	30	3,516	-11.0	-21.6	28	11.9
600	30	4,130	-14.4	-24.4	27	14.3
550	30	4,780	-17.9	-27.6	27	16.2
500	30	5,493	-22.2	-30.8	27	18.1
450	30	6,252	-27.2	-35.1	27	20.3
400	30	7,099	-32.9	-40.5	27	22.6
350	30	8,026	-39.5	-45.2	27	26.7
300	30	9,065	-46.5		27	29.5
250	30	10,257	-52.8		27	32.3
200	30	11,687	-55.0		27	32.3
175	30	12,540	-55.1		26	30.4
150	30	13,522	-56.0		27	27.4
125	30	14,679	-57.3		27	22.2
100	30	16,082	-59.2		27	18.6
80	28	17,470	-60.1		27	14.7
70	28	18,302	-60.2		27	12.0
60	27	19,262	-59.9		28	9.4
50	27	20,401	-59.6		28	8.0
40	26	21,798	-59.1		30	6.3
30	25	23,602	-58.8		32	5.8
25	24	24,749	-58.4		33	5.9
20	23	26,159	-57.5		33	7.1
15	22	27,975	-56.2		33	8.7
10	[illegible]	30,575	-53.9		31	13.1
7	[illegible]	32,870	-49.5			

FORT WORTH, TEXAS — 997 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	180	8.3	4.2	30	.8
1000	30	151			33	2.0
950	30	577	8.9	3.3	25	3.2
900	30	1,023	8.0	.3	27	5.3
850	30	1,494	7.1	-3.3	28	6.7
800	30	1,992	5.5	-7.4	28	6.7
750	30	2,519	3.5	-10.2	28	7.9
700	30	3,076	1.2	-13.0	28	10.1
650	30	3,664	-2.3	-16.5	27	12.4
600	30	4,300	-6.1	-19.4	27	13.1
550	30	4,970	-10.5	-23.9	27	15.6
500	30	5,702	-15.2	-27.9	27	18.5
450	30	6,485	-20.4	-32.6	27	21.1
400	30	7,353	-26.8	-38.5	27	22.3
350	30	8,304	-33.6	-43.3	27	25.9
300	30	9,367	-41.2	-47.9	26	29.9
250	30	10,585	-49.0		26	33.2
200	30	12,027	-56.1		26	34.3
175	30	12,871	-58.6		26	31.8
150	30	13,833	-61.8		26	29.0
125	29	14,954	-65.3		26	24.5
100	29	16,304	-67.8		27	17.8
80	24	17,651	-67.4		27	12.6
70	24	18,458	-66.0		27	10.7
60	24	19,396	-64.7		27	8.7
50	23	20,515	-63.4		28	6.8
40	23	21,896	-60.7		28	6.0
30	22	23,695	-58.8		28	6.9
25	22	24,842	-57.7		27	8.0
20	19	26,261	-56.2		28	7.6
15	17	28,107	-52.4		26	9.5
10	11	30,755	-47.3			

GLASGOW, MONT. — 933 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	696	-1.8	-5.8	36	.5
1000	30	137				
950	30	549				
900	30	982	.8	-5.7	28	3.7
850	30	1,441	-.3	-7.8	29	7.7
800	30	1,924	-3.0	-10.4	30	9.1
750	30	2,433	-5.9	-13.9	30	10.0
700	30	2,971	-8.9	-18.5	30	10.5
650	30	3,536	-12.3	-22.0	30	11.3
600	30	4,149	-15.7	-25.5	30	12.6
550	30	4,797	-19.7	-28.9	30	14.1
500	30	5,501	-24.3	-33.2	30	15.7
450	30	6,255	-29.3	-37.9	30	17.7
400	30	7,093	-35.1	-40.5	30	19.7
350	30	8,012	-41.8	-42.4	31	20.8
300	30	9,041	-48.8		31	23.5
250	30	10,224	-54.3		30	25.7
200	30	11,649	-55.3		30	24.6
175	30	12,502	-54.6		30	22.8
150	30	13,489	-54.5		30	19.8
125	30	14,655	-55.5		29	16.4
100	30	16,072	-57.2		30	12.7
80	30	17,482	-57.6		30	9.8
70	30	18,324	-57.7		30	8.0
60	30	19,296	-57.5		32	6.4
50	30	20,448	-57.3		33	5.7
40	29	21,860	-56.8		35	4.8
30	28	23,688	-55.7		02	5.6
25	28	24,851	-55.0		03	6.3
20	25	26,278	-54.3		04	7.9
15	21	28,131	-53.6		04	10.8
10	14	30,742	-51.9		02	13.1

GRAND JUNCTION, COLO. — 854 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	1,474	.1	-5.2	10	1.7
1000	30	191				
950	30	606				
900	30	1,048				
850	30	1,512			11	2.3
800	30	2,001	1.3	-7.3	14	1.5
750	30	2,518	-1.4	-9.7	26	1.5
700	30	3,066	-4.4	-12.6	28	4.1
650	30	3,644	-7.3	-16.8	29	7.2
600	30	4,267	-11.0	-19.8	29	9.1
550	30	4,931	-14.4	-24.3	29	10.6
500	30	5,648	-18.8	-28.4	30	12.0
450	30	6,423	-23.8	-34.2	30	13.7
400	30	7,277	-29.8	-39.1	30	16.0
350	30	8,215	-36.7	-45.0	29	17.4
300	30	9,267	-43.9		30	21.6
250	30	10,471	-51.1		29	25.7
200	30	11,905	-55.6		30	25.3
175	30	12,752	-57.5		29	22.5
150	30	13,722	-59.3		29	19.9
125	30	14,857	-61.6		29	16.5
100	30	16,233	-63.6		29	13.0
80	30	17,600	-63.9		29	10.1
70	30	18,420	-62.7		29	8.4
60	30	19,374	-61.9		30	5.9
50	30	20,503	-61.4		30	3.8
40	29	21,892	-60.1		34	2.7
30	27	23,700	-58.1		03	3.4
25	27	24,851	-57.1		04	4.4
20	23	26,275	-55.5		04	6.0
15	12	28,123	-52.8		02	5.0

See reference note at end of table

*** GREAT FALLS, MONT. 886 MB**

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	1,123	.5	-6.1	23	4.0
1000	30	137				
950	30	556				
900	30	996				
850	30	1,455	1.6	-8.6	25	9.3
800	30	1,941	-1.1	-11.2	27	8.3
750	30	2,451	-4.5	-13.9	27	8.7
700	30	2,993	-7.6	-17.9	28	10.1
650	30	3,565	-10.7	-21.8	29	11.[illegible]
600	30	4,177	-14.5	-25.8	29	12.1
550	30	4,832	-18.[illegible]	-29.4	29	13.0
500	30	5,534	-23.4	-32.9	30	14.2
450	30	6,296	-28.[illegible]	-37.3	30	16.4
400	30	7,131	-34.5	-40.5	29	18.[illegible]
350	30	8,050	-41.5	-43.3	29	20.3
300	30	9,080	-48.2		29	23.9
250	30	10,264	-53.9		29	25.9
200	30	11,687	-55.7		29	24.6
175	30	12,537	-55.8		29	23.5
150	29	13,505	-56.3		29	21.4
125	29	14,661	-56.7		29	18.1
100	29	16,075	-57.2		29	12.2
80	29	17,484	-58.0		29	9.9
70	29	18,324	-58.[illegible]		30	8.0
60	29	19,292	-58.7		30	6.3
50	29	20,438	-58.0		31	5.[illegible]
40	29	21,847	-57.0		34	4.8
30	28	23,668	-56.1		36	5.2
25	27	24,828	-55.3		02	6.0
20	24	26,254	-54.2		03	7.[illegible]
15	21	28,112	-53.6		04	8.9
10	13	30,750	-52.4		04	13.1
7	8	33,061	-51.8			
5						
4						

GREEN BAY, WIS. 989 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	210	-.3	-3.5	32	1.7
1000	30	122				
950	30	530	-.3	-3.3	32	3.5
900	30	964	-2.0	-5.4	31	4.4
850	30	1,417	-3.3	-9.7	30	5.2
800	30	1,896	-5.2	-13.2	30	6.1
750	30	2,397	-7.1	-17.4	30	7.0
700	30	2,938	-9.5	-20.6	29	9.1
650	30	3,505	-12.1	-23.5	29	10.3
600	30	4,117	-15.3	-25.1	29	12.3
550	30	4,766	-19.3	-28.5	29	13.6
500	30	5,473	-23.9	-33.1	28	14.5
450	30	6,228	-29.0	-37.6	28	17.1
400	30	7,068	-34.5	-41.9	28	19.1
350	30	7,990	-40.9	-47.4	28	21.5
300	30	9,024	-47.3		27	24.9
250	30	10,213	-53.0		27	29.2
200	30	11,645	-54.8		27	27.3
175	30	12,500	-54.8		27	25.3
150	30	13,485	-55.2		27	23.1
125	30	14,646	-56.5		27	19.5
100	30	16,058	-57.8		29	15.3
80	29	17,464	-59.1		28	12.1
70	29	18,299	-59.1		28	11.1
60	29	19,268	-58.9		29	9.4
50	29	20,412	-59.2		30	7.4
40	28	21,812	-58.7		31	6.2
30	26	23,616	-58.8		35	5.[illegible]
25	25	24,762	-58.4		35	5.5
20	24	26,174	-57.5		35	8.3
15	22	28,002	-55.8		34	8.5
10	11	30,599	-51.7		32	13.7

GREENSBORO, N. C. 984 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	273	5.5	2.2	26	1.5
1000	30	142				
950	30	564	8.2	.9	28	4.9
900	30	1,011	6.5	-1.9	28	6.9
850	30	1,479	4.4	-5.4	28	8.2
800	30	1,972	3.4	-9.5	27	9.8
750	30	2,490	1.6	-13.3	26	11.5
700	29	3,044	-.8	-17.1	26	13.3
650	29	3,629	-3.9	-19.0	26	14.9
600	29	4,260	-7.6	-22.0	26	17.1
550	29	4,927	-11.6	-26.4	26	19.4
500	29	5,656	-16.4	-29.9	27	21.6
450	29	6,438	-21.9	-33.6	27	24.3
400	29	7,298	-28.0	-38.4	27	26.8
350	29	8,244	-34.2	-44.3	27	30.5
300	29	9,308	-41.0	-47.7	27	33.6
250	29	10,527	-48.9		26	36.1
200	29	11,973	-54.3		26	38.1
175	29	12,823	-57.5		27	36.7
150	28	13,792	-60.6		27	32.8
125	28	14,920	-63.6		26	27.2
100	28	16,280	-65.9		27	24.1
80	28	17,635	-65.6		27	18.5
70	28	18,448	-64.5		27	14.8
60	28	19,391	-63.9		27	11.8
50	27	20,513	-62.9		27	9.2
40	27	21,890	-61.4		29	6.6
30	25	23,674	-59.3		29	7.3
25	24	24,815	-58.4		29	7.2
20	22	26,221	-56.5		29	8.3
15	22	28,057	-53.4		28	12.3
10	19	30,086	-49.6		28	19.3
7	14	33,019	-45.6			

*** GUAM, MARIANA IS. 998 MB**

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	111	[illegible]	23.5	09	1.9
1000	30	90				
950	30	541	23.1	21.3	09	4.7
900	30	1,012	20.5	18.0	09	5.0
850	30	1,505	18.3	14.1	10	4.2
800	30	2,074	16.1	8.6	11	4.1
750	30	2,559	13.3	4.1	10	4.7
700	30	3,149	10.2	.8	10	4.6
650	30	3,761	6.7	-3.1	11	4.4
600	30	4,415	2.8	-7.4	11	4.1
550	30	5,113	-1.3	-12.0	11	4.1
500	30	5,870	-5.6	-17.7	12	3.9
450	30	6,688	-9.9	-23.4	11	4.4
400	30	7,591	-15.8	-30.4	11	4.3
350	30	8,586	-22.5	-36.3	12	4.6
300	30	9,699	-30.7	-43.3	12	4.8
250	30	10,966	-41.0	-53.2	12	5.4
200	29	12,446	-53.1		11	5.5
175	29	13,292	-60.2		11	5.6
150	28	14,234	-68.2		09	5.3
125	28	15,305	-76.6		09	7.1
100	26	16,559	-83.5		10	11.1
80	22	17,795	-82.4		09	13.7
70	21	18,545	-79.2		10	13.0
60	20	19,441	-77.0		09	12.5
50	19	20,530	-66.8		09	14.2
40	19	21,899	-61.5		09	17.6
30	19	23,702	-57.2		09	19.2
25	19	24,859	-55.6		09	14.9
20	17	26,297	-50.1		09	3.1
15	17	28,198	-45.8		29	8.9
10	17	30,921	-41.8		27	16.2
7	14	33,374	-37.6		26	17.5
5	12	35,707	-32.6			
4	6	37,267	-31.3			

HILO, HAWAII 1016 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	11	21.5	18.4	23	2.7
1000	30	146	23.2	19.7	22	2.7
950	30	594	21.3	17.6	14	2.6
900	30	1,059	17.1	14.9	12	3.2
850	30	1,546	14.3	10.8	11	3.9
800	30	2,057	12.5	5.0	11	3.6
750	30	2,601	11.1	-4.7	11	3.9
700	30	3,172	9.9	-9.5	10	3.8
650	30	3,783	5.9	-13.6	09	3.4
600	30	4,434	2.4	-17.7	08	3.7
550	30	5,130	-1.6	-20.9	09	3.1
500	30	5,886	-6.3	-25.4	07	3.5
450	30	6,700	-12.2	-29.9	05	3.6
400	30	7,592	-19.9	-35.6	04	3.6
350	29	8,573	-26.3	-42.5	01	5.0
300	29	9,668	-35.1	-50.1	36	6.0
250	29	10,913	-44.5		33	6.4
200	29	12,373	-55.1		31	7.5
175	29	13,214	-61.0		31	8.6
150	29	14,159	-66.9		31	7.5
125	29	15,243	-73.0		31	6.1
100	27	16,542	-77.6		32	4.4
80	26	17,821	-76.2		36	1.7
70	26	18,596	-72.5		07	2.3
60	25	19,512	-67.4		09	2.7
50	25	20,623	-63.0		09	4.5
40	25	22,009	-59.2		09	5.9
30	25	23,822	-57.2		08	4.9
25	24	24,982	-55.2		09	2.9
20	24	26,415	-52.1		18	.9
15	21	28,307	-48.0		26	7.0
10	13	31,021	-41.8			
7	5	33,469	-38.2			

HUNTINGTON W. VA. 987 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	246	[illegible].8	2.9	24	1.8
1000	30	140				
950	30	561	6.6	2.0	25	6.1
900	30	1,003	4.3	-.2	26	9.2
850	30	1,467	1.9	-2.9	27	10.2
800	30	1,954	-.1	-6.6	27	11.2
750	30	2,468	-1.9	-10.1	26	12.9
700	30	3,016	-4.1	-12.5	26	13.6
650	30	3,592	-6.8	-16.4	27	15.2
600	30	4,220	-9.8	-21.1	26	17.6
550	30	4,880	-13.[illegible]	-26.0	27	19.4
500	30	5,605	-18.2	-29.2	26	21.6
450	30	6,379	-23.4	-34.9	26	25.3
400	30	7,236	-29.5	-38.7	27	27.9
350	30	8,177	-35.9	-44.5	26	29.9
300	30	9,233	-43.1		26	34.5
250	29	10,438	-49.9		26	38.3
200	29	11,878	-55.3		26	39.7
175	29	12,726	-57.0		26	37.8
150	29	13,697	-59.2		26	33.7
125	29	14,834	-61.0		26	29.1
100	29	16,215	-62.7		27	22.0
80	27	17,591	-63.2		27	16.7
70	27	18,412	-62.9		27	13.4
60	27	19,364	-61.7		27	10.8
50	26	20,495	-61.1		28	7.9
40	26	21,884	-59.9		29	5.4
30	25	23,685	-58.6		30	4.3
25	24	24,832	-57.3		30	[illegible].4
20	23	26,248	-55.6		31	[illegible].3
15	20	28,102	-53.2		31	6.8
10	12	30,732	-50.0			
7						
5						

*** INTERNATIONAL FALLS, MINN. 972 MB**

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	360	-3.5	-5.7	30	.5
1000	30	132				
950	30	537	-4.1	-6.1	31	[illegible].0
900	30	964	-5.4	-7.8	30	2.4
850	30	1,411	-6.7	-10.9	30	4.0
800	30	1,884	-8.1	-14.4	30	5.7
750	30	2,380	-9.9	-18.0	30	6.4
700	30	2,913	-12.[illegible]	-21.1	30	6.9
650	30	[illegible],471	-15.0	-25.2	29	8.5
600	30	4,079	-18.2	-28.5	29	9.7
550	30	4,718	-22.5	-31.[illegible]	29	11.[illegible]
500	30	5,417	-26.[illegible]	-35.[illegible]	29	11.5
450	30	6,160	-31.9	-39.6	29	13.[illegible]
400	30	6,993	-37.5	-43.1	30	16.0
350	30	7,902	-43.8	-47.2	30	17.7
300	30	8,924	-50.0		30	19.7
250	30	10,102	-54.0		29	21.4
200	30	11,533	-53.3		29	18.4
175	30	12,392	-53.7		29	18.3
150	30	13,381	-54.0		29	17.3
125	30	14,549	-54.6		29	15.0
100	30	15,974	-55.9		29	12.1
80	30	17,389	-57.0		30	10.3
70	30	18,232	-57.7		30	9.2
60	30	19,205	-57.9		31	7.6
50	30	20,354	-58.[illegible]		32	6.4
40	30	21,761	-57.7		34	5.0
30	30	23,577	-57.3		35	6.3
25	29	24,722	-57.5		35	7.7
20	28	26,133	-56.8		36	9.2
15	26	27,953	-56.9		36	12.9
10	22	30,531	-55.7		36	16.1
7	16	32,830	-52.3		36	18.0
5	6	35,007	-48.[illegible]			

JACKSONVILLE, FLA. 1019 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	5	9.5	7.7	29	2.1
1000	30	159	13.4	8.1	30	2.1
950	30	585	11.9	5.5	24	2.8
900	30	1,043	10.2	1.4	24	4.7
850	30	1,518	9.1	-2.6	25	6.2
800	30	2,019	8.0	-6.7	26	7.6
750	30	2,547	6.[illegible]	-11.6	26	9.3
700	30	3,115	4.2	-13.5	26	10.[illegible]
650	30	3,708	1.[illegible]	-17.6	26	12.4
600	30	4,355	-2.4	-20.7	26	14.4
550	30	5,032	-6.7	-23.8	26	16.0
500	30	5,778	-11.7	-27.3	26	17.5
450	30	6,566	-17.3	-32.7	26	19.3
400	30	7,450	-23.4	-37.5	26	21.[illegible]
350	30	[illegible],414	-30.2	-42.7	26	23.7
300	30	9,493	-38.1	-48.7	26	27.5
250	30	10,725	-46.6		26	32.1
200	30	12,177	-54.9		26	34.1
175	30	13,023	-59.4		26	34.5
150	30	13,977	-63.5		26	33.9
125	30	15,086	-66.7		26	29.0
100	30	16,422	-70.[illegible]		26	22.8
80	30	17,744	-70.1		26	16.1
70	30	18,541	-68.2		26	12.6
60	30	19,472	-65.2		26	9.6
50	30	20,588	-63.1		27	9.2
40	29	21,967	-60.8		27	9.3
30	28	23,771	-57.6		27	11.6
25	27	24,923	-56.2		27	12.0
20	27	26,345	-54.5		26	13.3
15	25	28,198	-52.1		27	17.0
10	19	30,851	-46.0		27	18.7
7	7	33,246	-41.5			

JOHN F. KENNEDY INT. AP NY 1013 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	5	6.6	1.6	33	3.5
1000	30	114	6.7	1.5	31	4.3
950	30	537	4.8	-.4	32	5.2
900	30	973	2.1	-2.5	30	6.2
850	30	1,435	1.2	-5.2	30	7.8
800	30	1,923	-.1	-6.6	28	10.3
750	30	2,439	-2.1	-9.3	27	12.3
700	30	2,985	-4.4	-12.2	27	14.8
650	30	3,565	-7.1	-15.0	27	18.3
600	30	4,188	-10.5	-19.2	27	21.4
550	30	4,852	-14.0	-22.8	27	24.7
500	30	5,572	-18.6	-27.6	27	29.1
450	30	6,348	-23.9	-32.7	26	30.7
400	30	7,202	-30.1	-38.3	26	33.1
350	29	8,135	-36.8	-42.6	27	36.8
300	29	9,187	-43.6		26	39.2
250	29	10,396	-49.9		26	40.2
200	29	11,836	-54.7		26	39.7
175	29	12,690	-55.2		26	35.7
150	29	13,669	-57.3		26	33.4
125	29	14,815	-59.6		26	28.9
100	28	16,196	-61.5		27	23.2
80	28	17,576	-61.8		27	15.6
70	28	18,402	-62.1		27	13.6
60	28	19,357	-61.3		27	10.1
50	28	20,489	-60.9		27	8.1
40	28	21,876	-60.6		28	5.6
30	27	23,674	-59.3		30	4.5
25	27	24,816	-58.[illegible]		30	4.9
20	24	26,220	-58.3		30	6.6
15	22	28,029	-56.1		30	8.9
10	8	30,627	-49.8			

JOHNSTON IS., PACIFIC AREA 1014 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	3	26.6	22.5	06	6.3
1000	30	122	25.6	21.9	07	7.2
950	30	571	22.1	19.7	09	7.9
900	30	1,042	19.1	16.1	09	7.5
850	30	1,532	16.5	10.7	09	6.3
800	30	2,048	14.6	4.5	09	6.0
750	30	2,590	12.6	-3.1	09	5.5
700	30	3,169	10.1	-8.0	09	4.9
650	30	3,780	6.6	-11.1	08	4.4
600	30	4,434	2.6	-15.6	09	4.5
550	30	5,123	-1.5	-21.4	09	4.6
500	30	5,886	-6.2	-24.5	09	4.0
450	30	6,695	-11.5	-30.0	08	4.3
400	30	7,597	-17.6	-35.2	06	3.8
350	30	8,583	-24.9	-40.7	05	3.2
300	30	9,686	-33.1	-46.2	34	3.9
250	30	10,942	-42.9		30	5.9
200	30	12,410	-54.4		30	7.0
175	30	13,253	-60.7		31	5.9
150	30	14,197	-67.5		31	5.7
125	30	15,277	-74.2		32	5.7
100	28	16,560	-79.3		01	3.4
80	24	17,822	-79.2		06	4.5
70	23	18,587	-75.1		07	5.9
60	23	19,495	-68.4		08	6.7
50	23	20,601	-64.2		09	8.6
40	23	21,981	-59.8		09	11.6
30	23	23,795	-56.4		09	10.8
25	23	24,957	-54.6		09	8.1
20	23	26,394	-51.8		09	2.3
15	23	28,279	-47.3		26	7.2
10	19	30,992	-41.6		26	17.8
7	13	33,430	-38.3		26	21.4

KEY WEST, FLA. 1017 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	22	3	21.0	16.8	03	1.7
1000	22	145	20.6	16.2	06	2.[illegible]
950	22	582	18.1	11.4	09	4.1
900	22	1,049	15.3	6.9	10	1.4
850	22	1,532	12.8	3.9	20	.8
800	22	2,041	12.1	-4.6	24	1.9
750	22	2,576	11.0	-10.9	26	3.8
700	22	3,153	8.5	-13.9	26	4.8
650	22	3,753	5.4	-17.4	26	5.2
600	22	4,411	1.2	-20.6	27	5.9
550	22	5,098	-3.4	-24.5	26	6.7
500	22	5,853	-8.4	-27.9	26	7.4
450	22	6,655	-13.6	-32.4	26	8.7
400	22	7,549	-19.9	-36.5	27	12.0
350	22	8,525	-27.1	-41.8	26	15.3
300	22	9,618	-35.4	-48.7	26	19.5
250	22	10,863	-44.7		26	25.1
200	21	12,320	-56.0		25	29.4
175	21	13,157	-62.1		26	29.0
150	21	14,098	-67.6		26	24.9
125	21	15,187	-70.8		26	20.2
100	21	16,497	-74.4		26	14.1
80	21	17,790	-74.8		25	7.5
70	21	18,574	-70.2		25	2.6
60	21	19,496	-67.3		29	.8
50	21	20,605	-63.3		32	1.3
40	21	21,991	-59.6		29	2.3
30	21	23,802	-56.6		28	5.8
25	21	24,964	-54.7		28	6.8
20	21	26,396	-53.0		28	8.4
15	21	28,263	-49.9		26	12.6
10	20	30,946	-43.5		26	23.8
7	16	33,368	-38.3			
5	8	35,702	-33.4			

KING SALMON, ALASKA 992 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	15	-3.4	-6.9	07	3.6
1000	30	-51				
950	30	358	-1.2	-6.3	07	5.1
900	30	788	-3.0	-8.[illegible]	09	4.6
850	30	1,239	-5.9	-10.6	11	4.1
800	30	1,712	-8.6	-14.3	13	3.8
750	30	2,210	-11.3	-17.7	14	4.2
700	30	2,737	-14.6	-21.6	15	4.7
650	30	[illegible],292	-18.3	-25.1	16	4.8
600	30	3,888	-22.4	-28.5	17	4.8
550	30	4,517	-26.[illegible]	-33.3	17	4.6
500	30	5,203	-31.7	-36.9	18	5.2
450	30	5,940	-35.5	-39.9	19	6.2
400	30	6,751	-41.9	-41.7	19	6.3
350	30	7,644	-47.7		19	7.4
300	30	[illegible],651	-52.2		19	8.4
250	30	9,827	-52.5		20	9.4
200	30	11,278	-50.0		21	[illegible].6
175	29	12,156	-49.1		21	7.9
150	29	13,168	-48.7		21	7.5
125	29	14,367	-48.4		20	7.2
100	29	15,835	-48.4		21	6.4
80	29	17,303	-48.6		21	6.3
70	29	18,181	-48.5		21	6.0
60	29	19,195	-48.9		21	5.6
50	29	20,391	-49.1		20	5.7
40	29	21,855	-49.2		20	5.0
30	29	23,743	-48.9		19	3.2
25	29	24,941	-48.9		16	3.2
20	28	26,402	-49.0		14	3.9
15	20	28,298	-49.2		10	5.5
10	7	30,987	-48.5			

+ KOROR, CAROLINE IS. 1008 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	30	28.5	23.9	32	1.6
1000	30	97	27.7	23.1	32	2.0
950	30	545	23.6	19.0	31	3.5
900	30	1,022	20.7	14.9	30	4.2
850	30	1,515	18.2	10.3	29	4.5
800	30	2,033	15.7	6.0	28	3.8
750	30	2,572	13.1	1.4	28	2.8
700	30	3,157	10.3	-3.5	29	1.3
650	30	3,764	7.0	-7.6	27	.5
600	30	4,424	3.3	-11.6	20	.6
550	30	5,120	-.5	-16.6	19	.3
500	30	5,882	-4.8	-19.8	07	.3
450	30	6,699	-9.6	-24.3	06	1.5
400	30	7,605	-15.3	-29.9	08	2.8
350	30	8,600	-22.3	-36.7	11	4.3
300	30	9,713	-30.7	-44.7	11	7.4
250	30	10,981	-41.0	-52.1	11	8.3
200	30	12,458	-53.3		10	12.1
175	30	13,304	-60.2		09	13.7
150	30	14,249	-67.5		08	14.1
125	30	15,325	-75.7		08	14.9
100	30	16,591	-82.2		09	12.5
80	30	17,843	-79.3		09	9.9
70	30	18,610	-74.1		09	6.7
60	29	19,518	-69.9		09	9.8
50	28	20,615	-65.4		09	16.0
40	27	21,985	-60.9		09	25.1
30	27	23,802	-53.9		09	2[illegible].3
25	27	24,985	-49.5		10	10.5
20	27	26,462	-45.7		25	5.0
15	26	28,368	-43.2		27	12.5
10	23	31,143	-38.9		27	15.9
7	11	33,612	-34.0			

KOTZEBUE, ALASKA 1005 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	25	5	-14.6	-19.1	08	4.9
1000	25	40			07	5.2
950	25	433	-12.7	-18.2	08	7.3
900	25	843	-13.9	-18.7	09	[illegible].7
850	25	1,277	-14.2	-19.9	09	5.[illegible]
800	25	1,736	-15.6	-21.9	09	4.3
750	25	2,222	-17.4	-25.1	10	3.4
700	25	2,736	-19.7	-29.0	12	3.7
650	25	3,282	-22.9	-31.9	14	3.0
600	25	3,866	-26.6	-35.8	16	2.6
550	25	4,487	-30.4	-39.3	20	3.1
500	25	5,161	-34.7	-42.4	21	3.9
450	25	5,891	-39.6	-45.1	21	4.9
400	25	6,687	-44.8	-46.8	22	5.7
350	25	7,568	-50.3		24	6.8
300	25	8,564	-54.0		24	7.3
250	25	9,734	-53.5		23	6.2
200	25	11,177	-50.7		22	5.9
175	25	12,048	-50.3		22	5.6
150	25	13,054	-49.8		22	6.6
125	25	14,249	-49.2		22	5.8
100	25	15,713	-48.7		22	6.6
80	25	17,178	-49.1		22	6.2
70	25	18,053	-49.1		23	6.0
60	24	19,075	-49.1		23	6.3
50	24	20,271	-49.3		24	7.1
40	24	21,733	-49.3		24	7.2
30	23	23,619	-49.2		24	7.8
25	23	24,815	-49.0		25	9.2
20	20	26,274	-48.7		25	11.6
15	16	28,141	-48.9		26	12.9

KWAJALEIN, MARSHALL IS. 1010 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	27	4	27.1	23.9	09	4.2
1000	27	95	26.5	23.1	09	4.5
950	27	548	23.3	20.2	09	5.7
900	27	1,019	20.5	16.8	09	6.5
850	27	1,512	17.7	13.8	09	6.9
800	27	2,030	15.4	10.7	09	6.6
750	27	2,576	12.8	.0	08	6.7
700	27	3,154	10.1	1.4	08	6.5
650	27	3,767	6.7	-3.1	08	6.9
600	27	4,421	2.9	-8.5	09	8.5
550	27	5,121	-.8	-11.8	09	8.6
500	27	5,876	-5.3	-15.6	09	8.8
450	27	6,697	-9.9	-23.0	08	9.[illegible]
400	27	7,596	-15.3	-29.0	07	9.0
350	27	8,591	-22.3	-37.4	08	7.2
300	27	9,705	-31.7	-43.6	08	5.8
250	27	10,972	-41.1	-52.6	07	5.2
200	27	12,447	-53.6	-61.9	07	4.3
175	27	13,291	-60.6		08	2.9
150	27	14,234	-68.1		09	2.2
125	26	15,306	-75.4		09	3.0
100	24	16,569	-83.0		08	7.4
80	24	17,814	-80.6		[illegible]	12.5
70	23	18,577	-75.9		09	8.8
60	22	19,478	-71.7		09	10.3
50	22	20,566	-67.5		09	16.7
40	20	21,925	-62.4		09	25.3
30	20	23,727	-55.2		09	25.0
25	19	24,911	-50.7		09	10.5
20	19	26,373	-46.6		31	2.1
15	19	28,281	-44.7		27	9.6
10	17	31,019	-40.8		27	11.9
7	14	33,464	-37.9		29	11.5

See reference note at end of table

RAWINSONDE DATA

Average monthly values

LAKE CHARLES, LA. 1018 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	5	9.9	7.2	05	1.2
1000	30	149	12.6	7.5	09	1.2
950	30	580	11.0	4.5	24	1.5
900	30	1,030	9.3	.2	27	3.6
850	30	1,504	8.7	-5.1	27	5.8
800	30	2,004	7.3	-8.2	27	7.8
750	30	2,534	5.2	-10.8	27	9.5
700	30	3,095	2.6	-13.9	27	11.3
650	30	3,689	-.4	-18.0	26	13.3
600	30	4,327	-3.9	-20.8	27	15.4
550	30	5,006	-7.8	-24.4	27	17.3
500	30	5,746	-12.7	-28.4	26	19.7
450	30	6,540	-18.3	-32.9	26	21.3
400	30	7,413	-24.3	-38.2	26	22.3
350	30	8,374	-31.4	-43.4	26	25.2
300	30	9,448	-39.4	-49.0	26	28.3
250	30	10,674	-47.9		26	30.6
200	30	12,118	-55.8		26	33.0
175	30	12,961	-59.7		25	33.9
150	30	13,915	-63.7		26	31.4
125	30	15,023	-67.2		26	28.0
100	29	16,357	-70.1		26	20.6
80	27	17,684	-69.4		27	14.1
70	25	18,481	-67.6		27	11.1
60	25	19,417	-64.7		26	9.7
50	25	20,537	-62.5		27	7.2
40	25	21,919	-60.9		26	10.5
30	25	23,719	-58.0		28	11.5
25	25	24,872	-56.6		28	12.7
20	20	26,282	-55.7		27	10.6
15	17	28,127	-52.3		27	10.2
10	14	30,771	-47.4		27	15.2
7	8	33,146	-41.8			
5						

LANDER, WYO. 828 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	1,696	-3.8	-9.9	23	.9
1000	30	182				
950	30	593				
900	30	1,031				
850	30	1,489				
800	30	1,971	-.3	-11.1	23	.5
750	30	2,482	-2.4	-13.5	29	1.0
700	30	3,031	-5.4	-16.0	30	7.2
650	30	3,601	-9.3	-19.1	30	9.6
600	30	4,224	-12.8	-23.5	30	11.5
550	30	4,875	-16.6	-26.5	30	12.0
500	30	5,594	-21.4	-32.2	30	13.9
450	30	6,355	-26.7	-36.9	30	16.5
400	30	7,205	-32.2	-42.2	30	19.3
350	30	8,135	-38.9	-43.8	30	21.0
300	30	9,176	-46.2		29	25.2
250	30	10,370	-52.8		29	26.5
200	30	11,798	-55.9		29	25.8
175	30	12,645	-57.2		29	24.4
150	30	13,618	-58.3		28	22.8
125	30	14,762	-59.6		29	19.1
100	30	16,154	-60.7		29	13.6
80	30	17,538	-61.8		28	10.0
70	30	18,366	-60.6		29	7.7
60	30	19,327	-60.4		31	5.3
50	30	20,466	-59.8		32	2.3
40	30	21,864	-58.7		03	2.6
30	28	23,681	-57.1		04	4.2
25	26	24,841	-56.1		04	8.0
20	25	26,260	-55.0		05	7.5
15	22	28,108	-53.5		05	9.6
10	14	30,729	-51.5			
7						
5						

* LIHUE KAUAI, HAWAII 1013 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	36	22.9	20.3	05	2.0
1000	30	147	23.3	20.0	06	3.2
950	30	591	20.6	17.8	07	4.1
900	30	1,061	17.4	15.0	09	3.5
850	30	1,548	14.4	10.8	10	3.3
800	30	2,060	12.7	2.5	11	3.1
750	30	2,600	11.3	-6.7	13	2.8
700	30	3,174	9.0	-11.6	17	2.0
650	30	3,783	6.0	-15.4	21	1.7
600	30	4,436	2.5	-18.2	24	2.4
550	30	5,127	-1.8	-21.3	25	2.7
500	30	5,886	-6.8	-26.1	26	3.6
450	30	6,698	-12.4	-30.8	27	4.6
400	30	7,590	-19.0	-35.5	27	6.2
350	30	8,569	-26.6	-41.9	28	7.3
300	30	9,663	-35.3	-49.5	29	8.7
250	30	10,906	-45.2		31	10.9
200	30	12,360	-55.7		29	11.6
175	30	13,200	-61.3		29	12.1
150	30	14,143	-67.1		29	12.3
125	30	15,226	-72.9		29	10.6
100	30	16,518	-77.4		29	7.0
80	29	17,798	-76.6		32	3.5
70	28	18,574	-73.1		01	1.7
60	28	19,487	-67.7		05	2.9
50	28	20,597	-63.4		07	3.7
40	28	21,978	-60.4		07	2.6
30	28	23,782	-57.9		04	1.1
25	27	24,937	-56.7		03	.9
20	27	26,358	-54.8		29	1.7
15	27	28,217	-50.2		26	5.7
10	23	30,902	-44.6		26	13.8
7	17	33,281	-41.2		26	22.6
5	10	35,559	-37.2			

LITTLE ROCK, ARK. 1008 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	79	7.5	4.6	27	1.3
1000	30	143	8.0	3.7	28	1.7
950	30	563	7.1	1.9	25	3.8
900	30	1,011	5.5	-.4	25	5.7
850	30	1,478	4.3	-3.7	27	7.9
800	30	1,970	2.6	-6.8	27	8.7
750	30	2,488	.7	-12.6	28	9.3
700	30	3,044	-1.4	-16.8	27	10.8
650	30	3,628	-4.3	-19.3	28	12.1
600	30	4,259	-7.9	-21.9	28	14.7
550	30	4,924	-12.2	-25.8	27	17.2
500	30	5,655	-17.0	-29.6	27	19.1
450	29	6,426	-22.2	-34.2	27	20.6
400	29	7,292	-27.8	-39.4	26	22.4
350	29	8,239	-34.4	-43.9	26	24.4
300	29	9,302	-41.4	-47.2	25	30.6
250	29	10,520	-48.8		26	33.9
200	28	11,972	-53.8		26	32.9
175	27	12,827	-57.2		26	30.1
150	27	13,794	-60.7		26	27.7
125	27	14,920	-63.4		26	25.1
100	27	16,281	-65.8		26	17.6
80	24	17,635	-65.4		27	12.8
70	24	18,448	-64.6		27	11.1
60	24	19,394	-63.1		27	7.8
50	24	20,518	-62.4		27	5.2
40	24	21,899	-60.7		28	4.1
30	23	23,697	-58.9		29	3.4
25	22	24,844	-57.8		31	3.1
20	20	26,256	-56.3		32	3.7
15	17	28,108	-53.4		30	4.5
10	11	30,718	-49.7			
7						
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MCGRATH, ALASKA 989 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	103	-16.4	-20.8	02	.1
1000	30	19				
950	30	408	-13.0	-15.7	06	3.3
900	30	822	-8.8	-11.7	09	3.9
850	30	1,266	-7.6	-12.4	14	2.8
800	30	1,737	-9.8	-15.2	17	2.8
750	30	2,232	-12.8	-18.9	18	3.7
700	30	2,755	-15.9	-22.9	18	4.0
650	30	3,310	-19.3	-26.1	17	4.6
600	30	3,900	-23.1	-30.3	17	5.6
550	30	4,530	-27.3	-34.8	17	6.5
500	30	5,211	-32.2	-38.5	18	7.2
450	30	5,945	-37.7	-42.3	18	6.7
400	30	6,749	-43.2	-43.0	18	7.2
350	30	7,637	-48.6		18	7.7
300	30	8,639	-53.2		19	7.7
250	30	9,807	-54.6		20	7.4
200	30	11,248	-50.6		21	7.6
175	30	12,121	-49.5		21	7.6
150	30	13,132	-49.0		21	7.7
125	30	14,329	-48.7		21	6.9
100	30	15,796	-48.3		21	6.7
80	30	17,264	-48.7		22	6.5
70	30	18,141	-48.9		22	5.9
60	30	19,154	-48.8		22	5.9
50	29	20,351	-48.9		23	5.0
40	29	21,816	-48.8		24	4.3
30	29	23,707	-48.4		25	3.2
25	26	24,898	-48.4		25	3.2
20	25	26,366	-48.5		24	4.0
15	22	28,251	-49.0		24	5.6
10	5	30,851	-46.2			
7						
5						

+ MAJURO, MARSHALL IS. 101. MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	3	29.1	25.0	08	2.5
1000	30	98	27.3	21.8	09	2.9
950	30	547	23.4	18.5	09	3.8
900	30	1,022	20.7	14.9	09	5.1
850	30	1,515	18.1	11.8	09	5.9
800	30	2,034	15.7	7.7	09	6.3
750	30	2,577	13.0	4.1	09	6.1
700	30	3,158	10.0	.1	09	5.9
650	30	3,764	6.6	-3.2	09	6.3
600	30	4,424	3.0	-7.7	08	8.1
550	30	5,112	-1.0	-12.7	09	8.8
500	30	5,880	-5.2	-17.0	09	8.6
450	30	6,693	-9.8	-22.7	09	8.6
400	30	7,603	-15.0	-28.5	09	7.4
350	30	8,601	-21.6	-35.8	08	6.4
300	30	9,719	-29.8	-43.9	08	5.0
250	30	10,993	-39.8	-53.1	08	5.1
200	30	12,480	-51.9		08	4.4
175	30	13,331	-59.0		08	3.4
150	30	14,281	-66.5		07	4.1
125	30	15,364	-74.0		07	4.3
100	29	16,042	-81.2		08	6.8
80	29	17,895	-80.3		08	10.8
70	29	18,659	-74.3		08	9.1
60	28	19,567	-69.6		09	9.6
50	27	20,667	-65.5		10	17.0
40	27	22,037	-60.9		09	24.6
30	25	23,863	-52.5		10	24.1
25	25	25,053	-48.3		10	8.6
20	23	26,537	-45.1		25	6.5
15	19	28,454	-42.9		27	11.7
10	19	31,214	-38.2		27	11.4
7						

* MEDFORD, OREG. 973 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	401	5.7	4.4	18	.5
1000	30	179				
950	30	603	5.4	3.7	18	.6
900	30	1,042	5.3	2.0	18	2.8
850	30	1,509	4.2	-2.1	21	4.2
800	30	2,001	2.0	-6.4	24	6.6
750	30	2,520	-.4	-10.6	25	8.7
700	30	3,070	-3.5	-14.1	27	9.6
650	30	3,651	-7.0	-18.0	27	11.2
600	30	4,273	-10.9	-21.3	26	12.9
550	30	4,933	-14.4	-25.0	27	13.6
500	30	5,657	-18.7	-29.0	28	16.0
450	30	6,430	-23.9	-34.0	28	17.1
400	30	7,286	-30.1	-39.4	28	19.5
350	30	8,224	-37.0	-43.4	28	23.2
300	30	9,275	-44.1		29	28.2
250	29	10,477	-50.9		29	32.2
200	28	11,907	-56.7		29	33.5
175	28	12,749	-59.2		29	29.4
150	28	13,711	-60.4		28	26.3
125	28	14,845	-61.5		28	20.6
100	28	16,222	-62.9		28	15.8
80	28	17,596	-62.7		28	10.8
70	28	18,419	-62.2		29	7.9
60	27	19,373	-61.4		30	5.0
50	27	20,506	-60.3		33	3.3
40	27	21,901	-59.3		07	3.1
30	27	23,710	-57.3		07	4.2
25	27	24,866	-56.3		07	5.1
20	26	26,288	-55.1		07	7.3
15	23	28,138	-53.3		07	8.1
10	18	30,757	-50.9		07	9.0
7	11	33,126	-47.6			

MERIDA, MEXICO 1016 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	11	18.6	17.7	07	2.2
1000	30	146	21.7	18.8	07	4.3
950	30	588	19.9	15.7	10	5.0
900	30	1,056	17.1	12.4	12	3.1
850	30	1,543	14.8	7.6	15	1.7
800	30	2,055	13.4	2.0	19	1.6
750	30	2,591	11.0	-4.1	23	2.0
700	30	3,169	7.9	-7.5	25	2.4
650	30	3,772	4.8	-14.6	25	2.8
600	30	4,426	1.0	-18.4	26	3.4
550	30	5,113	-2.7	-22.7	26	4.8
500	30	5,872	-7.6	-24.9	25	5.3
450	30	6,678	-12.9	-30.5	26	8.0
400	30	7,574	-18.8	-36.0	26	9.8
350	30	8,555	-25.6	-42.2	26	12.9
300	30	9,654	-33.8	-49.3	26	16.2
250	30	10,906	-43.4		25	18.8
200	30	12,368	-55.1		24	21.7
175	30	13,207	-61.5		24	20.8
150	30	14,148	-67.5		25	20.0
125	29	15,234	-71.5		25	14.3
100	26	16,542	-75.8		24	5.2
80	26	17,830	-75.4		24	8.4
70	26	18,610	-71.4		15	1.6
60	26	19,531	-67.5		10	4.8
50	26	20,643	-62.3		09	6.1
40	26	22,033	-58.5		07	4.0
30	25	23,851	-55.7		04	1.1
25	24	25,020	-53.9		08	3.7
20	23	26,460	-52.0		29	1.7
15	19	28,348	-48.2		26	5.1

MIAMI, FLA. 1017 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	4	18.2	15.1	35	.9
1000	30	148	19.6	15.3	04	1.7
950	30	587	17.5	12.3	10	1.7
900	30	1,050	14.9	7.8	16	1.2
850	30	1,533	12.8	3.7	20	1.9
800	30	2,041	11.7	-3.4	24	3.1
750	30	2,581	10.1	-8.3	25	5.4
700	30	3,151	7.5	-12.1	25	5.5
650	30	3,754	4.4	-15.6	26	6.1
600	30	4,406	.7	-20.2	25	7.4
550	30	5,094	-3.9	-23.5	26	8.3
500	30	5,845	-8.9	-27.4	26	9.9
450	30	6,651	-14.3	-30.6	26	12.4
400	30	7,539	-20.4	-34.8	26	13.6
350	30	8,514	-27.3	-40.6	26	18.8
300	30	9,608	-35.0	-47.6	26	23.5
250	30	10,856	-44.2		26	27.7
200	30	12,318	-54.6		26	31.8
175	30	13,162	-60.4		26	30.6
150	30	14,109	-66.3		26	27.4
125	30	15,202	-70.1		27	22.6
100	30	16,520	-72.8		27	16.1
80	30	17,824	-73.4		26	8.0
70	30	18,608	-71.2		27	5.1
60	29	19,528	-67.1		26	2.7
50	29	20,638	-63.0		29	3.4
40	29	22,024	-59.4		28	4.3
30	28	23,829	-56.6		28	7.7
25	27	24,989	-54.3		28	9.6
20	27	26,421	-53.2		27	11.5
15	24	28,282	-50.1		26	15.1
10	23	30,973	-43.5		26	24.4
7	5	33,490	-36.4			

MIDLAND, TEXAS 917 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	874	5.7	2.3	23	1.0
1000	30	157				
950	30	579				
900	30	1,027	8.0	1.4	20	2.0
850	30	1,500	8.7	-1.7	25	3.6
800	30	2,000	7.0	-4.6	28	5.0
750	30	2,527	4.1	-7.0	28	7.0
700	30	3,087	1.0	-11.2	27	7.8
650	30	3,675	-2.2	-16.2	27	9.8
600	30	4,311	-5.6	-21.0	26	11.6
550	29	4,981	-9.6	-24.3	27	13.9
500	29	5,720	-14.3	-28.7	27	15.8
450	29	6,504	-19.9	-32.8	27	17.3
400	29	7,375	-26.0	-38.5	27	20.1
350	29	8,328	-33.1	-44.4	27	22.9
300	29	9,395	-40.8	-49.6	27	25.6
250	29	10,616	-48.6		27	27.1
200	29	12,058	-56.4		27	28.9
175	29	12,900	-59.2		27	28.3
150	28	13,858	-62.4		27	24.3
125	27	14,974	-65.7		27	20.8
100	27	16,318	-68.5		27	15.8
80	24	17,664	-68.6		27	11.7
70	24	18,466	-66.5		27	8.6
60	24	19,400	-65.2		26	6.7
50	24	20,515	-63.5		27	5.3
40	23	21,896	-60.9		28	5.7
30	22	23,698	-59.3		28	6.9
25	22	24,843	-58.1		28	5.9
20	22	26,253	-56.7		29	6.3
15	19	28,095	-53.6		29	6.8
10	6	30,722	-47.7			

MONTGOMERY, ALA. 1012 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	61	7.6	6.2	30	.9
1000	30	156	10.1	6.8	28	1.2
950	30	579	9.3	3.5	27	2.4
900	30	1,031	7.7	.3	26	4.2
850	30	1,502	6.7	-2.8	26	6.5
800	30	2,000	5.9	-8.1	26	9.1
750	30	2,525	4.1	-10.9	26	10.0
700	30	3,086	1.7	-13.4	26	12.4
650	30	3,679	-1.0	-15.7	26	13.8
600	30	4,316	-4.8	-18.9	26	17.0
550	30	4,991	-8.7	-23.2	26	19.4
500	30	5,728	-13.6	-27.5	25	21.6
450	30	6,520	-18.9	-31.6	26	23.3
400	30	7,390	-25.0	-37.9	26	25.9
350	30	8,348	-32.3	-43.4	25	28.4
300	30	9,418	-40.0	-48.8	26	31.6
250	30	10,643	-47.6		26	34.6
200	30	12,092	-54.9		26	36.0
175	29	12,937	-58.4		26	34.3
150	29	13,897	-62.3		25	34.0
125	29	15,015	-65.5		26	29.1
100	29	16,361	-68.5		26	23.1
80	29	17,700	-68.3		26	15.2
70	29	18,503	-66.6		26	12.6
60	28	19,443	-64.6		25	9.9
50	27	20,561	-62.9		27	8.5
40	26	21,940	-61.4		27	8.9
30	26	23,736	-58.7		28	7.0
25	24	24,881	-57.3		28	7.8
20	24	26,301	-55.1		27	7.5
15	21	28,146	-52.7		27	9.8
10	15	30,795	-47.6		27	14.3
7	8	33,193	-42.6			
5	6	35,496	-38.7			

* NANTUCKET, MASS. 1012 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	14	6.7	3.9	30	2.3
1000	30	111	6.5	3.1	30	2.9
950	30	529	4.3	.9	28	5.6
900	30	970	2.3	-1.4	27	7.2
850	30	1,431	.3	-4.0	27	9.0
800	30	1,917	-.6	-8.1	27	12.1
750	30	2,430	-2.5	-10.8	27	14.5
700	30	2,977	-4.9	-14.7	27	16.6
650	30	3,552	-7.7	-17.1	27	18.9
600	30	4,176	-11.0	-20.9	27	21.7
550	30	4,832	-14.9	-25.6	27	23.9
500	30	5,555	-19.3	-27.8	26	26.8
450	30	6,324	-24.2	-33.2	27	28.4
400	30	7,181	-29.8	-39.6	27	32.1
350	30	8,120	-36.6	-45.2	27	35.1
300	30	9,174	-43.5		27	37.5
250	30	10,381	-50.8		26	39.1
200	30	11,817	-55.3		27	37.0
175	30	12,668	-55.9		27	34.6
150	29	13,642	-57.1		27	31.4
125	29	14,788	-59.8		26	25.9
100	29	16,174	-61.1		27	22.7
80	29	17,553	-62.2		27	17.0
70	29	18,378	-62.0		27	14.4
60	28	19,332	-61.7		27	13.3
50	28	20,462	-61.3		28	11.6
40	27	21,844	-60.8		28	9.6
30	27	23,634	-60.4		28	9.9
25	26	24,773	-59.8		29	9.3
20	24	26,176	-58.5		29	10.1
15	21	27,990	-57.0		29	14.0
10	19	30,566	-53.2		28	23.0
7	13	32,896	-47.8		27	34.3
5	5	35,102	-42.8			

NASHVILLE, TENN. 996 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	180	6.6	3.9	18	.4
1000	30	149			14	.8
950	30	568	6.9	1.8	24	4.0
900	30	1,015	4.7	.4	25	6.1
850	30	1,480	2.7	-3.1	26	7.4
800	30	1,969	.7	-6.4	27	8.5
750	30	2,487	-.8	-11.5	26	10.1
700	30	3,036	-3.0	-15.0	26	12.1
650	30	3,619	-5.2	-17.4	26	14.3
600	30	4,246	-8.4	-19.5	26	16.6
550	30	4,912	-12.4	-23.5	26	19.7
500	30	5,640	-17.3	-28.4	26	20.7
450	30	6,413	-22.7	-34.0	26	23.5
400	30	7,277	-28.5	-38.5	26	26.3
350	30	8,221	-35.0	-42.9	26	29.3
300	30	9,280	-42.4	-48.2	26	32.5
250	30	10,492	-49.3		26	36.3
200	30	11,937	-54.8		26	38.9
175	30	12,786	-57.1		26	36.9
150	30	13,755	-59.9		26	33.7
125	30	14,887	-62.7		26	30.4
100	29	16,253	-64.7		26	22.7
80	29	17,613	-64.7		26	17.5
70	29	18,427	-64.2		27	13.9
60	29	19,373	-62.9		27	9.3
50	27	20,495	-62.1		27	8.5
40	24	21,871	-60.5		26	6.7
30	23	23,671	-58.7		29	4.3
25	23	24,818	-57.3		30	4.7
20	20	26,235	-55.8		30	4.3
15	19	28,067	-54.2		30	5.4
10	13	30,679	-50.0		29	9.9
7	6	33,005	-48.1			

* NOME, ALASKA 999 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	5	-8.4	-14.7	04	3.6
1000	30	-4			03	4.2
950	30	398	-8.4	-13.6	08	5.6
900	30	813	-9.8	-13.3	10	4.6
850	30	1,253	-10.8	-14.6	10	3.3
800	30	1,718	-12.6	-18.1	11	2.8
750	30	2,208	-15.2	-21.6	11	2.4
700	30	2,728	-18.3	-26.5	13	2.4
650	30	3,275	-21.8	-30.3	15	2.2
600	30	3,864	-25.3	-34.0	17	2.7
550	30	4,488	-29.3	-38.5	19	3.3
500	30	5,166	-33.9	-42.1	19	4.1
450	30	5,895	-38.8	-44.8	19	4.4
400	30	6,698	-44.0	-43.9	20	5.0
350	30	7,584	-49.1		21	4.7
300	30	8,587	-53.0		22	5.3
250	30	9,759	-53.8		21	5.4
200	30	11,202	-50.5		20	4.6
175	30	12,076	-49.3		20	4.9
150	30	13,087	-49.2		20	4.8
125	30	14,285	-48.6		21	4.7
100	30	15,754	-48.2		21	5.0
80	30	17,223	-48.6		21	4.6
70	29	18,098	-48.7		21	5.1
60	29	19,111	-48.8		22	4.9
50	29	20,309	-48.8		22	4.7
40	29	21,775	-48.9		21	4.9
30	29	23,663	-49.0		23	5.4
25	29	24,861	-48.7		22	5.2
20	27	26,330	-48.9		22	5.7
15	26	28,221	-49.6		22	5.1
10	22	30,885	-50.4		21	6.0
7	12	33,206	-49.1			

NORTH PLATTE, NEBR. 918 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	848	-2.5	-5.5	33	1.3
1000	30	160				
950	30	569				
900	30	1,003	.1	-5.2	32	2.8
850	30	1,463	1.4	-6.6	32	6.1
800	30	1,949	-.5	-9.5	32	8.0
750	30	2,460	-2.8	-13.2	32	9.5
700	30	3,008	-5.7	-17.1	31	10.9
650	30	3,581	-8.9	-19.7	30	12.0
600	30	4,201	-12.5	-22.9	30	13.3
550	30	4,858	-16.5	-27.7	30	13.6
500	30	5,572	-20.7	-32.0	30	15.7
450	30	6,338	-25.9	-36.1	29	18.1
400	30	7,187	-31.8	-40.7	29	19.8
350	30	8,118	-38.5	-46.2	28	20.7
300	30	9,160	-45.8		28	22.1
250	30	10,356	-52.0		29	24.5
200	30	11,789	-55.4		29	24.3
175	30	12,639	-56.4		29	23.7
150	30	13,615	-57.5		29	23.9
125	30	14,764	-58.5		29	21.0
100	30	16,158	-60.8		29	16.6
80	30	17,542	-61.5		29	12.3
70	30	18,369	-61.4		29	9.2
60	30	19,326	-61.2		29	6.3
50	29	20,463	-60.1		30	4.5
40	27	21,859	-59.3		33	4.5
30	27	23,664	-58.3		35	3.3
25	26	24,813	-57.6		36	5.3
20	26	26,224	-56.5		01	5.0
15	17	28,068	-54.9		03	8.2
10	10	30,679	-53.0			

See reference note at end of table

RAWINSONDE DATA

Average monthly values

NOVEMBER 1968

OAKLAND, CALIF. 1019 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	6	10.3	8.2	03	.5
1000	30	165	10.9	7.2	01	.9
950	30	591	10.7	4.2	35	2.4
900	30	1,044	[illegible].5	.2	33	3.4
850	30	1,517	8.0	-5.2	31	4.0
800	30	2,016	6.2	-9.7	30	5.3
750	30	2,542	3.6	-12.5	31	7.6
700	30	3,099	.6	-15.3	30	8.4
650	30	3,689	-3.1	-17.6	30	10.0
600	30	4,320	-6.9	-21.1	30	12.2
550	30	4,991	-11.0	-24.2	29	13.4
500	30	5,721	-15.4	-27.6	29	15.5
450	30	6,508	-20.8	-33.4	29	16.8
400	30	7,371	-26.6	-39.4	30	19.8
350	30	8,321	-33.5	-43.6	30	22.[illegible]
300	30	9,385	-41.3	-48.3	30	25.8
250	30	10,600	-49.8		30	28.4
200	30	12,033	-57.0		30	29.3
175	30	12,873	-59.7		30	27.4
150	30	13,831	-62.2		29	24.4
125	30	14,951	-64.6		30	20.4
100	30	16,307	-66.7		29	15.4
80	30	17,658	-65.9		30	10.7
70	29	18,470	-64.8		30	7.3
60	29	19,412	-63.6		32	4.0
50	29	20,535	-62.4		33	3.1
40	29	21,917	-60.[illegible]		02	2.1
30	29	23,716	-58.4		06	3.2
25	29	24,866	-57.3		06	3.6
20	25	26,287	-55.7		06	3.5
15	21	28,127	-52.5		07	4.9
10	16	30,761	-48.1		08	3.0
7						
5						
4						

OMAHA, NEBR. 969 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	403	-.3	-3.0	32	1.3
1000	30	146				
950	30	557	1.1	-3.0	32	2.2
900	30	993	1.4	-6.5	31	3.9
850	30	1,452	-.4	-9.5	31	4.8
800	30	1,936	-2.3	-12.3	31	5.6
750	30	2,446	-4.[illegible]	-15.0	29	7.1
700	30	2,988	-6.6	-17.8	29	9.2
650	30	3,563	-9.3	-20.3	27	10.6
600	30	4,180	-12.[illegible]	-23.1	29	12.1
550	30	4,834	-16.9	-26.1	28	14.1
500	30	5,549	-21.4	-31.1	28	15.3
450	30	6,309	-26.6	-36.2	28	14.9
400	30	7,162	-32.5	-41.4	28	17.9
350	30	8,091	-39.1	-45.1	28	18.7
300	30	9,131	-46.4		27	22.4
250	29	10,330	-52.6		28	23.6
200	29	11,759	-55.2		28	25.2
175	29	12,609	-56.5		28	24.9
150	29	13,586	-57.4		27	23.7
125	28	14,738	-59.3		28	20.6
100	28	16,130	-60.7		28	15.3
80	28	17,515	-61.1		28	12.8
70	28	18,343	-61.3		29	9.7
60	28	19,298	-60.7		29	7.7
50	25	20,431	-60.4		30	5.3
40	24	21,819	-59.5		32	4.9
30	24	23,622	-58.6		35	4.4
25	21	24,768	-58.0		01	[illegible].4
20	20	26,172	-56.[illegible]		35	6.4
15	14	27,978	-55.[illegible]		35	[illegible].1
10	5	30,629	-52.2			

*** PAGO PAGO, AMERICAN SAMOA 1011 MB**

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	5	28.7	24.1	11	4.1
1000	30	106	27.1	21.2	11	5.1
950	30	559	23.0	17.1	11	6.0
900	30	1,028	19.6	14.0	10	4.8
850	30	1,519	17.2	8.9	09	3.7
800	30	2,035	15.3	2.5	07	2.1
750	30	2,576	13.1	-1.5	04	1.4
700	30	3,159	10.1	-5.8	03	1.1
650	30	3,769	[illegible].7	-10.1	01	1.2
600	30	4,426	3.0	-13.5	36	1.7
550	30	5,120	-1.0	-18.8	33	1.3
500	30	[illegible],882	-5.5	-23.4	30	2.5
450	30	6,697	-10.5	-27.3	28	3.7
400	30	7,602	-16.1	-32.6	26	5.3
350	30	8,595	-23.0	-38.9	27	6.2
300	30	9,706	-31.4	-46.0	27	11.1
250	29	10,972	-41.3		26	14.0
200	29	12,451	-52.9		26	15.7
175	29	13,300	-59.3		25	16.2
150	29	14,250	-66.2		26	14.9
125	29	15,336	-73.1		26	14.0
100	29	16,624	-78.8		25	8.1
80	29	17,896	-77.1		25	.7
70	29	18,672	-71.8		10	3.9
60	29	19,594	-66.6		09	8.3
50	29	20,710	-62.0		09	13.6
40	28	22,100	-58.6		08	18.7
30	28	23,924	-55.0		09	19.9
25	27	25,095	-52.4		09	16.1
20	24	26,550	-48.7		07	8.1
15	20	28,467	-42.0		04	1.2
10	15	31,239	-36.0			
7	[illegible]	33,743	-31.9			

*** PEORIA, ILL. 992 MB**

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	200	1.9	-.7	31	1.0
1000	30	134				
950	30	548	2.4	-1.3	32	4.4
900	30	985	1.2	-5.0	31	4.8
850	30	1,444	-.1	-8.3	29	5.7
800	30	1,926	-2.0	-10.9	29	7.4
750	30	2,439	-4.0	-13.5	29	9.2
700	30	2,982	-6.4	-15.7	29	10.1
650	30	3,556	-9.1	-19.3	28	11.5
600	30	4,176	-12.5	-22.9	28	13.1
550	30	4,830	-16.6	-25.6	28	14.0
500	29	5,544	-21.8	-29.9	28	16.3
450	29	6,308	-26.7	-35.6	28	18.1
400	29	7,154	-32.1	-40.6	28	20.4
350	29	8,084	-38.7	-43.6	27	23.0
300	29	9,128	-45.5		27	27.1
250	29	10,327	-52.1		27	30.3
200	29	11,758	-55.0		27	31.8
175	29	12,609	-55.9		27	30.4
150	29	13,587	-57.6		27	28.[illegible]
125	28	14,732	-59.6		27	23.7
100	28	16,121	-61.3		27	18.5
80	28	17,500	-62.1		27	13.6
70	28	18,326	-61.6		28	11.5
60	27	19,283	-61.2		29	8.4
50	26	20,416	-60.8		29	6.2
40	26	21,807	-59.8		31	5.6
30	26	23,608	-59.0		33	5.0
25	25	24,753	-58.4		35	5.0
20	25	26,160	-57.2		35	6.1
15	24	27,986	-55.2		35	6.9
10	20	30,585	-52.4		34	8.6
7	20	32,908	-48.7		31	13.[illegible]
5	14	35,150	-45.0		31	17.4
4	5	36,583	-42.8			

*** PITTSBURGH, PA. 971 MB**

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	359	4.3	1.4	24	1.9
1000	30	121				
950	30	541	4.9	1.4	25	3.9
900	30	980	3.2	-.8	27	7.0
850	30	1,442	.8	-3.4	27	9.2
800	30	1,927	-1.6	-6.1	27	10.6
750	30	2,441	-4.0	-8.9	27	12.2
700	30	2,982	-6.1	-14.1	27	14.6
650	30	3,556	-8.3	-17.2	27	16.0
600	30	4,178	-11.4	-20.4	27	17.8
550	30	4,838	-15.2	-24.1	27	20.1
500	30	5,556	-19.9	-28.5	27	22.8
450	30	6,325	-25.0	-33.7	26	25.0
400	30	7,177	-30.7	-39.6	26	27.1
350	30	8,112	-37.5	-44.7	26	29.7
300	30	9,160	-44.[illegible]		27	33.1
250	30	10,364	-50.9		27	36.1
200	30	11,802	-54.5		27	36.2
175	30	12,654	-55.8		27	34.7
150	30	13,630	-57.7		27	31.5
125	30	14,775	-59.[illegible]		27	28.5
100	30	16,164	-61.5		27	22.5
80	30	17,546	-61.7		27	17.5
70	30	18,373	-61.2		27	14.0
60	29	19,327	-61.4		27	11.0
50	29	20,453	-60.8		28	8.8
40	29	21,848	-60.1		28	8.0
30	28	23,647	-59.1		29	8.4
25	28	24,791	-58.4		30	8.5
20	28	26,197	-57.[illegible]		30	8.9
15	27	28,021	-55.9		30	10.7
10	25	30,617	-52.9		29	14.4
7	20	32,930	-48.4		29	21.1
5	6	35,159	-43.0			

*** PONAPE, CAROLINE IS. 1005 MB**

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	39	29.0	24.2	07	1.6
1000	30	85	28.4	23.2	08	1.7
950	30	534	24.[illegible]	18.2	10	2.1
900	30	1,012	21.6	14.8	12	2.[illegible]
850	30	1,507	18.8	11.2	10	[illegible].8
800	30	2,026	16.2	7.7	10	3.1
750	30	2,571	13.5	3.5	10	3.5
700	30	3,152	10.3	-1.0	10	4.2
650	30	3,762	7.1	-5.1	10	5.3
600	30	4,421	3.3	-8.2	10	6.9
550	30	5,118	-.5	-13.7	10	7.1
500	30	5,880	-4.[illegible]	-18.2	10	7.6
450	29	6,699	-9.4	-23.3	09	7.4
400	29	7,605	-14.6	-29.8	09	6.5
350	29	8,604	-21.[illegible]	-36.9	09	5.[illegible]
300	29	9,722	-29.[illegible]	-45.0	10	6.2
250	29	10,995	-40.1	-53.6	09	7.3
200	29	12,478	-52.5		09	7.5
175	29	13,327	-59.6		09	7.0
150	29	14,275	-66.8		10	6.9
125	29	15,356	-74.6		09	7.0
100	29	16,629	-81.9		08	12.2
80	29	17,880	-79.8		09	12.9
70	29	18,645	-74.4		09	9.3
60	29	19,552	-69.4		09	9.4
50	29	20,651	-65.9		09	15.8
40	29	22,019	-61.4		09	25.0
30	29	23,837	-52.8		10	25.1
25	28	25,025	-48.5		10	10.5
20	27	26,503	-45.6		27	2.2
15	27	28,431	-42.9		27	10.2
10	25	31,191	-38.1		28	11.7
7	14	33,656	-34.4			
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PORTLAND, MAINE 1011 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	20	.2	-3.4	32	1.8
1000	30	106	.4	-3.7	34	2.4
950	30	515	-.4	-3.3	32	3.2
900	30	949	-2.0	-5.6	30	4.2
850	30	1,402	-3.0	-7.3	29	5.4
800	30	1,882	-4.2	-10.2	29	7.6
750	30	2,384	-6.3	-12.9	28	9.[illegible]
700	30	2,927	-8.4	-17.2	28	13.0
650	30	3,497	-10.6	-19.2	28	16.8
600	30	4,113	-13.8	-21.6	27	18.3
550	30	4,763	-17.8	-26.2	27	20.6
500	30	5,476	-22.3	-30.5	27	24.2
450	30	6,234	-27.3	-35.1	27	26.3
400	30	7,082	-32.7	-39.6	27	29.1
350	30	8,011	-38.9	-43.2	27	32.4
300	30	9,054	-45.3		27	35.3
250	30	10,252	-51.3		27	39.0
200	30	11,690	-54.0		27	37.[illegible]
175	30	12,547	-54.1		27	33.9
150	30	13,533	-55.3		27	29.3
125	30	14,691	-57.5		27	24.4
100	30	16,092	-59.6		27	20.5
80	30	17,486	-60.2		27	15.2
70	30	18,318	-60.2		27	12.2
60	30	19,279	-60.7		28	10.5
50	30	20,413	-60.5		27	8.2
40	30	21,803	-60.8		29	7.3
30	28	23,594	-60.6		30	7.6
25	28	24,728	-60.5		30	8.7
20	24	26,123	-60.0		30	9.6
15	21	27,917	-58.5		30	12.7
10	15	30,484	-55.3		29	20.2
7	13	32,774	-51.7		28	24.6
5	11	34,960	-48.2			

*** QUILLAYUTE, WASH. 1008 MB**

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	58	6.7	6.1	14	1.1
1000	30	125			16	2.3
950	30	547	5.7	2.5	19	5.5
900	30	987	3.1	-.3	21	7.6
850	30	1,448	1.1	-5.1	22	8.6
800	30	1,934	-1.1	-8.8	22	9.7
750	30	2,447	-4.0	-13.5	24	11.0
700	30	2,989	-7.0	-16.1	24	12.3
650	30	3,559	-10.5	-19.9	24	14.1
600	30	4,175	-14.2	-24.1	25	14.6
550	30	4,825	-18.3	-27.8	25	15.6
500	30	5,535	-23.0	-33.0	26	17.1
450	30	6,293	-28.1	-37.1	26	20.0
400	30	7,136	-33.5	-40.3	27	22.8
350	30	[illegible],062	-39.5	-41.9	28	27.2
300	30	9,101	-46.8		28	28.9
250	30	10,291	-53.4		29	30.8
200	30	11,715	-56.6		28	26.[illegible]
175	30	12,561	-57.3		26	25.1
150	30	13,536	-57.3		28	21.9
125	30	14,689	-57.4		28	18.3
100	30	16,096	-58.3		28	14.3
80	29	17,502	-57.7		28	9.[illegible]
70	29	18,342	-58.5		28	[illegible].7
60	29	19,310	-57.7		28	6.7
50	28	20,463	-57.4		29	4.7
40	28	21,876	-56.6		32	3.3
30	27	23,704	-55.7		36	2.3
25	27	24,866	-55.1		04	3.4
20	27	26,294	-54.4		05	4.3
15	21	28,146	-52.9		04	5.8
10	16	30,768	-50.7		05	8.0
7	11	33,173	-48.1			

RAPID CITY, S. DAK. 904 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	966	-1.0	-7.0	33	2.5
1000	30	151				
950	30	568				
900	30	1,000			32	3.6
850	30	1,459	1.1	-8.3	31	6.7
800	30	[illegible],945	-1.4	-10.9	31	[illegible].5
750	30	2,451	-4.5	-13.0	31	[illegible].8
700	30	2,996	-7.7	-16.6	31	10.4
650	30	3,562	-10.9	-21.9	30	11.6
600	30	4,180	-14.5	-26.0	30	12.8
550	30	4,830	-18.4	-28.9	30	13.7
500	30	5,539	-23.0	-32.0	30	15.2
450	30	[illegible],296	-28.4	-38.2	29	15.8
400	30	7,137	-34.5	-42.8	29	17.[illegible]
350	30	8,057	-40.9	-44.1	29	18.1
300	30	9,091	-47.2		30	21.4
250	30	10,282	-52.5		30	24.1
200	30	11,713	-55.1		29	23.1
175	30	12,564	-55.8		29	21.0
150	30	13,543	-56.8		29	19.6
125	30	14,697	-57.[illegible]		29	17.6
100	30	16,098	-59.7		29	14.7
80	30	17,493	-59.5		29	10.7
70	30	18,328	-59.7		30	7.1
60	29	19,291	-59.7		30	6.0
50	28	20,435	-59.3		31	3.8
40	27	21,836	-58.4		34	3.6
30	26	23,653	-57.2		02	4.3
25	23	24,800	-56.[illegible]		03	5.1
20	21	26,224	-56.1		04	8.4
15	13	28,065	-54.6			

ST CLOUD, MINN. 978 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	316	-1.7	-4.2	27	.1
1000	30	136				
950	30	547	-1.1	-4.2	32	1.8
900	30	976	-1.9	-6.8	31	4.0
850	30	1,430	-3.2	-10.9	30	5.2
800	30	1,908	-4.9	-14.4	31	6.3
750	30	2,410	-7.3	-17.2	30	7.1
700	30	2,949	-9.6	-19.1	30	9.1
650	30	3,512	-12.6	-23.5	30	9.9
600	30	4,126	-15.7	-26.5	29	11.1
550	30	4,772	-19.6	-29.2	29	12.6
500	30	5,479	-24.3	-32.9	29	13.5
450	30	6,233	-29.4	-37.6	29	14.0
400	30	7,071	-35.4	-42.0	29	15.6
350	30	7,988	-41.9	-46.0	29	17.3
300	30	9,017	-48.4		28	20.4
250	30	10,202	-53.2		28	21.9
200	30	11,633	-54.5		28	22.4
175	30	12,488	-54.6		28	21.7
150	30	13,474	-55.1		28	20.3
125	30	14,635	-56.2		28	17.7
100	30	16,050	-57.3		29	14.2
80	30	17,458	-58.1		29	10.8
70	30	18,297	-58.5		30	8.4
60	30	19,266	-58.9		30	6.9
50	29	20,413	-58.9		31	5.5
40	27	21,822	-58.0		34	4.7
30	25	23,634	-57.3		36	5.4
25	23	24,791	-57.2		01	7.9
20	23	26,203	-56.8		02	9.0
15	18	28,023	-55.8		02	11.3
10	6	30,636	-52.7			

*** ST PAUL IS., ALASKA 990 MB**

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	10	.9	-1.5	02	2.0
1000	30	-75				
950	30	338	-.8	-3.9	04	2.2
900	30	766	-4.0	-6.4	08	1.6
850	30	1,215	-7.1	-9.2	10	1.5
800	30	1,686	-9.[illegible]	-14.1	12	1.9
750	30	2,181	-12.8	-19.0	13	1.5
700	30	2,705	-16.1	-22.9	16	1.3
650	30	3,257	-19.[illegible]	-26.8	20	2.0
600	30	3,849	-23.[illegible]	-31.1	21	2.2
550	30	4,475	-28.1	-35.9	21	2.6
500	30	5,156	-33.0	-40.4	[illegible]	2.7
450	30	5,888	-38.2	-42.0	21	2.7
400	30	6,691	-43.4	-44.9	22	2.7
350	30	7,579	-48.3		20	3.5
300	30	8,586	-51.7		20	4.2
250	30	9,767	-51.6		20	3.3
200	30	11,222	-49.2		21	4.5
175	29	12,100	-48.1		21	4.9
150	29	13,116	-48.[illegible]		22	4.9
125	29	14,317	-48.2		22	4.8
100	29	15,787	-48.3		22	4.5
80	29	17,257	-48.2		21	3.9
70	29	18,136	-48.3		21	4.0
60	29	19,149	-48.9		21	3.7
50	29	20,346	-49.2		20	2.7
40	29	21,809	-49.3		18	3.2
30	29	23,694	-49.[illegible]		16	3.9
25	28	24,888	-49.4		15	4.6
20	28	26,352	-48.9		14	5.2
15	25	28,238	-49.2		12	7.3
10	23	30,901	-49.3		12	[illegible].9
7	17	33,252	-48.[illegible]		13	6.9
5	[illegible]	35,441	-48.6			
4	5	36,850	-49.7			

SALEM, OREG. 1011 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	61	6.1	5.0	18	2.7
1000	30	151	6.[illegible]	5.2	19	3.4
950	30	574	7.2	3.9	20	6.3
900	30	1,018	5.1	.8	[illegible]	7.9
850	30	1,483	2.6	-3.5	23	9.5
800	30	1,971	.5	-8.6	24	9.3
750	30	2,482	-2.3	-12.5	24	9.6
700	30	3,032	-5.4	-17.1	25	11.0
650	30	3,603	-8.7	-19.6	26	12.5
600	30	4,227	-12.2	-21.8	27	13.8
550	30	4,879	-16.3	-25.6	27	15.0
500	30	5,598	-20.8	-30.6	27	16.9
450	30	6,361	-25.8	-35.8	27	19.2
400	30	7,214	-31.5	-39.6	28	22.1
350	30	8,147	-37.9	-42.3	28	23.9
300	30	9,192	-45.2	-45.2	28	27.0
250	30	10,389	-52.1		28	29.4
200	30	11,814	-56.7		29	31.6
175	30	12,658	-58.1		23	27.7
150	30	13,627	-59.4		28	24.4
125	30	14,766	-59.7		28	20.0
100	30	16,157	-60.8		28	15.6
80	30	17,545	-60.5		28	[illegible].7
70	28	18,373	-60.3		28	6.6
60	26	19,329	-59.4		29	5.3
50	25	20,475	-58.4		31	3.2
40	24	21,880	-59.0		01	2.4
30	24	23,697	-56.6		05	4.4
25	23	24,856	-55.0		06	5.4
20	21	26,281	-54.0		07	7.2
15	20	28,132	-52.8		06	7.7
10	14	30,780	-50.7		04	10.0
7	5	33,194	-45.9			

SALT LAKE CITY, UTAH 874 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	1,288	1.3	-3.1	15	2.0
1000	30	194				
950	30	613				
900	30	1,054				
850	30	1,516	2.4	-4.2	16	2.6
800	30	2,005	.[illegible]	-7.6	20	2.9
750	30	2,523	-2.0	-10.1	27	3.9
700	30	3,067	-5.2	-13.0	29	6.5
650	30	3,647	-8.5	-15.9	30	8.5
600	30	4,263	-11.[illegible]	-20.9	30	10.4
550	30	4,925	-15.4	-24.5	30	12.5
500	30	5,639	-19.8	-28.7	30	13.7
450	30	6,412	-24.7	-33.1	30	15.5
400	30	7,261	-30.5	-37.6	30	18.1
350	30	8,198	-37.1	-43.1	30	20.0
300	30	9,246	-44.5		30	22.7
250	30	10,447	-51.7		30	25.2
200	30	11,878	-55.9		30	27.0
175	30	12,724	-57.7		29	25.9
150	30	13,093	-59.7		29	23.0
125	30	14,825	-61.9		29	20.1
100	30	16,201	-62.7		29	15.[illegible]
80	30	17,574	-63.1		27	10.2
70	30	18,397	-62.3		30	7.6
60	30	19,347	-62.2		30	6.3
50	30	20,477	-61.0		32	4.0
40	29	21,870	-59.4		35	3.1
30	28	23,084	-57.1		05	3.7
25	28	24,840	-56.2		03	5.[illegible]
20	28	26,260	-55.3		05	7.2
15	23	28,100	-53.2		05	8.1
10	17	30,737	-51.0		04	7.1
7	5	33,123	-46.8			

SAN DIEGO, CALIF. 1002 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	124	11.2	8.3	05	.9
1000	30	138			04	1.0
950	30	572	15.3	3.3	01	1.1
900	30	1,029	13.6	-.7	35	1.3
850	30	1,508	11.2	-4.7	32	2.4
800	30	2,012	8.7	-8.6	32	3.6
750	30	2,543	6.1	-11.4	32	5.5
700	30	3,107	3.4	-14.2	32	7.[illegible]
650	30	3,704	.1	-17.0	32	9.4
600	30	4,342	-3.7	-20.3	31	11.5
550	30	5,020	-7.8	-23.6	31	13.0
500	30	5,759	-12.9	-27.7	31	14.6
450	30	6,552	-18.6	-31.7	30	16.7
400	30	7,423	-24.9	-37.3	30	18.4
350	30	[illegible],380	-32.1	-43.8	30	19.9
300	30	9,450	-40.3	-48.1	30	21.3
250	30	10,669	-49.0		30	22.4
200	30	12,107	-57.0		30	21.8
175	29	12,948	-59.7		29	22.8
150	29	13,904	-62.8		29	20.4
125	29	15,018	-66.2		29	17.7
100	28	16,367	-69.6		30	12.2
80	29	17,697	-68.9		30	7.3
70	28	18,498	-67.3		30	6.1
60	28	19,431	-64.9		30	3.5
50	27	20,547	-62.8		29	2.6
40	26	21,925	-60.6		30	2.6
30	26	23,729	-57.6		31	1.9
25	25	24,880	-57.0		30	2.1
20	25	26,296	-55.5		32	1.1
15	24	28,143	-52.1		36	2.2
10	20	30,805	-47.3		36	4.5
7	8	33,194	-44.1			

SAN JUAN, P. R. 1014 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	6	24.5	22.2	13	1.7
1000	30	128	24.7	21.1	11	4.2
950	30	579	22.3	17.6	09	6.3
900	30	1,047	19.6	14.2	09	6.0
850	30	1,538	16.8	10.2	09	5.6
800	30	2,053	14.1	6.5	10	5.4
750	30	2,595	11.5	1.1	10	5.1
700	30	3,171	8.6	-4.6	09	4.0
650	30	3,776	5.4	-9.4	09	3.9
600	30	4,430	1.8	-14.0	08	3.6
550	30	5,123	-2.2	-19.0	09	3.7
500	30	5,878	-6.5	-24.3	06	3.2
450	30	6,691	-11.4	-29.2	05	2.9
400	30	7,587	-17.4	-34.0	02	3.0
350	30	8,574	-24.[illegible]	-40.8	34	3.8
300	30	9,678	-33.1	-48.1	33	5.7
250	30	10,933	-43.0		32	8.4
200	30	12,399	-54.5		32	12.7
175	30	13,241	-60.9		32	12.8
150	30	14,185	-67.3		31	11.1
125	30	15,268	-72.7		31	9.6
100	30	16,566	-76.3		34	5.2
80	30	17,846	-77.2		03	3.8
70	29	18,621	-73.9		06	4.3
60	29	19,531	-68.5		05	5.1
50	29	20,641	-62.6		08	5.3
40	29	22,033	-58.3		07	6.5
30	28	23,863	-53.9		08	7.8
25	24	25,036	-52.3		1[illegible]	7.6
20	20	26,481	-49.7		12	4.8
15	13	28,381	-44.4		23	8.6
10	6	31,128	-39.3			

See reference note at end of table

RAWINSONDE DATA

Average monthly values

SAN NICOLAS, CALIF. 996 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	23	174	12.9	9.0	32	4.5
1000	23	142				
950	28	578	16.2	-1.7	36	3.8
900	28	1,035	14.1	-4.8	36	3.6
850	28	1,515	12.0	-6.6	35	4.0
800	28	2,020	9.4	-10.7	33	5.3
750	28	2,552	7.0	-14.3	33	6.6
700	28	3,115	3.8	-17.3	33	8.0
650	28	3,713	.3	-20.4	32	9.9
600	28	4,350	-3.8	-24.4	32	11.3
550	28	5,031	-8.1	-26.0	31	13.4
500	28	5,764	-13.4	-29.6	31	14.2
450	28	6,557	-19.2	-34.5	30	16.0
400	28	7,423	-25.4	-39.9	31	15.8
350	28	8,376	-33.0	-45.9	31	17.3
300	28	9,442	-41.4	-53.2	30	19.3
250	28	10,655	-50.5	-61.6	31	21.1
200	28	12,082	-58.6	-67.7	30	21.7
175	28	12,915	-61.8	-70.3	30	19.4
150	28	13,862	-64.6		29	19.3
125	28	14,967	-68.2		30	17.6
100	28	16,298	-70.5		30	12.7
80	28	17,026	-69.2		28	5.9
70	28	18,427	-67.8		31	5.2
60	23	19,358	[illegible]		32	3.4
50	28	20,472	-63.7		31	[illegible]
40	27	21,850	-61.1		30	1.5
30	27	23,046	[illegible]		29	1.5
25	27	24,793	-57.8		33	1.2
20	26	26,204	-35.9		35	2.0
15	26	28,046	-52.9		[illegible]	3.5
10	25	30,695	-47.6		31	6.1
7	21	33,050	-44.4		18	10.9
5	12	35,300	-41.4		29	19.8
4	9	36,766	-40.1			

* SAULT STE MARIE, MICH. 987 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	221	-.5	-3.4	02	2.2
1000	30	119				
950	30	526	-2.3	-4.7	02	2.1
900	30	956	-3.8	-6.0	32	2.2
850	30	1,406	-5.3	-8.5	29	4.3
800	30	1,882	-6.9	-10.9	29	[illegible]
750	30	2,382	-8.7	-15.5	29	[illegible]
700	30	2,917	-11.1	-18.4	29	8.2
650	30	3,480	-14.0	-22.5	29	10.4
600	30	4,088	-16.9	-26.9	29	12.8
550	30	4,736	-20.7	-26.9	29	13.7
500	30	5,435	-25.0	-32.4	28	15.3
450	30	6,191	-30.1	-38.0	28	17.3
400	30	7,023	-35.6	-42.9	28	20.0
350	30	7,939	-42.2		28	21.3
300	30	8,967	-48.4		27	23.8
250	30	10,154	-52.8		27	26.4
200	30	11,590	-53.4		27	24.2
175	30	12,450	-53.4		27	21.1
150	30	13,441	-53.8		27	19.4
125	30	14,611	-54.5		27	17.9
100	30	16,031	-56.5		27	15.0
80	30	17,443	-57.5		28	11.4
70	30	18,285	-57.6		28	9.1
60	30	19,259	-57.5		29	8.5
50	30	20,410	-57.8		30	7.4
40	30	21,817	-57.9		31	6.9
30	30	23,632	-57.6		34	[illegible]
25	30	24,783	-57.3		34	7.6
20	30	26,195	-56.8		35	9.0
15	29	28,021	-56.2		35	10.5
10	27	30,619	-53.8		35	12.7
7	22	32,920	-50.6		33	16.2
5	9	35,094	-48.1			

* SHEMYA, ALASKA 995 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	38	1.0	-3.1	32	5.5
1000	30				32	6.9
950	30	-12	-1.8	-5.8	32	7.3
900	30	837	-5.4	-7.9	32	8.1
850	30	1,283	-8.7	-11.9	33	8.3
800	30	[illegible]	-11.5	-16.4	33	9.4
750	30	2,239	-14.0	-21.6	32	[illegible]
700	30	2,764	-16.9	-24.7	32	8.0
650	30	3,314	-20.3	-28.4	31	8.2
600	30	[illegible]	-24.3	-31.8	31	8.4
550	30	4,528	-28.4	-36.2	31	9.5
500	30	5,211	-33.2	-39.5	31	10.0
450	30	5,942	-38.3	-42.7	30	10.2
400	30	6,745	-43.5	-46.0	29	10.2
350	29	7,628	-49.0		30	10.6
300	29	8,630	-52.7		29	11.3
250	29	9,807	-52.1		29	12.8
200	29	11,258	[illegible]		28	13.4
175	29	12,133	-49.3		28	11.0
150	29	13,143	-49.1		25	10.8
125	29	14,340	-48.9		28	10.8
100	28	15,811	-49.1		28	[illegible]
80	28	17,276	-49.1		28	8.7
70	28	18,151	-49.6		28	7.6
60	27	19,161	-50.4		29	6.1
50	27	20,349	-51.0		28	4.9
40	27	21,800	-51.5		28	2.4
30	27	23,668	-51.7		04	1.0
25	27	24,852	-51.5		08	2.4
20	27	26,301	-51.0		06	3.4
15	24	28,167	-50.8		09	5.0
10	20	30,806	-50.2		10	5.6
7	14	33,143	-48.8		12	10.0
5	9	35,363	-48.1			

* SHREVEPORT, LA. 1009 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	79	[illegible]	5.9	26	[illegible]
1000	30	149	9.2	5.1	28	.6
950	30	579	9.7	3.8	25	3.9
900	30	1,024	7.9	-.8	27	5.8
850	30	1,495	6.5	-4.0	28	[illegible]
800	30	1,992	[illegible]	-8.6	28	[illegible]
750	30	2,517	3.0	-11.4	28	10.2
700	30	3,074	1.1	-15.3	28	11.9
650	30	3,663	-1.8	-18.6	27	[illegible]
600	30	4,300	-5.4	-21.2	27	15.9
550	30	4,974	-9.8	-25.2	27	17.6
500	30	5,708	-14.6	-30.7	26	19.7
450	30	6,495	-20.0	-35.7	26	23.3
400	30	7,363	-26.3	-40.7	26	25.9
350	30	8,316	-32.9	-44.8	26	28.2
300	30	9,386	-40.1	-47.4	26	30.4
250	30	10,610	-47.8		26	[illegible]
200	30	12,057	-55.1		26	35.1
175	30	12,906	-57.8		26	32.6
150	30	13,870	-61.0		27	[illegible]
125	29	14,991	-65.2		27	25.0
100	28	16,344	-67.9		27	20.2
80	28	17,687	-67.2		26	13.4
70	28	18,494	-65.5		27	11.1
60	28	19,434	-64.0		27	10.0
50	28	20,556	-62.4		27	[illegible]
40	26	21,936	-61.3		26	[illegible]
30	24	23,731	-58.8		29	7.7
25	24	24,879	-57.6		29	7.5
20	23	26,298	-55.7		28	7.3
15	22	28,141	-52.9		27	[illegible]
10	22	30,789	-47.9		28	[illegible]
7	19	33,177	-41.6		27	[illegible]
5	10	35,489	-36.7			

SPOKANE, WASH. 934 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	717	.3	-1.6	18	1.3
1000	30	161				
950	30	572				
900	30	1,011	1.2	-1.3	20	[illegible]
850	30	1,471	.1	-4.8	23	[illegible]
800	30	1,955	-2.1	-8.0	25	7.3
750	30	2,458	-4.7	-12.3	25	[illegible]
700	30	3,006	-7.7	-17.0	26	9.6
650	30	3,575	-10.6	-21.0	27	11.1
600	30	4,192	[illegible]	-25.8	27	12.0
550	30	4,845	[illegible]	-29.1	27	14.0
500	30	5,553	-22.8	-33.9	27	[illegible]
450	30	6,313	-27.6	-38.0	28	18.6
400	30	7,156	-33.6	-41.7	28	20.9
350	30	8,080	-40.1	-44.3	28	[illegible]
300	30	9,117	-47.1		29	28.4
250	30	10,307	-53.1		29	31.2
200	30	11,736	[illegible]		29	30.7
175	30	12,586	-56.0		29	27.5
150	30	13,566	-56.3		29	24.4
125	30	14,721	-57.3		28	[illegible]
100	30	16,129	-58.2		28	15.0
80	29	17,535	-58.3		29	10.7
70	29	18,376	-57.7		29	[illegible]
60	29	19,346	-58.0		30	6.5
50	29	20,497	[illegible]		32	4.0
40	29	21,909	-56.6		34	4.2
30	28	23,740	[illegible]		02	[illegible]
25	27	24,905	-54.0		04	5.4
20	26	26,342	-52.8		05	[illegible]
15	22	28,207	-52.6		04	7.3
10	10	30,846	-51.2			

* SWAN ISLAND, W. I. 1012 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	10	25.9	22.3	05	3.2
1000	30	117	25.2	21.8	[illegible]	5.0
950	30	569	22.0	19.1	07	6.1
900	30	1,036	19.0	15.8	06	[illegible]
850	30	1,526	16.1	12.6	08	4.9
800	30	2,041	[illegible]	8.6	09	3.9
750	30	2,585	11.2	3.7	11	3.7
700	30	3,157	8.4	-1.6	11	2.5
650	30	3,767	5.1	-6.5	12	[illegible]
600	30	4,416	[illegible]	-9.4	13	1.8
550	30	5,106	-2.3	-13.8	14	[illegible]
500	30	5,864	-6.5	-19.8	13	[illegible]
450	30	6,679	-11.5	-25.4	12	.4
400	30	7,573	-17.4	-29.5	25	1.3
350	30	8,561	-24.0	-37.2	27	4.1
300	30	9,666	-32.6	-44.3	26	6.2
250	29	10,923	-43.0		24	9.2
200	29	12,386	-55.3		23	12.4
175	29	13,225	-62.0		24	14.5
150	28	14,162	-68.9		25	13.7
125	27	15,240	-73.0		25	10.2
100	27	16,534	-77.3		23	3.6
80	27	17,808	-77.2		12	1.7
70	27	18,579	-74.0		08	4.1
60	27	19,489	-68.8		09	[illegible]
50	27	20,595	-63.7		09	5.8
40	26	21,985	-58.3		09	7.9
30	26	23,806	-55.8		09	9.1
25	26	24,970	-53.9		09	8.7
20	26	26,411	-50.8		10	4.6
15	26	28,306	-45.2		24	5.2
10	25	31,035	-41.4		25	15.7
7	17	33,475	-37.6		26	24.8
5						

TAMPA, FLA. 1016 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	8	13.5	11.2	06	1.9
1000	30	156	15.7	11.0	07	2.9
950	30	589	14.1	8.7	19	1.1
900	30	1,047	12.1	4.5	23	2.7
850	30	1,526	10.9	.1	25	4.5
800	30	2,031	9.7	-5.9	25	5.9
750	30	2,567	8.5	-9.4	25	7.2
700	30	3,134	6.4	-13.5	25	8.0
650	30	3,737	3.4	-17.1	26	9.3
600	30	4,383	-.6	-20.9	26	11.3
550	30	[illegible]	-5.1	-24.4	26	12.7
500	30	5,816	-9.9	-28.1	26	14.1
450	30	6,616	-15.7	-32.5	26	15.6
400	30	7,500	-22.1	-38.0	26	17.3
350	30	[illegible]	-29.0	-42.3	26	19.9
300	30	9,553	-36.9	-48.9	26	23.0
250	30	10,792	-45.6		26	29.6
200	30	12,246	-55.4		26	32.7
175	30	13,087	-60.6		25	30.6
150	30	14,036	-65.4		26	29.3
125	30	15,135	-69.1		26	25.1
100	30	16,457	-72.3		26	22.4
80	30	17,769	-72.0		26	16.4
70	30	18,558	-69.9		26	12.3
60	30	19,483	-66.6		25	6.7
50	29	20,595	-63.4		24	5.3
40	29	21,975	-60.8		18	7.2
30	29	23,777	-57.4		28	11.4
25	28	24,935	-55.7		27	12.1
20	25	26,366	-54.5		26	13.1
15	20	28,219	-50.4		26	14.8
10	11	30,892	[illegible]			

TOPEKA, KANS. 985 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	269	1.4	-1.3	35	1.0
1000	30	149				
950	30	566	3.3	-3.0	34	1.9
900	30	1,003	2.4	-4.9	33	[illegible]
850	30	1,465	1.6	-9.3	32	4.5
800	30	1,952	-.2	-11.1	31	6.3
750	30	2,464	-2.6	-13.6	30	7.2
700	30	3,012	-4.9	-17.2	29	9.0
650	30	3,568	-7.5	-19.9	30	10.8
600	30	4,211	-11.1	-21.9	29	12.1
550	30	4,869	-15.0	-25.3	28	13.4
500	30	5,590	-19.6	-29.1	28	14.0
450	30	6,356	[illegible]	-33.9	28	15.6
400	30	7,211	-31.1	-39.3	28	[illegible]
350	30	8,145	-37.9	-45.1	27	20.0
300	30	9,191	-45.3		27	21.3
250	30	10,390	-51.8		27	23.1
200	29	11,823	-54.7		27	27.8
175	29	12,675	-55.9		27	28.0
150	29	13,651	-58.2		27	26.8
125	29	14,793	-60.1		27	21.4
100	29	16,177	[illegible]		27	16.9
80	29	17,550	-63.1		28	12.8
70	28	18,373	-62.5		28	9.0
60	28	19,327	-61.8		28	7.1
50	28	20,457	-61.0		30	4.7
40	26	21,848	-60.5		31	3.5
30	24	23,652	-58.7		33	3.2
25	23	24,800	-57.6		36	3.1
20	22	26,213	-56.2		01	3.4
15	22	28,046	-54.6		34	4.8
10	15	30,681	-49.7			
7	5	33,070	[illegible]			

+ TRUK, CAROLINE IS. 1010 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	2	28.8	24.8	02	1.2
1000	30	91	27.8	23.1	03	1.2
950	30	543	23.8	18.9	07	.9
900	30	1,017	20.8	15.4	08	1.0
850	30	1,511	18.2	11.6	09	1.3
800	30	2,029	15.6	8.3	10	[illegible]
750	30	2,574	12.9	4.7	11	[illegible]
700	30	3,153	10.0	.7	11	2.9
650	30	3,766	6.6	-2.9	11	3.7
600	30	4,419	[illegible]	-7.1	10	5.3
550	30	5,115	-.9	-12.1	10	5.9
500	30	5,876	-4.9	-17.3	10	6.6
450	30	6,695	-9.7	-22.6	10	6.5
400	30	7,600	-15.1	-29.3	10	5.8
350	30	8,597	-21.7	-36.3	11	6.2
300	30	9,715	-29.8	-44.3	11	5.6
250	30	10,988	-40.1	-53.7	10	[illegible]
200	30	12,472	-52.3		10	6.6
175	30	13,322	-59.4		09	7.1
150	30	14,271	-66.9		08	8.1
125	30	15,351	-75.0		08	9.8
100	30	16,622	-81.8		09	12.9
80	30	17,876	-79.1		09	11.0
70	30	18,643	-74.5		09	[illegible]
60	30	19,550	[illegible]		09	10.1
50	30	20,650	-65.3		09	15.3
40	30	22,023	-60.9		09	24.2
30	30	23,841	[illegible]		09	24.9
25	29	25,025	-48.8		10	9.4
20	28	26,503	-45.7		25	2.9
15	27	28,433	-42.4		27	10.9
10	26	31,197	-38.1		27	8.3
7	16	33,657	-34.6			
5	5	35,984	-34.1			

* TUCSON, ARIZ. 925 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	789	9.4	-.5	14	[illegible]
1000	30	135				
950	30	566				
900	30	1,019	13.3	-1.7	13	3.1
850	30	1,498	11.1	-4.3	14	1.1
800	30	2,001	7.9	-6.5	26	2.1
750	30	2,528	4.6	-10.2	27	3.5
700	30	3,090	1.5	-13.9	28	4.6
650	30	3,678	-1.6	-18.8	28	[illegible]
600	30	4,317	-5.3	-22.9	28	8.3
550	30	4,986	-9.5	-26.0	29	9.8
500	30	5,725	-14.3	-30.1	29	[illegible]
450	30	6,510	-19.7	-34.3	29	14.2
400	30	7,382	-25.8	-39.0	29	16.5
350	30	8,338	-32.2	-44.8	28	[illegible]
300	30	9,409	-40.0	-50.2	29	19.9
250	29	10,630	-48.9		29	22.7
200	29	12,073	-55.8		28	[illegible]
175	29	12,917	-59.2		29	23.4
150	29	13,875	-62.5		29	20.4
125	29	14,991	-65.6		29	18.4
100	29	16,336	-68.7		28	13.9
80	29	17,674	-68.1		29	9.7
70	29	18,477	-67.1		28	7.2
60	29	19,411	-65.0		28	5.6
50	29	20,530	-63.1		27	[illegible]
40	29	21,912	-60.4		27	4.4
30	29	23,712	-58.6		28	5.7
25	28	24,861	-57.4		27	5.0
20	28	26,274	-56.6		28	4.8
15	28	28,111	-53.5		30	[illegible]
10	24	30,738	-48.6		31	7.1
7	15	33,114	-43.8		29	10.0

* VANDENBERG AFB, CALIF. 1007 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	100	10.5	7.7	04	1.2
1000	29	.55	12.3	7.6	02	1.7
950	29	588	13.8	2.8	01	4.9
900	29	1,042	12.7	-2.6	35	4.9
850	29	1,520	10.9	-5.8	34	5.0
800	29	2,023	8.6	-9.9	33	[illegible]
750	29	2,554	6.0	-14.7	32	7.0
700	29	3,116	3.0	-18.9	32	8.0
650	29	3,709	-.3	-20.6	32	9.9
600	29	4,349	-4.3	-24.5	31	12.1
550	29	5,023	-8.8	-27.2	31	14.2
500	29	[illegible]	-13.8	-31.0	30	15.4
450	29	6,549	-19.5	-35.0	30	17.0
400	29	7,419	-26.0	-40.3	30	19.7
350	29	8,372	-33.3	-44.9	30	21.2
300	29	9,437	-41.2	-51.1	31	21.8
250	28	10,658	-49.8		31	24.1
200	28	12,091	-57.6		30	24.7
175	28	12,926	-61.5		30	22.7
150	28	13,875	-64.2		29	20.7
125	28	14,984	-66.7		29	17.4
100	27	16,320	-69.0		29	13.1
80	27	17,655	-68.5		30	9.3
70	27	18,427	-67.1		30	6.4
60	27	19,390	-65.1		30	4.6
50	27	20,506	-63.5		33	3.6
40	27	21,881	-61.7		32	3.1
30	27	23,673	-59.4		02	1.9
25	27	24,818	-58.0		04	1.6
20	27	26,229	-56.2		04	2.1
15	26	28,069	-53.4		04	3.2
10	25	30,712	-49.0		30	3.0
7	21	33,078	-44.7		29	4.2
5	10	35,335	-41.1			

VICTORIA, TEXAS 1014 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	33	11.6	9.5	02	1.9
1000	30	147	14.0	9.1	05	2.3
950	30	577	13.1	6.3	16	1.1
900	30	1,034	11.5	3.9	22	2.6
850	30	1,511	9.7	-.8	25	4.6
800	30	2,014	6.4	-4.9	26	5.7
750	30	2,543	5.8	-7.4	26	6.9
700	30	3,108	3.1	-10.6	26	8.6
650	30	3,703	.3	-14.6	26	10.9
600	30	4,345	-2.9	-19.2	27	12.7
550	30	5,025	-7.1	-23.8	27	14.3
500	30	5,766	-12.0	-28.0	27	[illegible]
450	30	6,560	-17.9	-34.2	27	18.7
400	30	7,435	-23.9	-38.7	26	20.0
350	30	8,396	-31.2	-44.6	26	24.0
300	30	9,472	-39.0	-50.0	26	[illegible]
250	30	10,699	-47.8		26	28.4
200	30	12,143	-56.2		26	30.9
175	30	12,985	-59.7		26	29.2
150	29	13,937	-63.7		25	28.3
125	29	15,045	-67.6		26	24.7
100	29	16,375	-70.9		26	[illegible]
80	25	17,701	-70.2		26	12.3
70	25	18,498	-68.2		26	9.9
60	23	19,431	-65.2		27	8.2
50	22	20,549	-63.1		27	[illegible]
40	20	21,929	-60.9		27	8.5
30	20	23,725	-59.2		27	10.7
25	20	24,870	-58.4		27	12.3
20	18	26,265	-57.1		27	[illegible]
15	16	28,110	-53.9		27	12.1
10	11	30,754	-46.2			
7	5	33,110	-42.1			

* WAKE IS., PACIFIC AREA 1014 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	5	27.1	23.7	09	5.6
1000	30	125	26.0	22.9	09	6.3
950	30	575	22.5	20.1	09	6.7
900	30	1,047	19.4	16.0	09	6.2
850	30	1,538	17.1	11.4	10	5.3
800	30	2,055	15.5	4.3	10	4.4
750	30	2,597	13.3	-2.1	10	3.3
700	30	3,179	10.3	-5.1	11	[illegible]
650	30	3,786	6.8	-7.8	12	2.3
600	30	4,445	2.9	-12.5	12	2.1
550	30	5,141	-1.2	-16.4	13	1.8
500	30	5,899	-5.8	-20.6	13	1.2
450	30	6,715	-10.9	-24.8	10	.4
400	30	7,614	-16.4	-31.5	32	.1
350	30	8,604	-23.6	-38.5	29	1.7
300	30	9,713	-31.9	-46.4	31	3.0
250	30	10,974	-41.9		30	4.5
200	30	12,447	-53.7		31	4.7
175	30	13,293	-60.2		31	4.6
150	30	14,238	-67.2		33	4.8
125	30	15,319	-74.3		35	[illegible]
100	28	16,599	-80.3		05	2.6
80	27	17,857	-80.8		08	6.2
70	26	18,616	-76.6		09	6.7
60	26	19,516	-70.0		08	6.5
50	26	20,618	-64.2		09	6.7
40	25	21,995	-60.5		09	7.7
30	25	23,802	-57.0		09	[illegible]
25	25	24,961	-55.7		09	[illegible]
20	24	26,384	-54.2		09	5.7
15	22	28,255	-49.2		33	.5
10	17	30,939	-42.9		28	15.7
7	11	33,341	-36.7		28	19.0
5	9	35,707	-31.6			

* WALLOPS IS., VA. NASA 1014 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	3	8.2	5.6	30	1.8
1000	30	115	9.5	3.7	29	3.3
950	30	538	[illegible]	1.3	29	6.2
900	30	986	6.3	-.6	29	7.4
850	30	1,454	4.3	-3.4	28	8.4
800	30	1,946	2.6	-7.5	27	[illegible]
750	30	2,465	.4	-12.6	26	[illegible]
700	30	3,018	-1.7	-17.4	26	16.0
650	30	3,600	[illegible]	-20.0	26	18.4
600	30	4,233	-7.9	-21.9	26	20.9
550	30	4,896	-12.1	-25.1	26	22.3
500	30	5,627	-17.1	-29.4	26	24.5
450	30	6,404	-22.1	-33.6	26	[illegible]
400	30	7,266	-27.7	-40.0	27	[illegible]
350	30	8,213	-34.5	-45.7	27	30.7
300	30	9,275	-41.4	-48.8	26	33.4
250	30	10,493	-48.9		26	37.6
200	30	11,936	-55.1		27	[illegible]
175	30	12,783	[illegible]		26	35.6
150	30	13,749	-60.3		26	33.7
125	30	14,881	-62.6		27	28.9
100	30	16,249	-64.6		27	23.1
80	30	17,612	-64.5		27	15.5
70	30	18,428	-63.7		27	13.4
60	30	19,375	[illegible]		27	13.5
50	30	20,498	-62.5		27	11.0
40	30	21,879	-61.3		28	9.0
30	30	23,670	-59.9		29	7.4
25	28	24,809	-58.9		28	8.0
20	28	26,214	-57.2		28	[illegible]
15	24	28,046	-54.7		28	12.1
10	21	30,656	-50.8		27	19.7
7	12	33,014	-45.7			

WASHINGTON DULLES INT. AP 1005 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	85	4.1	1.5	29	1.1
1000	30	124			27	1.0
950	30	549	6.6	.7	29	[illegible]
900	30	989	4.3	-.9	29	6.9
850	30	1,453	2.6	-3.2	29	8.7
800	30	1,942	.5	-6.3	28	10.0
750	30	2,460	-1.0	-10.2	28	11.8
700	30	3,007	-3.4	-13.6	27	13.7
650	30	3,590	-6.0	-16.6	27	15.6
600	30	4,214	-9.4	-20.6	26	17.9
550	30	4,882	[illegible]	-23.0	26	19.6
500	30	5,601	[illegible]	[illegible]	26	21.1
450	30	6,378	-23.0	-34.2	26	22.4
400	30	7,234	-29.1	-40.2	27	25.0
350	29	8,175	-35.9	-45.4	26	[illegible]
300	29	9,231	-43.0		26	32.6
250	28	10,441	-50.0		26	38.3
200	27	11,880	-54.7		26	[illegible]
175	27	12,730	-56.6		26	38.4
150	26	13,702	-58.3		26	[illegible]
125	25	14,835	-61.0		26	28.7
100	25	16,215	-62.9		26	23.8
80	25	17,591	-62.5		26	17.9
70	25	18,414	[illegible]		26	13.7
60	24	19,369	-61.7		27	11.7
50	23	20,501	-61.3		27	10.7
40	22	21,886	-61.1		28	7.4
30	21	23,678	-59.3		28	[illegible]
25	20	24,827	-58.2		29	8.4
20	20	26,236	-57.0		29	8.3
15	18	28,066	-55.1		28	13.0
10	13	30,701	-50.1			

See reference note at end of table

RAWINSONDE DATA

Average monthly values

NOVEMBER 1968

WINNEMUCCA, NEV. 872 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	1,312	1.7	-3.1	14	.7
1000	29	187				
950	29	609				
900	29	1,048				
850	29	1,514	2.7	-2.6	21	1.6
800	29	2,003	.7	-5.6	24	4.2
750	29	2,521	-1.9	-8.8	26	5.5
700	29	3,067	-4.1	-12.4	27	7.2
650	28	3,642	-7.3	-16.0	28	9.1
600	28	4,266	-10.8	-20.7	28	11.1
550	28	4,925	-14.9	-24.3	25	13.4
500	28	5,646	-19.1	-28.5	28	14.7
450	28	6,415	-24.3	-33.9	28	15.4
400	28	7,272	-30.6	-39.4	29	17.4
350	27	8,210	-37.3	-43.2	29	19.1
300	27	9,258	-44.4		29	21.8
250	27	10,462	-51.0		29	26.0
200	25	11,892	-56.6		30	24.5
175	25	12,737	-57.7		29	22.4
150	25	13,704	-59.[illegible]		29	21.1
125	25	14,838	-61.7		28	16.7
100	25	16,213	-63.6		28	13.1
80	24	17,580	-63.1		30	9.4
70	24	18,402	-62.5		30	6.3
60	22	19,348	-61.1		29	4.1
50	21	20,477	-60.3		34	2.5
40	20	21,863	-59.3		03	3.7
30	20	23,675	-56.8		07	3.8
25	19	24,823	-55.7		06	5.0
20	19	26,248	-54.5		07	7.0
15	18	28,100	-52.8		08	8.9
10	10	30,775	-48.4			
7						

WINSLOW, ARIZ. 852 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	1,492	.7	-6.8	20	.6
1000	30	181				
950	30	603				
900	30	1,048				
850	30	1,509			16	.7
800	30	2,003	4.6	-7.0	29	1.8
750	30	2,528	2.1	-9.3	31	3.4
700	30	3,081	-1.1	-13.3	29	4.7
650	30	3,663	-4.1	-17.8	27	6.2
600	30	4,297	-7.2	-21.7	[illegible]	8.0
550	30	4,963	-11.4	-25.5	29	9.0
500	30	5,695	-15.9	-29.2	29	11.6
450	30	6,477	-21.2	-33.7	30	14.4
400	30	7,342	-27.3	-38.6	30	17.0
350	30	8,291	-34.0	-43.7	30	18.4
300	30	9,354	-41.8	-50.0	29	23.7
250	30	10,569	-49.8		30	26.9
200	29	11,999	-55.9		29	27.9
175	29	12,843	-58.6		29	26.2
150	29	13,805	-61.6		29	22.9
125	29	14,926	-64.6		28	19.5
100	28	16,281	-66.6		28	14.2
80	28	17,627	-66.8		28	9.8
70	28	18,434	-65.9		28	7.4
60	28	19,373	-64.2		29	5.1
50	26	20,497	-62.5		29	3.0
40	25	21,876	-60.9		33	1.6
30	25	23,071	-59.1		36	1.1
25	24	24,818	-57.6		02	1.4
20	21	26,233	-56.1		04	2.5
15	19	28,076	-53.4		07	3.4
10	10	30,704	-48.8			
7						

YAKUTAT, ALASKA 998 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	12	.0	-1.9	10	3.3
1000	30	-3			09	3.0
950	30	408	1.9	-2.6	12	6.2
900	30	846	-1.0	-4.4	14	7.0
850	30	1,300	-4.0	-7.2	15	7.8
800	30	1,776	-7.0	-11.0	16	8.5
750	30	2,278	-10.0	-15.4	16	8.6
700	30	2,806	-13.4	-20.6	17	8.3
650	30	3,365	-16.9	-24.5	18	7.9
600	30	3,964	-20.9	-27.9	19	8.3
550	30	4,596	-25.4	-33.0	20	8.5
500	30	5,287	-30.1	-38.3	21	9.2
450	30	6,026	-35.1	-42.3	21	9.5
400	30	6,843	-40.7	-45.1	22	10.1
350	30	7,740	-46.5		22	11.4
300	30	8,749	-51.9		23	13.9
250	30	9,923	-53.8		24	13.[illegible]
200	30	11,365	-50.9		24	11.7
175	30	12,237	-49.7		24	11.7
150	30	13,245	-49.9		24	10.4
125	30	14,436	-50.0		24	9.8
100	30	15,892	-50.4		24	9.3
80	30	17,349	-50.2		25	7.9
70	30	18,219	-50.3		25	6.6
60	30	19,224	-50.8		25	4.9
50	30	20,410	-50.9		25	4.9
40	30	21,863	-50.8		26	3.9
30	29	23,740	-50.7		28	2.9
25	28	24,924	-50.6		28	2.2
20	26	26,383	-50.1		36	1.5
15	23	28,262	-49.9		06	1.8
10	15	30,948	-49.3			
7						

\+ YAP, CAROLINE IS. 1008 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	17	28.4	24.5	32	.5
1000	30	85	27.7	23.4	31	.7
950	30	532	23.6	19.0	33	1.2
900	30	1,010	20.8	15.1	31	1.2
850	30	1,503	18.0	11.7	28	.6
800	30	2,021	15.5	6.9	22	.6
750	30	2,561	13.4	1.3	13	.8
700	30	3,145	10.6	-2.9	11	1.3
650	30	3,753	7.1	-6.6	11	2.0
600	30	4,414	3.5	-10.2	12	2.9
550	30	5,106	-.8	-13.4	12	2.8
500	30	5,871	-4.8	-18.9	12	3.2
450	30	6,687	-9.5	-23.7	11	2.9
400	30	7,596	-15.0	-30.7	11	3.4
350	30	8,593	-22.0	-37.0	10	4.5
300	30	9,709	-30.2	-44.5	11	6.3
250	30	10,980	-40.5	-52.2	11	6.9
200	30	12,461	-52.[illegible]		10	9.1
175	30	13,309	-59.8		10	10.5
150	30	14,256	-67.4		09	11.1
125	30	15,332	-75.4		08	11.8
100	30	16,600	-82.2		09	13.0
80	30	17,854	-79.1		10	12.6
70	30	18,619	-74.8		10	11.2
60	30	19,529	-69.1		09	11.8
50	30	20,632	-64.5		09	16.1
40	29	22,010	-60.7		09	23.1
30	29	23,829	-54.2		09	25.0
25	25	25,009	-50.4		09	12.6
20	24	26,481	-45.7		24	1.9
15	21	28,411	-42.7		26	10.4
10	17	31,156	-38.6		26	17.5
7	12	33,649	-33.7			

YUCCA FLAT, NEV. 884 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	1,196	1.5	-6.5	32	1.3
1000	30	188				
950	30	605				
900	30	1,051				
850	30	1,517	7.0	-5.4	35	3.2
800	30	2,014	4.6	-8.1	36	2.3
750	30	2,535	1.8	-11.4	35	1.9
700	30	3,091	-.7	-14.8	32	3.9
650	30	3,672	-3.5	-18.[illegible]	30	6.5
600	30	4,309	-7.3	-21.2	31	8.7
550	30	4,973	-11.5	-23.8	31	12.1
500	30	5,706	-16.2	-27.3	30	14.8
450	30	6,486	-21.7	-31.[illegible]	30	15.2
400	30	7,349	-27.9	-37.0	30	17.2
350	30	8,294	-35.[illegible]	-43.0	30	18.5
300	30	9,350	-42.9	-49.4	30	21.4
250	30	10,559	-50.4		30	24.0
200	30	11,994	-56.4		30	25.5
175	30	12,836	-59.3		29	24.6
150	30	13,797	-61.[illegible]		29	20.7
125	29	14,921	-64.4		29	18.0
100	29	16,277	-66.7		29	15.2
80	28	17,635	-66.1		29	8.6
70	28	18,444	-65.5		29	6.3
60	28	19,384	-63.9		30	3.7
50	26	20,508	-62.3		32	2.6
40	25	21,893	-60.7		02	2.1
30	23	23,692	-58.3		03	2.4
25	21	24,844	-57.3		03	2.1
20	15	26,263	-55.3		03	4.0
15	5	28,139	-51.0			
10						
7						

YUMA, ARIZ. 998 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	19	131	12.6	-.7	36	1.2
1000	19	116				
950	19	547	16.7	-1.4	34	5.[illegible]
900	19	1,009	14.1	-3.5	35	[illegible].6
850	19	1,488	10.9	-5.5	35	3.9
800	19	1,991	7.[illegible]	-9.1	33	3.3
750	19	2,512	3.[illegible]	-11.8	32	4.5
700	19	3,077	.[illegible]	-15.7	31	5.9
650	19	3,661	-2.0	-18.6	32	7.8
600	19	4,302	-5.5	-21.[illegible]	31	9.5
550	19	4,972	-10.0	-25.[illegible]	31	10.9
500	19	5,709	-14.9	-29.4	30	13.0
450	19	6,491	-20.3	-33.5	30	15.0
400	19	7,362	-26.2	-39.1	30	17.2
350	19	8,315	-33.6	-44.0	31	18.2
300	19	9,382	-40.8	-49.4	30	19.4
250	19	10,602	-49.[illegible]		30	20.4
200	13	12,085	-56.9		28	22.7
175	7	12,918	-59.2			

Note: All observations scheduled at 1200, G.C.T. Pressures shown under station names are the average monthly station pressures for the month of record, corrected to the height of the floors of the instrument shelters used for rawinsonde purposes. "Number of observations" refers to those of dynamic height only. Although the number of temperature observations at any given pressure surface is usually the same as for height, it is possible for temperature to be missing for one or more pressure surfaces of some observations. Dew Point averages are limited to those observations with temperatures warmer than -40°C. Observations of wind speed and direction are sometimes lost due to limiting angles, i. e., elevation angles less than 6° above the horizon, or any obstruction above the horizon.

The temperature and wind values are based on 15 or more observations at the surface or 5 observations at a standard pressure level for temperature and 10 for wind. Dew Point data are not published for standard pressure surfaces for which less than 5 observations are available. Dew Point data are computed and expressed on the basis of vapor pressure over water. Unless otherwise indicated, they are obtained from carbon hygristors.

These average values for standard pressure surfaces were obtained by rawinsondes, dynamic height (geopotential) in units of .98 dynamic meter, temperature and dew point in degrees Celsius, and resultant winds in tens of degrees and meters per second.

Rawinsondes at this station were equipped with hypsometers to permit more accurate evaluations of pressure, and consequently height, at pressures lower than 50 mb. These rawinsondes were carried aloft by special high altitude balloons, in an effort to consistently reach higher altitudes.

\+ Observations for these stations are scheduled at 0000 G. C. T.

† Dew Point temperatures are based on a minimum of 5 observations. Therefore, due to the lesser number of Dew Point observations at the higher levels comparison with dry-bulb temperatures should be made with care. Dew Point temperatures replaced Relative Humidity January [illegible]

SOLAR RADIATION DATA

Solar radiation intensities, tabulated in langleys per minute on a surface normal to the direction of the sun. NOVEMBER 1968

Sun's zenith distance

Date	A.M. 78.7°	A.M. 75.7°	A.M. 70.7°	A.M. 60.0°	*	P.M. 60.0°	P.M. 70.7°	P.M. 75.7°	P.M. 78.7°

ALBUQUERQUE, N. MEX.

Date	Air mass 4.19	3.35	2.51	1.67	*	1.67	2.51	3.35	4.19
Nov.									
1	----	----	----	----	(1.32)	(1.16)	----	----	----
2	----	----	----	----	1.41	1.34	1.21	1.10	0.99
4	0.91	----	----	----	----	----	----	----	----
5	----	----	----	----	----	1.26	1.09	.97	.87
6	----	----	(1.17)	----	1.43	----	1.21	1.07	.97
8	----	----	1.08	1.27	1.36	----	----	----	----
9	1.05	----	1.26	1.39	1.44	1.35	----	----	----
10	1.04	1.14	1.25	1.37	1.47	1.41	1.27	1.15	1.06
11	1.08	1.18	1.29	1.40	1.42	1.38	(1.17)	(1.01)	(.98)
18	1.08	1.17	1.28	1.41	1.46	1.42	1.28	1.18	1.09
19	1.05	1.13	1.23	1.39	1.42	1.37	1.21	1.09	.98
20	1.06	1.15	1.27	1.40	1.44	1.39	1.23	1.16	1.06
21	1.08	1.18	1.29	1.42	1.47	1.40	1.21	1.07	.99
22	1.04	1.13	1.25	1.42	1.46	1.41	1.28	1.13	1.05
23	1.06	1.16	1.26	1.38	1.44	1.39	1.27	1.19	1.08
24	1.08	1.18	1.29	1.41	----	----	----	----	----
27	----	----	----	----	----	1.37	1.21	1.09	.99
29	Instrument inoperative								
Averages	1.06	1.16	1.25	1.39	1.44	1.37	1.22	1.11	1.01

BLUE HILL OBS., MASS.

Date	Air mass 4.89	3.92	2.94	1.96	*	1.96	2.94	3.92	4.89
Nov.									
1	0.98	1.07	1.18	1.32	1.34	1.29	1.12	0.96	0.84
14	----	----	----	----	1.29	----	----	----	----
20	.87	.96	1.11	----	----	----	----	----	----
21	.98	1.07	1.18	----	1.28	----	----	----	----
26	.96	1.05	1.15	----	----	----	----	----	----
Averages	0.95	1.04	1.16	1.32	1.30	1.29	1.12	0.96	0.84

OMAHA, NEBR.

Date	Air mass 4.78	3.82	2.87	1.91	*	1.91	2.87	3.82	4.78
Nov.									
1	----	----	HS1.13	HS1.25	HS1.33	HS1.27	----	----	----
3	HM0.78	HM0.87	HM .98	HM1.08	----	----	----	----	----
11	.78	HM .87	HS1.02	HS1.21	HS1.25	HS1.16	HS1.10	HS0.98	HS0.90
13	HM .63	HM .75	HM .92	----	----	----	----	----	----
21	.96	HS1.02	HS1.13	----	HS1.33	----	----	----	----
24	----	----	----	----	HM1.24	----	----	----	----
27	----	----	----	----	KM1.24	----	----	----	----
30	HS .91	HS1.01	HS1.13	----	HS1.24	----	HS1.10	HS .84	HS .78
Averages	0.81	0.90	1.05	1.08	1.27	1.22	1.10	0.91	0.84

TUCSON, ARIZ.

Date	Air mass 4.56	3.65	2.74	1.83	*	1.83	2.74	3.65	4.56
Nov.									
1	0.78	0.89	1.05	1.20	----	1.23	----	----	----
2	.87	.97	1.08	1.16	1.34	1.20	1.03	0.91	0.81
3	.86	.97	1.10	1.22	----	----	----	----	----
4	----	----	----	----	----	1.25	1.11	.99	.88
5	.89	.98	1.12	1.28	1.34	1.28	1.09	.98	.89
6	.90	1.02	1.11	1.28	1.35	----	----	----	----
7	----	----	----	1.27	----	----	----	----	----
8	.79	.87	1.02	1.21	1.30	1.20	----	.87	.75
9	.88	.98	1.12	1.27	1.36	1.26	1.12	.99	.89
10	.97	1.08	1.20	1.33	1.40	1.31	1.14	1.00	.91
11	.94	1.03	----	----	----	----	----	.92	----
12	.82	----	.98	----	----	----	----	----	----
14	.82	----	1.08	----	----	----	----	----	----
16	----	----	----	----	----	----	1.01	.86	.79
17	.84	.96	1.08	1.22	1.32	1.26	1.13	1.00	.92
18	.97	1.01	1.15	1.26	1.36	1.30	1.15	1.01	.88
19	.92	1.04	1.12	1.28	1.36	1.25	1.06	.95	.86
20	.89	1.00	1.13	1.29	1.36	1.26	1.10	.95	.85
21	.90	.99	1.14	1.28	1.32	1.24	1.04	.92	.84
22	----	----	----	----	----	1.20	1.05	.93	.83
23	.91	1.01	1.14	1.31	1.35	1.28	1.09	.97	.90
24	.90	.98	1.12	1.26	----	----	----	----	----
25	----	----	----	----	----	----	.99	.86	.76
26	----	----	----	----	1.27	1.05	.97	.84	----
27	.80	.92	1.09	1.26	1.34	----	----	----	----
28	.89	1.01	1.15	1.33	1.38	1.26	1.22	1.10	.99
30	----	----	----	----	----	1.24	----	.94	----
Averages	0.88	0.98	1.10	1.26	1.34	1.24	1.08	0.95	0.86

MADISON, WIS.

Date	Air mass 4.69	3.75	2.81	1.88	*	1.88	2.81	3.75	4.69
	Instrument inoperative								

GUAM, M. I.

Date	Air mass 4.92	3.93	2.95	1.97	*	1.97	2.95	3.93	4.92
Nov. 1-22	No observations due to cloudiness								
23-30	Instrument inoperative								

HS Slight haze ( ) Clouds present
HM Moderate haze * Values corresponding to true solar noon
KM Moderate smoke

Langleys is the unit used to denote one gram calorie per square centimeter. An explanation of the formula used in computing the air mass values for each station listed above appears in the February 1957 issue, Vol. 8, No. 2, page 63, of this publication.

SOLAR RADIATION DATA

Daily totals and monthly averages of solar radiation (direct and diffuse) received on a horizontal surface, tabulated in langleys.

Station	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
ALBUQUERQUE N.M.	268	348	362	185	320	349	145	328	359	372	360	283	---	174	66	176	233	340	331	332	333	327	323	305	168	---	262	158	306	299		279
AMES IOWA	277	88	277	182	54	53	161	75	196	55	219	227	224	117	177	28	140	39	76	167	226	206	129	168	39	45	200	58	185	213		143
ANNETTE ALASKA	30	79	67	52	20	65	12	12	46	35	57	49	37	58	118	26	39	1	12	31	12	14	34	68	6	29	6	---	---	---		38
APALACHICOLA FLORIDA	439	418	400	344	320	384	404	402	42	403	254	419	422	412	284	309	254	110	411	398	392	387	344	323	380	369	322	217	186	304		335
ARGONNE NAT. LAB.	273	257	219	213	191	44	77	137	207	215	116	192	189	137	70	30	59	85	132	98	245	213	138	236	160	183	135	15	50	180		150
ASTORIA OREGON	138	69	263	136	180	70	63	24	197	23	97	95	164	105	104	40	25	77	112	149	---	---	136	71	51	---	---	---	---	---		104
ATLANTA GEORGIA	329	310	255	295	82	139	273	347	30	261	29	106	363	346	289	82	68	284	230	341	335	318	227	99	325	316	198	103	---	94		223
BARROW ALASKA	3	2	1	3	3	2	0	0	1	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		1
BETHEL ALASKA	32	32	27	41	79	55	22	85	59	69	17	27	36	20	20	42	19	17	42	32	12	15	12	---	18	14	25	9	51	11		32
BISMARCK N.DAK.	70	284	210	88	143	85	70	221	101	157	255	180	238	229	170	118	66	131	104	175	205	146	194	192	132	186	122	170	156	169		159
BLUE HILL MASS.	301	132	135	163	98	193	29	42	91	22	189	24	73	241	87	35	23	13	136	224	207	161	192	178	98	218	145	49	55	70		121
BOISE IDAHO	255	55	64	246	234	250	144	43	201	163	76	109	150	182	53	56	108	40	59	76	161	83	197	26	132	174	194	192	103	164		133
BOSTON MASSACHUSETTS	305	97	160	160	96	200	29	45	83	22	170	22	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---		---
BROWNSVILLE TEXAS	---	396	302	417	384	357	48	103	354	428	459	440	---	269	381	362	311	373	413	106	129	232	276	346	310	257	101	214	28	63		281
BURLINGTON VERMONT	286	173	45	216	153	161	70	37	37	36	111	20	42	211	60	103	37	24	128	139	92	45	145	47	35	200	122	60	12	72		97
CAPE HATTERAS N.C.	344	342	332	119	185	279	307	352	196	33	256	50	346	347	331	287	284	116	243	257	337	329	312	244	---	330	220	268	240	67		254
CARIBOU MAINE	104	199	66	---	190	138	116	56	162	106	167	83	47	121	122	87	196	105	57	124	153	87	118	25	125	201	202	199	84	225		126
CHARLESTON S.C.	371	373	378	155	114	259	316	383	85	62	137	250	387	369	312	312	246	170	375	347	358	353	305	292	356	346	153	178	265	105		270
CLEVELAND OHIO	271	288	182	176	217	59	42	42	114	103	92	47	189	56	19	34	44	89	68	97	123	206	201	58	95	64	50	30	38	88		106
COLUMBIA MISSOURI	306	65	55	329	108	24	44	166	312	79	32	317	217	42	21	35	62	63	123	292	284	279	144	237	198	109	71	38	220	220		150
DAVIS CALIFORNIA	182	79	179	249	324	155	316	252	179	268	122	324	320	71	63	111	135	49	299	59	75	71	293	274	301	258	236	270	118	119		192
DODGE CITY KANSAS	297	42	240	336	85	103	334	42	124	246	355	265	241	28	59	100	312	309	173	302	300	292	158	300	130	90	241	262	280	243		210
E. LANSING MICHIGAN	243	303	247	277	216	54	43	93	89	244	164	101	250	75	28	25	39	113	80	117	218	229	83	171	176	94	---	12	44	179		138
EL CENTRO CALIF. NPF	391	385	372	356	378	365	339	376	367	365	281	281	352	359	244	247	344	346	331	324	328	338	329	274	274	274	299	336	336	317		330
EL PASO TEXAS	393	431	433	380	426	428	239	285	409	408	409	318	204	137	322	315	389	388	380	377	347	339	364	366	210	102	194	365	157	162		322
ELY NEVADA	303	244	191	339	208	336	157	189	127	352	252	208	339	288	90	234	299	267	233	313	318	297	252	245	143	322	231	310	297	198		253
EPPLEY NEWPORT R.I.	295	204	76	199	58	164	28	45	154	24	232	27	78	---	78	42	27	11	117	202	221	181	210	161	85	195	82	49	56	125		118
FAIRBANKS ALASKA	40	47	68	66	30	36	17	13	12	11	51	48	32	32	38	16	37	12	22	6	9	9	3	9	18	5	9	4	15	9		24
FLAMING GORGE UTAH	226	322	73	148	---	146	235	144	166	291	227	206	229	279	137	140	169	260	216	248	284	233	247	127	151	250	66	149	252	65		196
FORT WORTH TEXAS	361	227	191	368	250	339	313	66	321	142	361	353	265	71	125	334	251	373	357	365	356	276	191	361	336	35	47	351	141	49		253
FRESNO CALIFORNIA	259	128	156	277	297	189	91	239	269	274	138	279	211	183	197	153	161	197	71	168	58	36	64	175	186	239	220	219	228	148		184
GAINESVILLE FLORIDA	279	367	352	131	386	335	360	337	0	220	110	296	476	363	259	358	270	190	400	327	380	396	344	349	313	348	196	263	203	176		293
GLASGOW MONTANA	202	280	---	143	41	70	63	133	58	132	189	39	186	201	110	95	132	60	95	---	166	63	77	169	185	---	158	155	90	91		125
GRAND JUNCTION COLO.	175	356	239	302	297	286	262	257	219	309	324	214	62	285	60	145	263	316	244	308	310	277	292	154	299	295	207	159	292	166		246
GREAT FALLS MONTANA	242	140	186	---	118	134	229	95	40	219	207	89	201	137	---	92	231	72	196	199	120	176	207	114	185	119	176	187	125	148		157
GREENSBORO N.C.	341	317	272	51	97	145	209	291	56	128	84	196	324	312	250	47	148	51	174	290	307	279	214	215	290	285	193	116	255	119		201
INDIANAPOLIS INDIANA	208	162	98	231	78	43	30	160	143	169	100	104	300	120	32	29	67	113	149	116	267	255	163	248	204	142	57	81	46	210		137
ITHACA NEW YORK	219	264	94	225	132	73	15	19	76	22	71	10	46	152	25	91	19	22	71	141	47	105	188	6	80	139	27	21	6	54		82
LAKE CHARLES LA.	384	380	196	265	371	292	360	91	317	268	296	413	375	217	126	316	215	400	400	362	378	341	284	304	391	311	83	354	127	18		288
LAKELAND FLORIDA	427	374	416	324	376	359	387	437	85	269	177	341	464	539	398	420	511	292	417	417	416	416	442	430	429	421	398	464	401	301		385
LANDER WYOMING	235	279	222	215	140	271	258	191	189	295	225	277	274	276	233	125	272	240	251	237	184	209	243	106	55	283	114	215	236	116		216
LARAMIE WYOMING	187	306	192	213	233	218	212	235	92	267	239	254	197	195	190	193	261	269*	235	238	245	191	226	114	227	234	209	180	235	226		217*
LAS VEGAS NEVADA	377	339	312	382	391	342	321	365	364	381	306	189	340	337	---	321	333	329	332	332	330	330	333	292	338	329	316	328	326	292		331
LITTLE ROCK ARKANSAS	175	178	78	165	109	84	130	99	299	110	86	344	166	174	32	209	162	321	297	323	301	254	238	332	316	189	45	94	190	180		189
LOS ANGELES CALIF.	312	340	---	---	---	---	---	351	337	327	245	225	329	270	109	340	306	294	264	307	305	233	227	197	325	320	264	311	322	198		282
MADISON WISCONSIN	286	213	275	266	141	40	64	115	121	211	203	276	165	193	150	24	59	65	125	156	240	163	158	231	101	65	206	20	83	220		155
MANHATTAN KANSAS	292	27	310	288	24	44	47	89	72	27	252	297	236	29	119	91	219	125	227	242	251	255	74	245	90	33	200	172	244	228		162
MEDFORD OREGON	118	82	209	117	182	82	187	83	193	135	36	146	219	28	98	122	104	100	190	97	51	31	130	60	174	54	44	162	86	59		113
MIAMI FLORIDA	365	303	448	390	424	304	419	379	304	340	388	419	487	349	422	405	428	402	318	381	435	391	373	419	431	270	306	340	374	345		379
MIDLAND TEXAS	357	375	381	359	335	88	162	84	358	355	427	---	---	---	299	258	341	346	317	332	313	276	320	333	305	30	43	333	214	74		275
NASHVILLE TENNESSEE	302	261	237	211	77	83	25	86	245	---	63	129	322	135	114	279	25	237	137	284	306	295	239	163	294	270	17	129	236	194		186
NEW YORK N.Y. U	269	223	34	119	89	103	11	58	117	18	170	10	63	243	36	29	15	14	191	170	217	164	185	193	134	214	58	30	145	50		112
NORTH OMAHA NEBRASKA	307	91	309	226	56	38	85	117	99	73	307	283	256	64	154	56	107	66	153	234	252	242	157	244	79	46	237	102	238	232		164
OAK RIDGE TENNESSEE	331	281	279	251	296	90	118	119	43	260	71	87	326	130	261	275	59	240	203	313	304	301	220	72	302	308	64	104	239	156		203
OKLAHOMA CITY OKLA.	345	50	318	371	271	78	112	255	308	72	374	347	281	28	28	312	266	351	183	---	321	---	---	331	261	16	30	313	315	141		225

Note.--Langley is the unit used to denote one gram calorie per square centimeter.
Values with an asterisk are interpolated.

U Indicates Urban sites

SOLAR RADIATION DATA

Daily totals and monthly averages of solar radiation (direct and diffuse) received on a horizontal surface, tabulated in langleys.

Station	Day of month																														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
PAGE ARIZONA	276	385	346	317	383	364	134	364	360	379	342	224	126	310	78	257	342	341	263	337	336	332	335	202	311	326	211	---	---	229		293
PALMER AAES ALASKA	63	22	106	90	80	31	72	77	33	24	26	41	40	58	30	33	37	29	19	33	49	57	15	10	22	31	23	11	25	23		40
PHOENIX ARIZONA	386	392	319	289	391	375	---	415	375	382	346	262	68	255	57	215	338	343	338	337	331	334	328	262	298	332	305	331	332	276		311
PORTLAND MAINE	271	29	167	210	142	168	58	69	107	20	250	28	46	254	132	141	58	17	106	182	241	135	183	118	61	222	199	75	104	113		130
PROSSER WASHINGTON	241	121	78	140	205	57	89	37	230	40	37	169	223	142	135	135	132	61	90	146	34	188	152	31	173	76	161	110	27	91		118
RAPID CITY S.DAK.	270	290	248	121	106	101	112	273	78	267	237	228	238	129	106	186	216	252	108	190	206	111	233	199	208	244	150	215	210	199		191
RENO NEVADA	252	99	71	297	270	192	205	205	194	272	262	276	268	114	197	250	104	85	180	52	167	97	251	235	96	231	260	236	109	149		189
RICHLAND 25 NW WASH.	238	88	184	231	149	46	80	72	229	45	44	141	206	152	126	143	124	52	73	131	36	197	167	38	170	74	162	109	35	100		121
RIVERSIDE CALIFORNIA	317	364	363	329	347	347	326	392	375	377	290	233	304	335	110	351	338	343	358	352	343	334	348	216	327	349	306	354	349	242		324
RUSTON LOUISIANA	344	317	128	94	286	205	159	85	347	173	173	353	326	122	46	287	276	337	328	316	317	260	252	318	320	266	36	215	254	55		233
SAINT CLOUD MINN.	244	246	195	159	46	112	71	115	94	131	103	249	81	66	160	38	73	91	169	171	214	101	78	59	33	121	243	49	77	198		126
SALT LAKE CITY	314	292	120	102	259	527	188	161	101	311	272	18	224	330	52	57	142	259	275	262	232	132	260	141	75	274	101	170	269	75		200
SAN ANTONIO TEXAS	263	332	441	419	165	406	268	30	400	399	426	391	286	119	381	208	364	345	384	361	361	165	260	365	277	154	77	365	79	21		284
SANTA MARIA CALIF.	330	323	162	367	367	309	347	343	346	338	229	289	349	269	113	319	318	312	320	325	319	309	315	284	249	315	289	307	284	287		301
SAULT STE MARIE MICH	105	66	161	150	183	137	70	93	89	58	94	197	193	103	35	170	30	54	98	65	26	59	54	27	54	56	139	---	142	87		96
SEATTLE TACOMA WASH.	186	64	228	181	103	133	136	31	184	52	27	94	127	156	81	59	62	57	124	133	17	116	140	21	48	59	33	89	15	24		93
SPOKANE WASHINGTON	229	55	43	127	88	53	165	18	68	50	21	136	162	200	40	137	89	28	34	102	47	164	172	80	71	45	44	49	13	124		89
STATE COLLEGE PENN.	281	272	66	59	45	14	24	132	84	112	68	64	144	132	111	46	40	29	121	---	---	---	---	---	---	68	100	45	16	73		89
STERLING VIRGINIA	288	253	214	67	51	24	20	200	81	128	197	52	176	232	201	---	77	30	164	261	261	264	---	219	---	235	62	46	198	83		151
SWAN ISLAND W.I.	258	140	297	349	---	356	412	---	472	451	461	405	427	298	430	431	456	478	351	144	158	198	342	227	437	406	266	404	430	395		353
TAMPA FLORIDA	354	317	379	270	340	335	350	366	29	191	116	315	403	370	297	350	323	---	489	379	374	362	347	349	370	343	312	332	252	201		318
TUCSON ARIZONA	365	415	363	363	407	397	308	399	398	401	390	344	59	188	74	301	377	370	367	364	350	350	356	297	274	282	353	362	337	316		331
WAKE ISLAND PACIFIC	484	409	354	453	370	451	257	233	410	459	490	279	481	458	473	475	365	475	347	214	338	442	464	447	458	415	418	179	440	374		397

Note.--Langley is the unit used to denote one gram calorie per square centimeter.

Values with an asterisk are interpolated.

NET RADIATION

Net radiation in langleys per day (8 a.m. to 8 a.m.) at Palmer, Alaska

NOVEMBER 1968

Date.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
Langleys. . .	-38	-34	-73	-66	-52	-45	-49	-41	-28	-17	-38	-51	-82	-72	-30	-73	-67	-59	-100	-84	-70	-60	-35	-37	-47	-69	-55	-23	-58	-70		-54

The measurement is made with a CSIRO FUNK net exchange radiometer over a plot of sod. The value represents the total incoming minus the total outgoing radiation of all wave lengths.

These data are of an experimental nature and are published as received from the Palmer Exp. Station. The instrument with which they were measured has not been checked by the ESSA, Weather Bureau.

SOLAR ULTRA-VIOLET RADIATION DATA

Daily totals and monthly average (< 3900 Å) at Ames, Iowa

Date.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
Langleys. . .	13.35	6.33	13.21	10.87	4.13	4.13	9.36	5.50	10.32	4.68	13.63	14.04	13.35	8.26	10.18	2.47	8.39	3.30	5.64	9.22	10.46	9.77	7.57	8.26	3.16	3.35	8.08	5.13	8.67	9.22		8.13

These data are from an U - V Eppley total ultra violet sensor and Speedomax H (Leeds Northrup) Recorder. It is at the same location (Agronomy Building, Iowa State University, Ames) as the published total solar radiation instrumentation. This instrument has not been checked by the ESSA, Weather Bureau.

TOTAL OZONE DATA

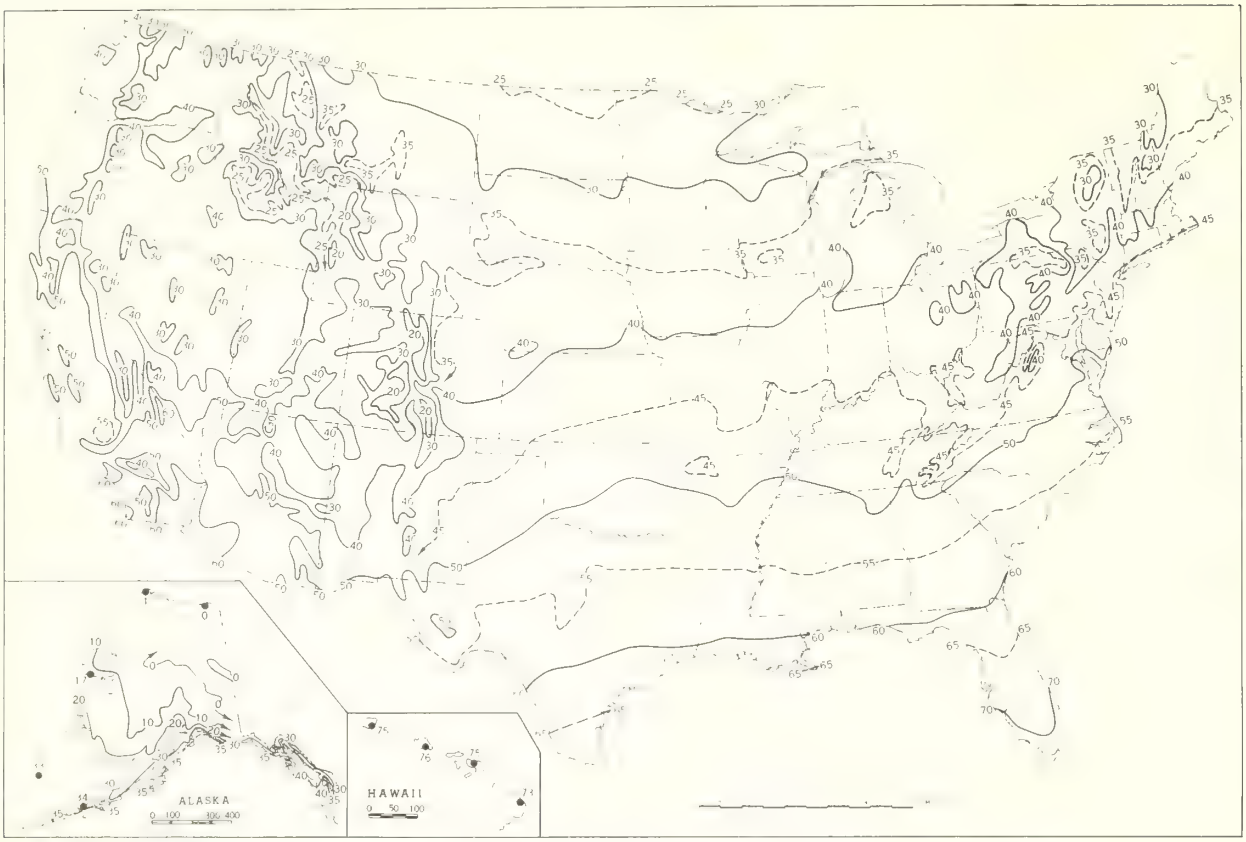
These provisional ozone data are obtained from measurements made with a Dobson ozone spectrophotometer, and are applicable approximately to local apparent noon. The data are presented in the code A S Ω Ω Ω defined in the August 1962 WMO circular entitled "PUBLICATION OF DATA FOR METEOROLOGICAL RESEARCH, WORLD OZONE DATA."

Units: Milli-atmo-cms.

Station	Day of month																														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean O3
															Data will be delayed																	

The spectrophotometer measures the total amount of ozone in the atmosphere, i.e., the amount contained in a vertical column of air extending from ground level to the top of the atmosphere in the vicinity of the station. The amount of ozone in this column (coded Ω Ω Ω) is expressed in terms of a thickness of a layer it would occupy at standard temperature and pressure, e.g., 350 milli-atmo-cm of ozone implies an ozone layer 0.350 centimeter thick. The code A S designates the type of measurement made.

Chart 1. A. Normal Daily Average Temperature (°F. 1931-60), November



B. Temperature Departure from 30 - Year Mean (°F 1931-60), November 1968.

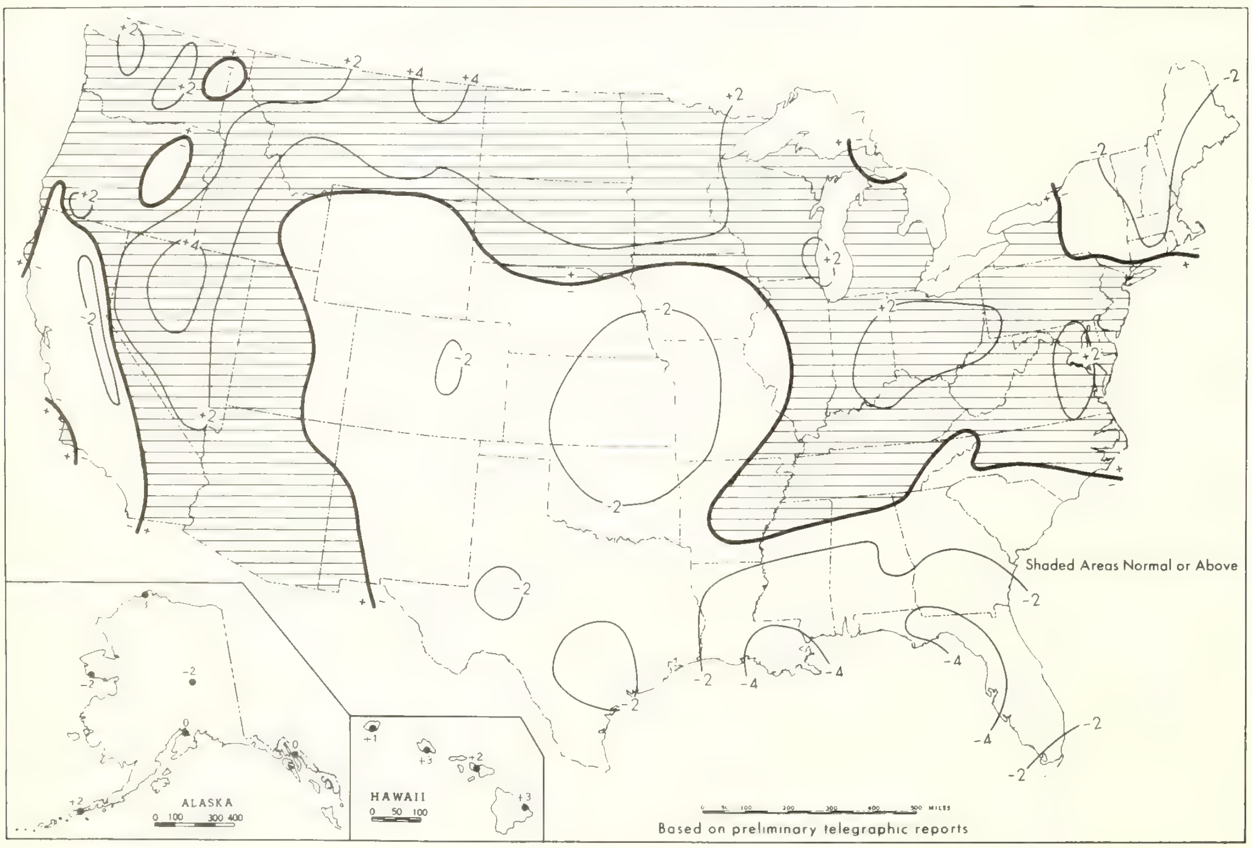


Chart II. Total Precipitation (Inches), November 1968.

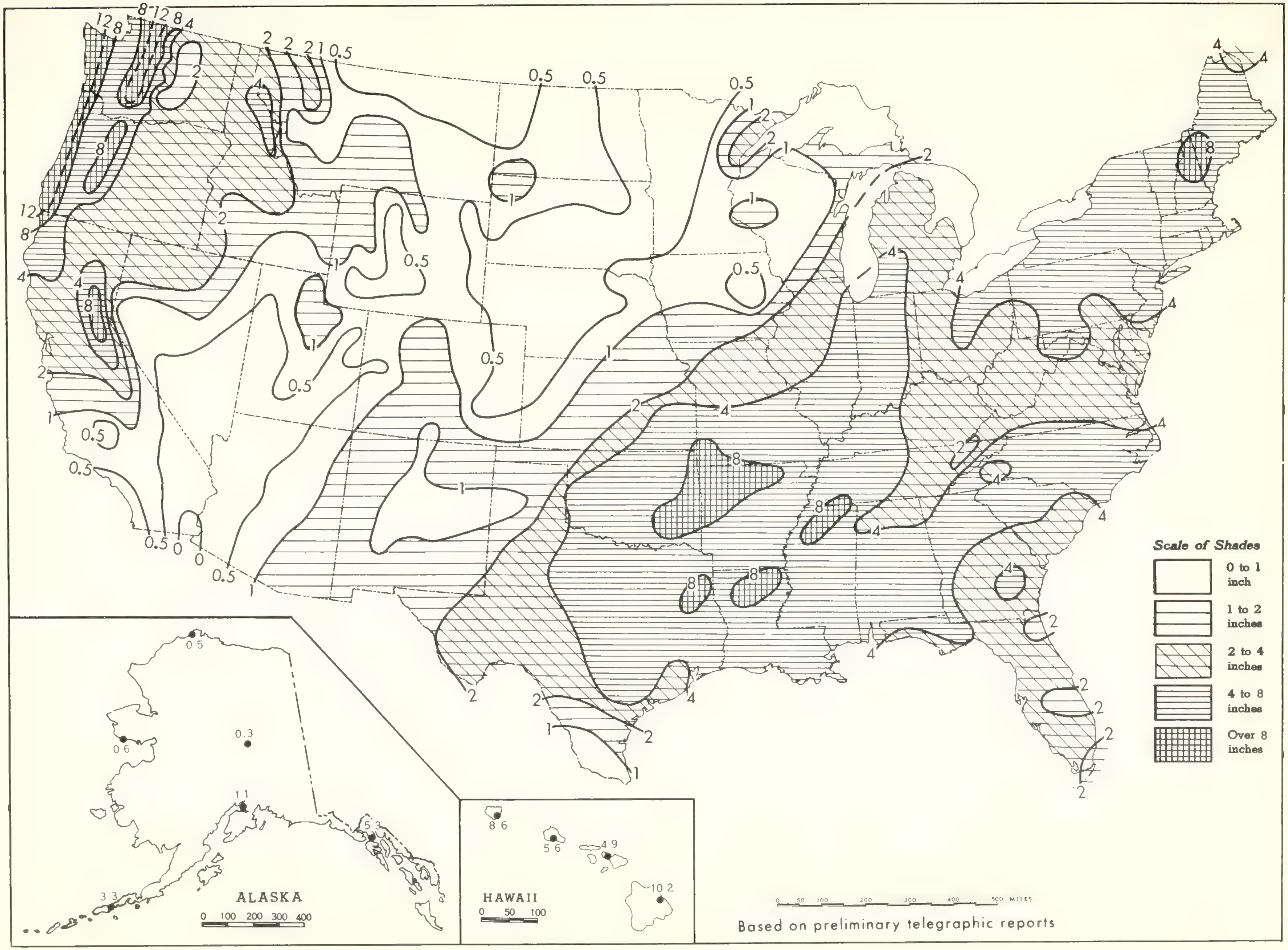


Chart III. Percentage of Normal Precipitation, November 1968.

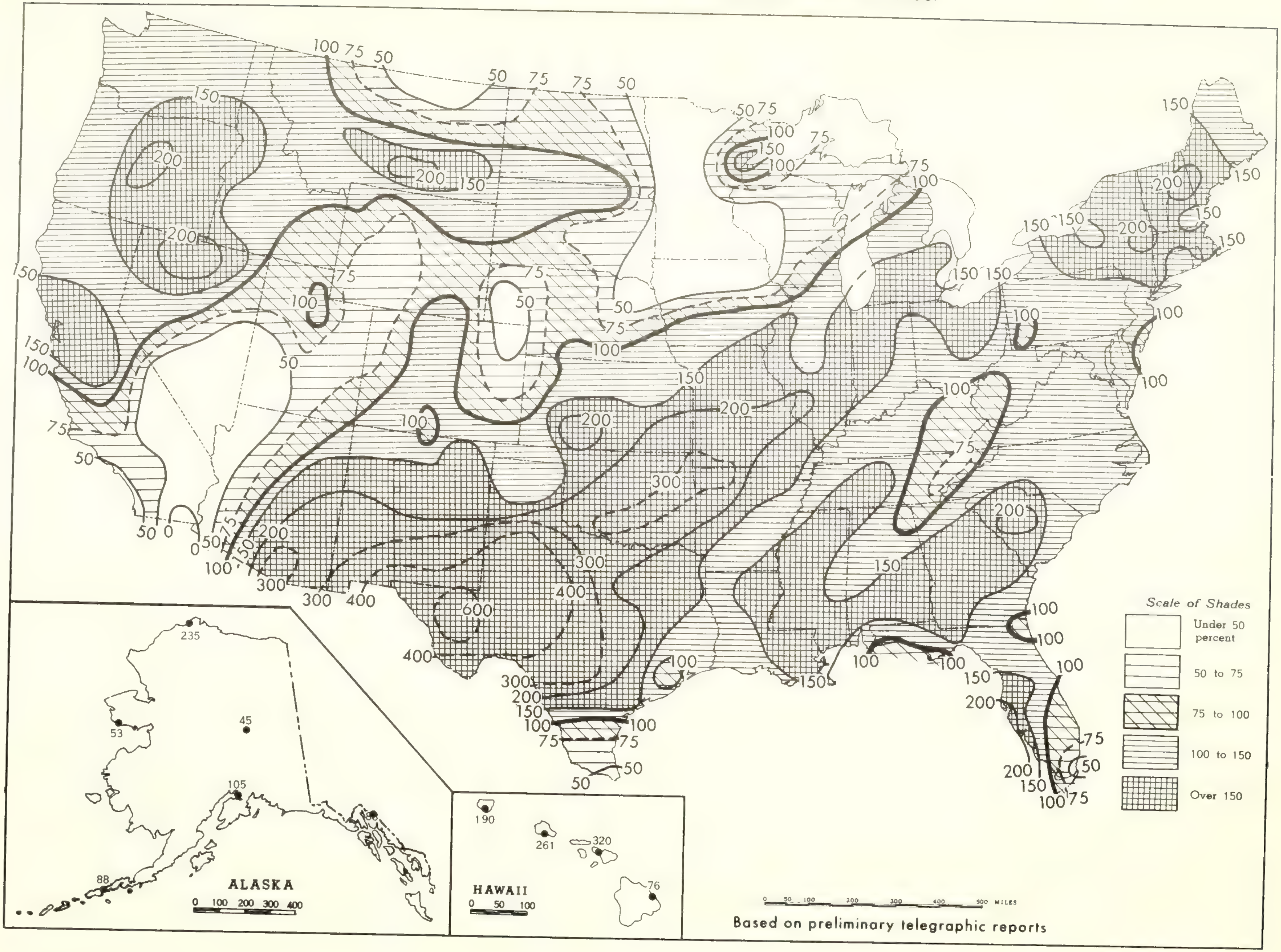
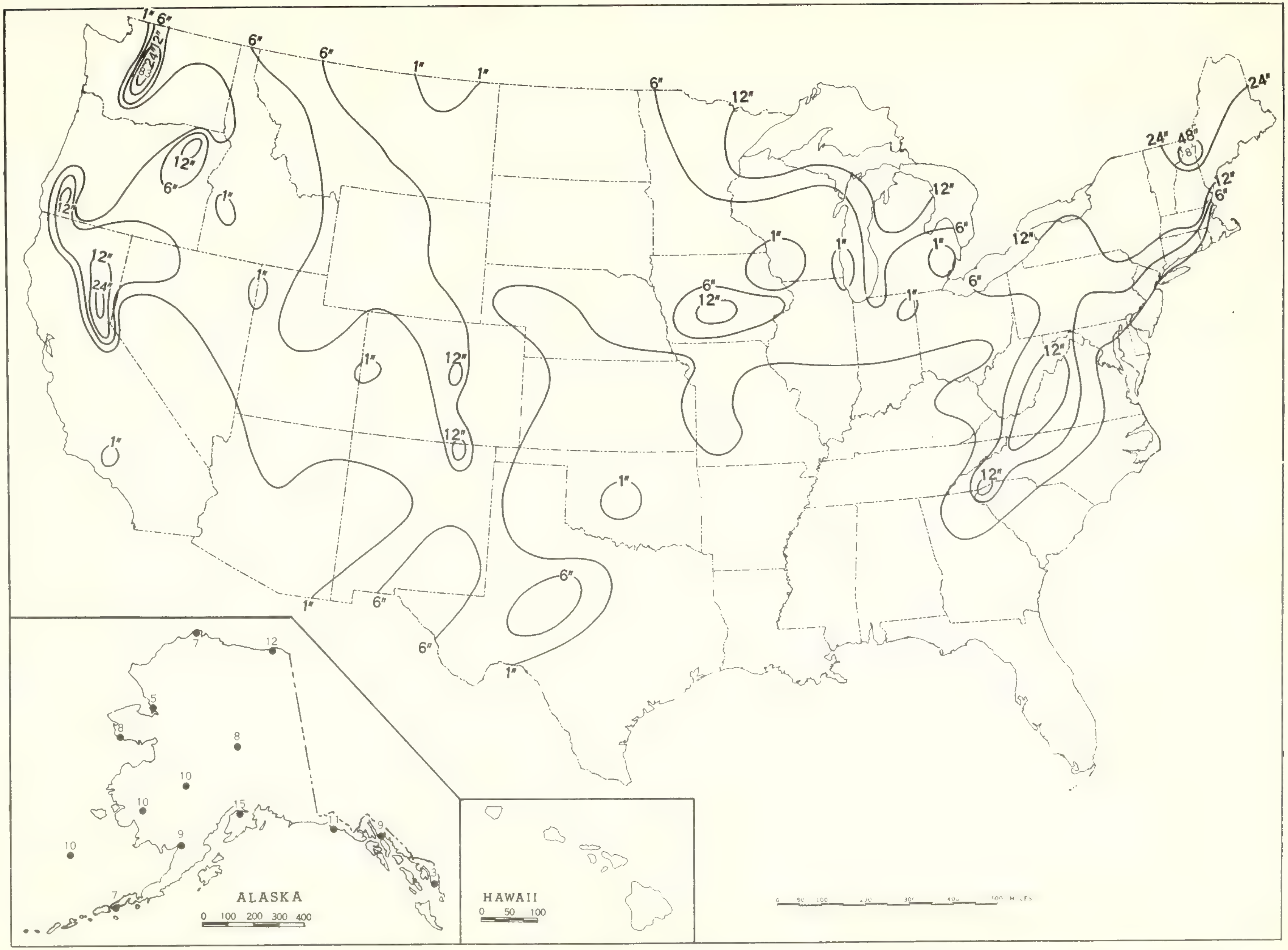
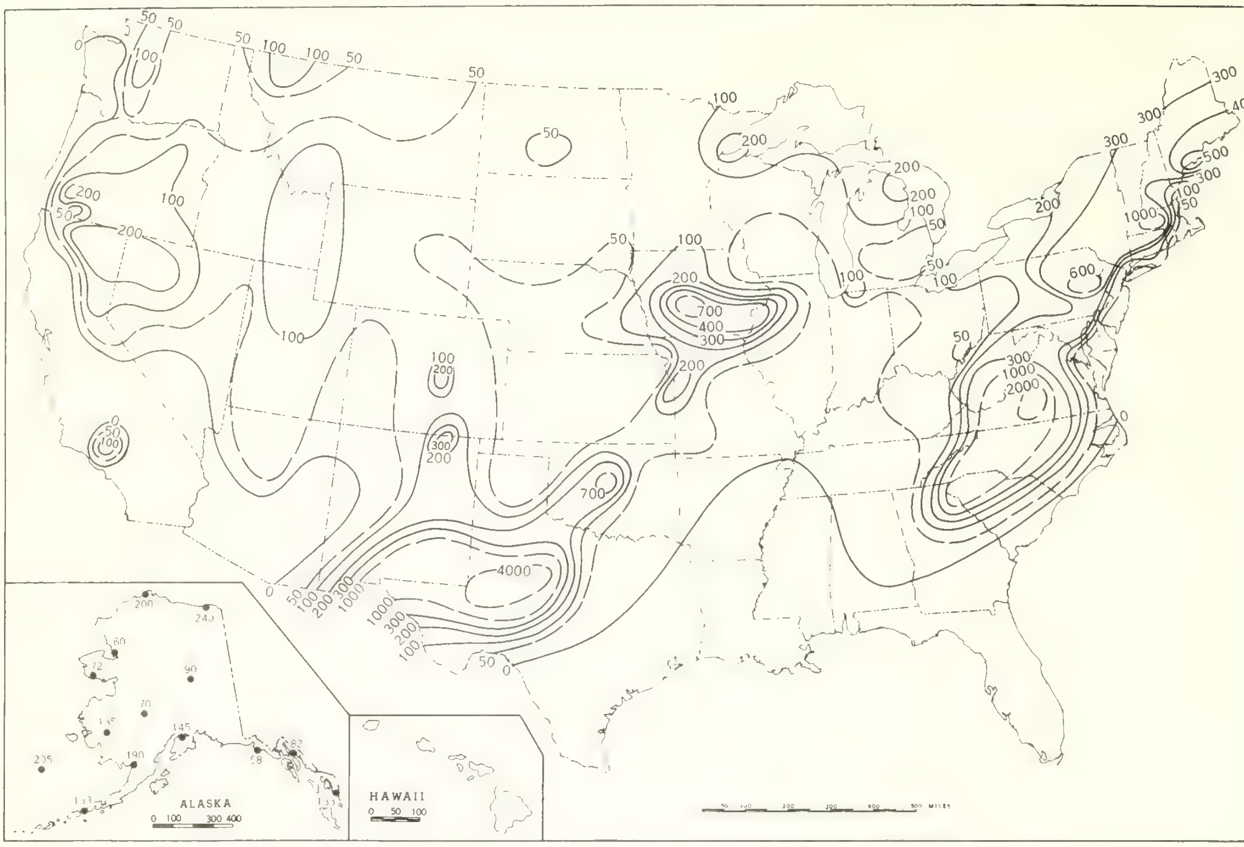


Chart IV. Total Snowfall (Inches), November 1968.

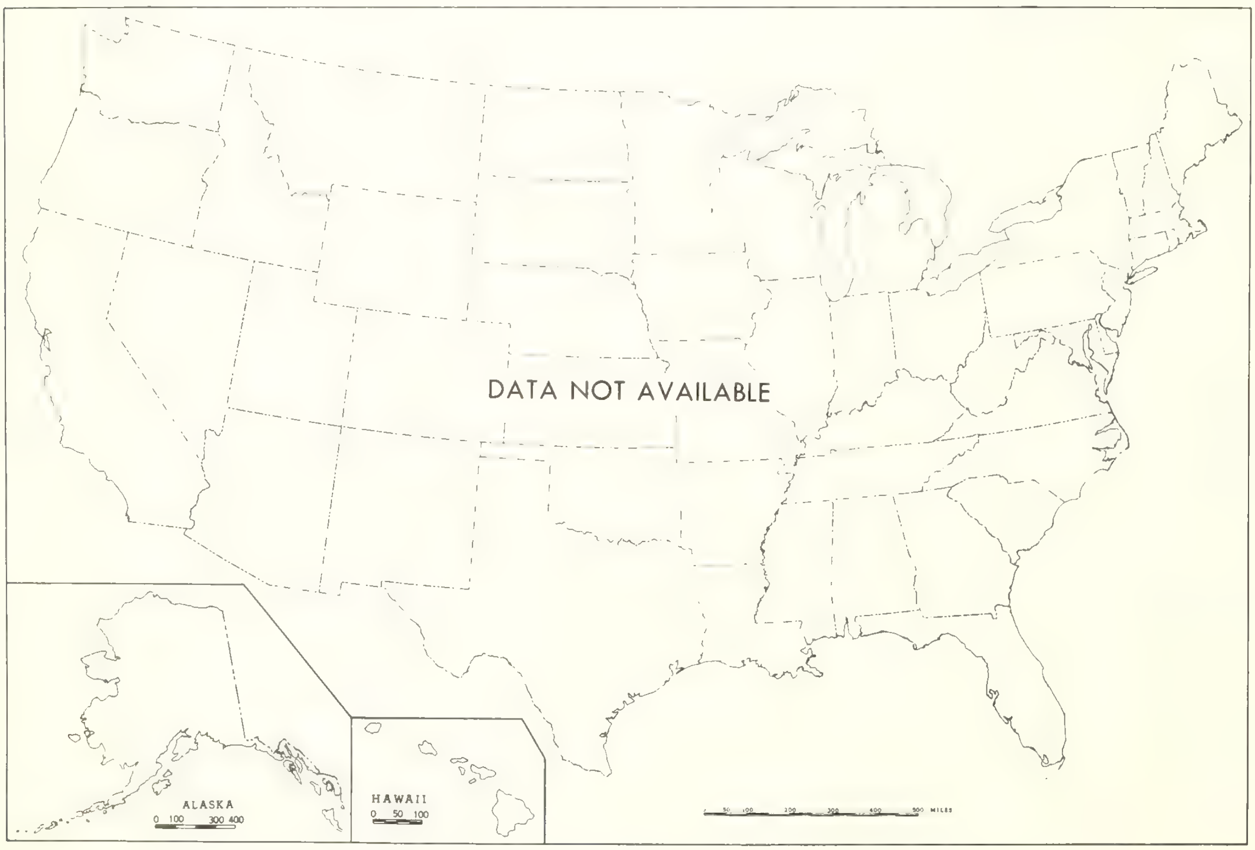


This is the total of unmelted snowfall recorded during the month at Weather Bureau and selected cooperative stations. This Chart and Chart V are published only for the months of November through April, although of course there is some snow at higher elevations, particularly in the far West, earlier and later in the year.

Chart V. A. Percentage of Mean Monthly Snowfall, November 1968.

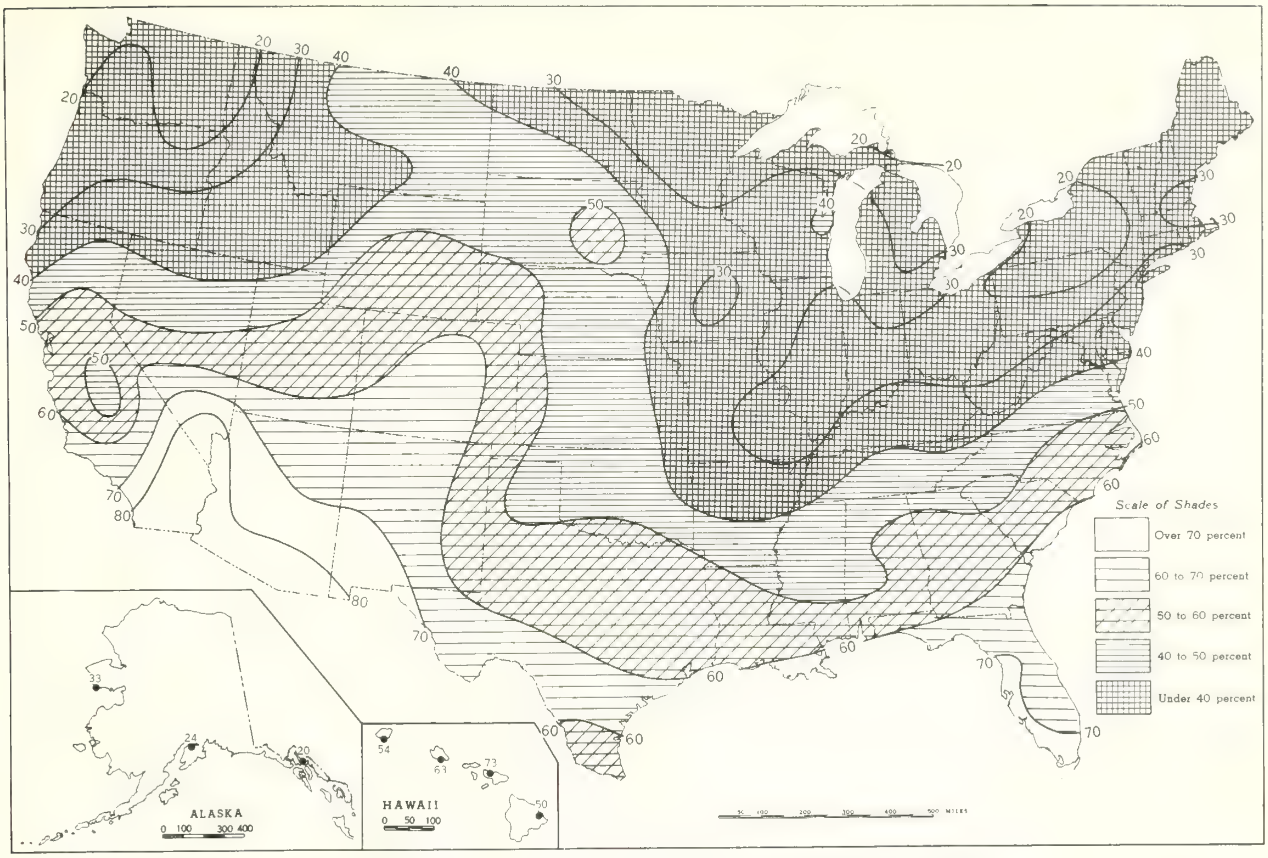


B. Depth of Snow on Ground (Inches), 7:00 a.m. E. S. T., November 1968.

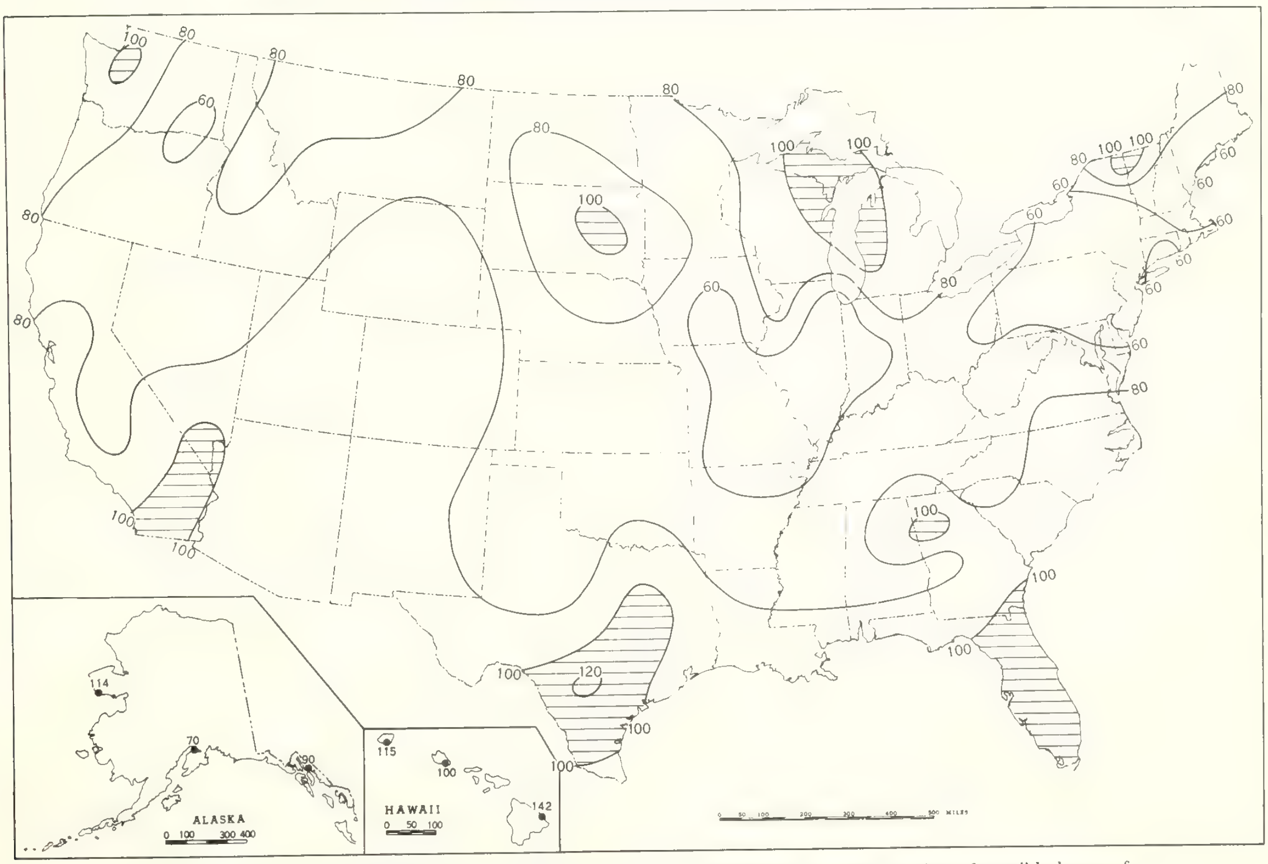


A. Amount of mean monthly snowfall is computed for Weather Bureau stations having at least 10 years of record.
B. Shows depth currently on ground at 7:00 a.m. E.S.T., of the Monday nearest the end of the month.
It is based on reports from Weather Bureau and selected cooperative stations.

Chart VI. A. Percentage of Possible Sunshine, November 1968.

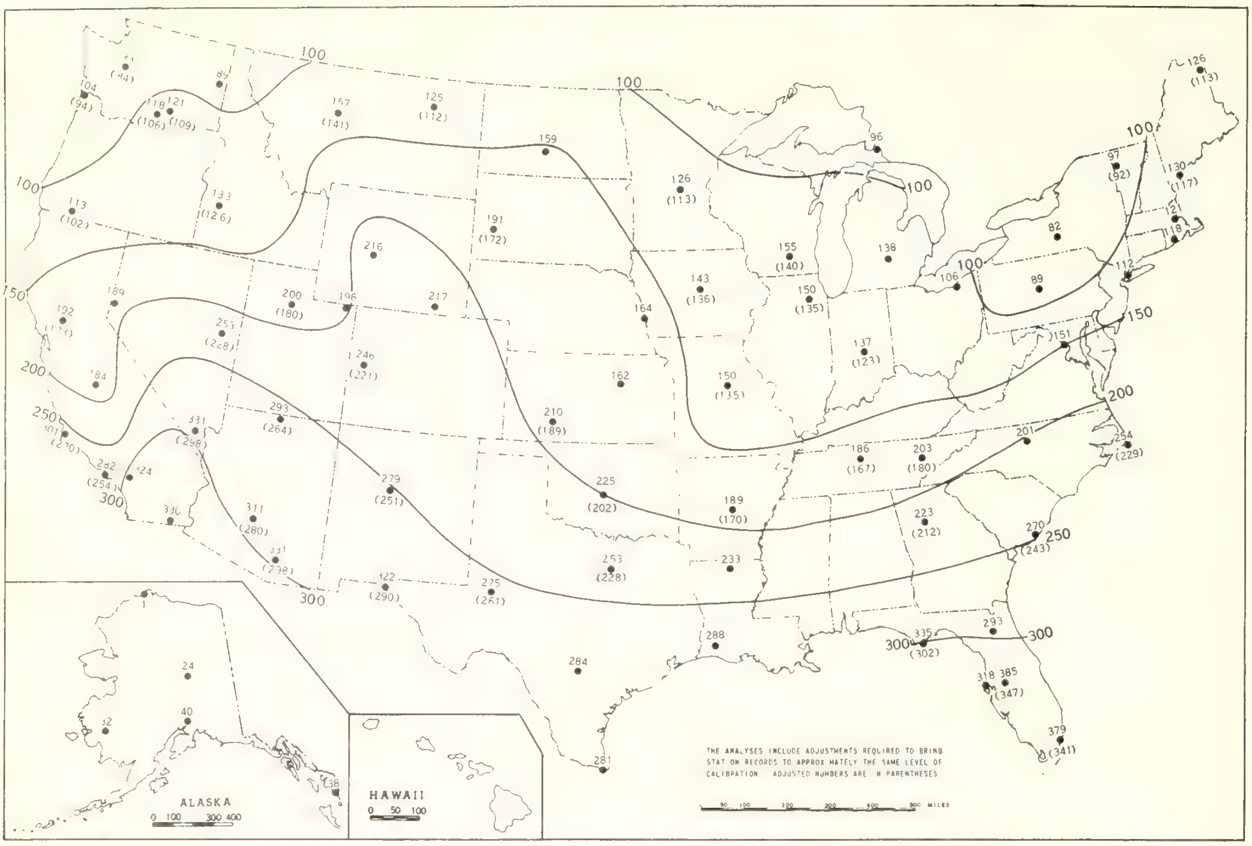


B. Percentage of Mean Monthly Sunshine, November 1968.

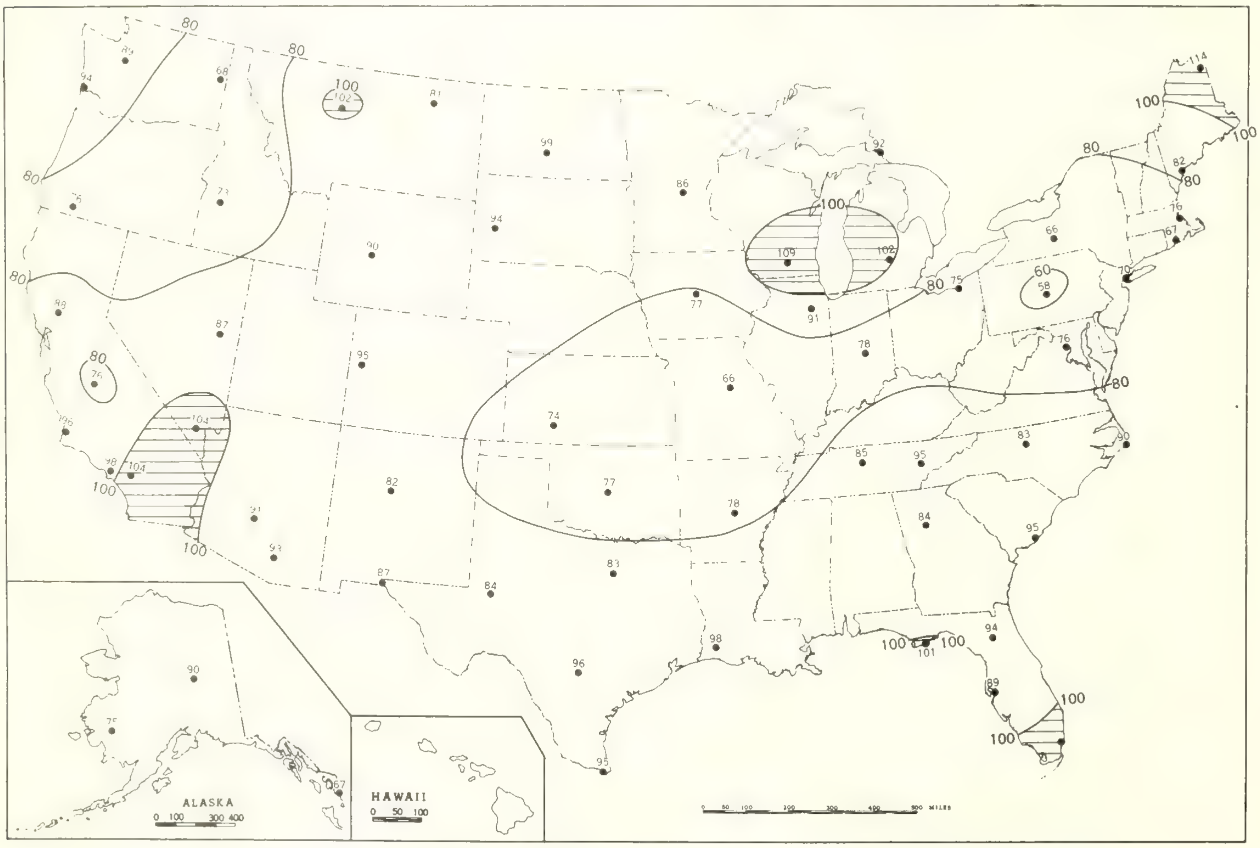


A. Computed from total number of hours of observed sunshine in relation to total number of possible hours of sunshine during month. B. Means are computed for stations having at least 10 years of record.

Chart VII. A. Average Daily Values of Solar Radiation, Langleys, November 1968.

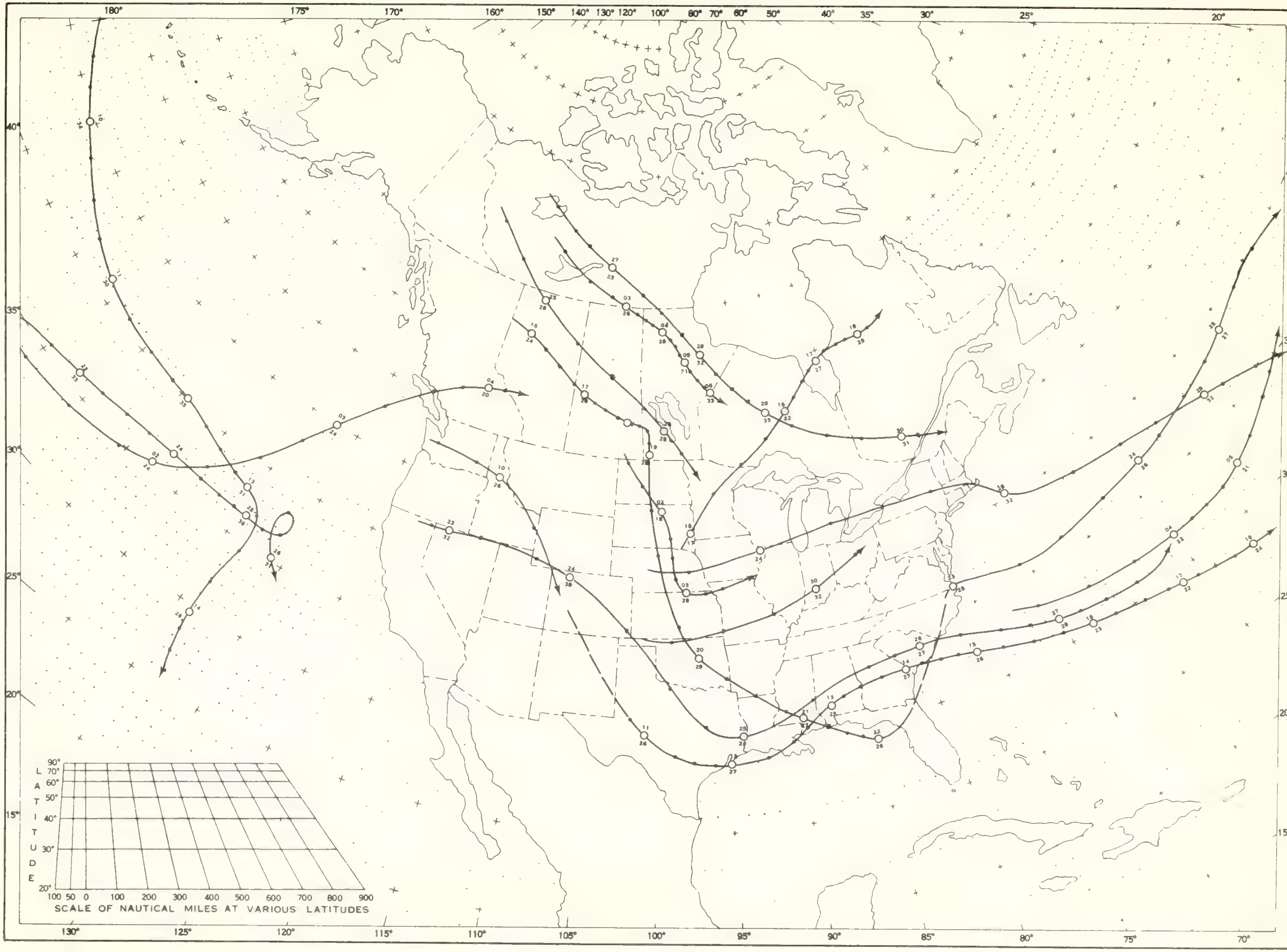


B. Percentage of Mean Daily Solar Radiation, November 1968.



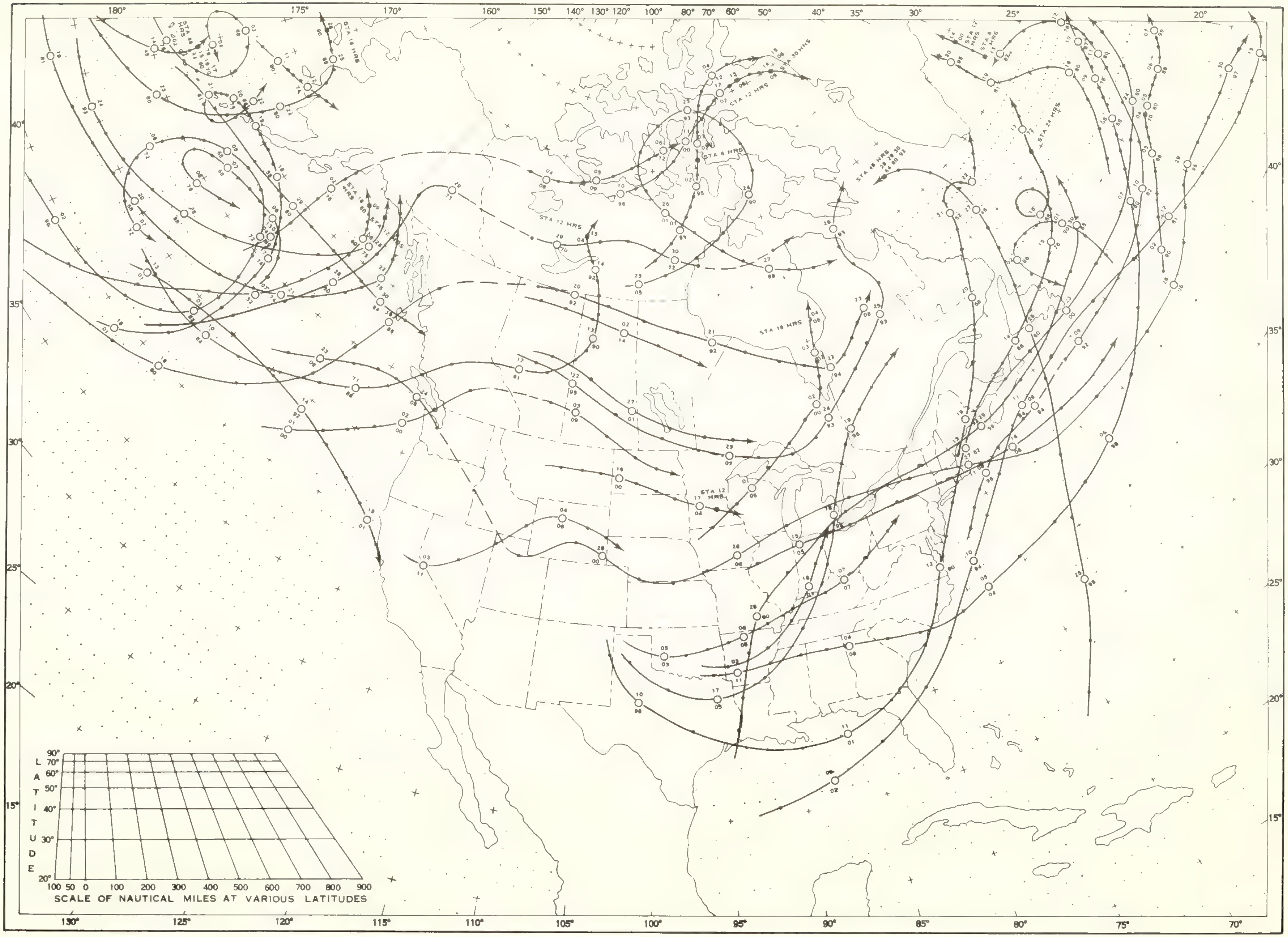
A. Mean daily solar radiation, direct + diffuse, received on a horizontal surface in langleys (1 langley = 1 gm. cal. cm.$^{-2}$) and recorded in International Pyrheliometer Scale of 1956. B. Percentage of the mean based on at least 5 years of record during the period 1950-60, and corrected to the International Pyrheliometer Scale of 1956.

Chart VIII. Tracks of Centers of Anticyclones at Sea Level, November 1968.



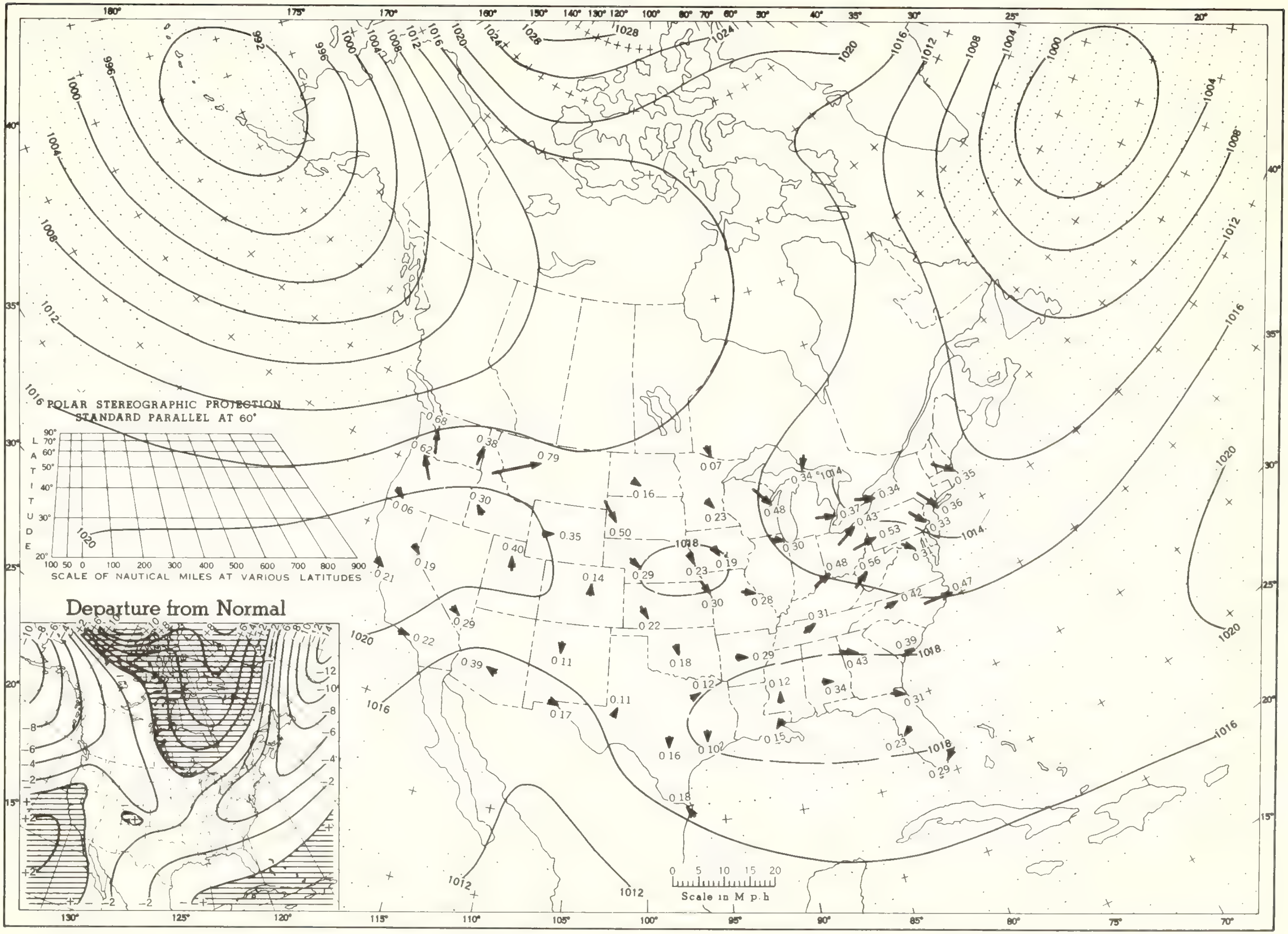
Circle indicates position of center at 7:00 a.m. E.S.T. Figure above circle indicates date, figure below, pressure to nearest millibar. Dots indicate intervening 6-hourly positions. Squares indicate position of stationary center for period shown. Dashed line in track indicates reformation at new position. Only those centers which could be identified for 24 hours or more are included.

Chart IX. Tracks of Centers of Cyclones at Sea Level, November 1968.



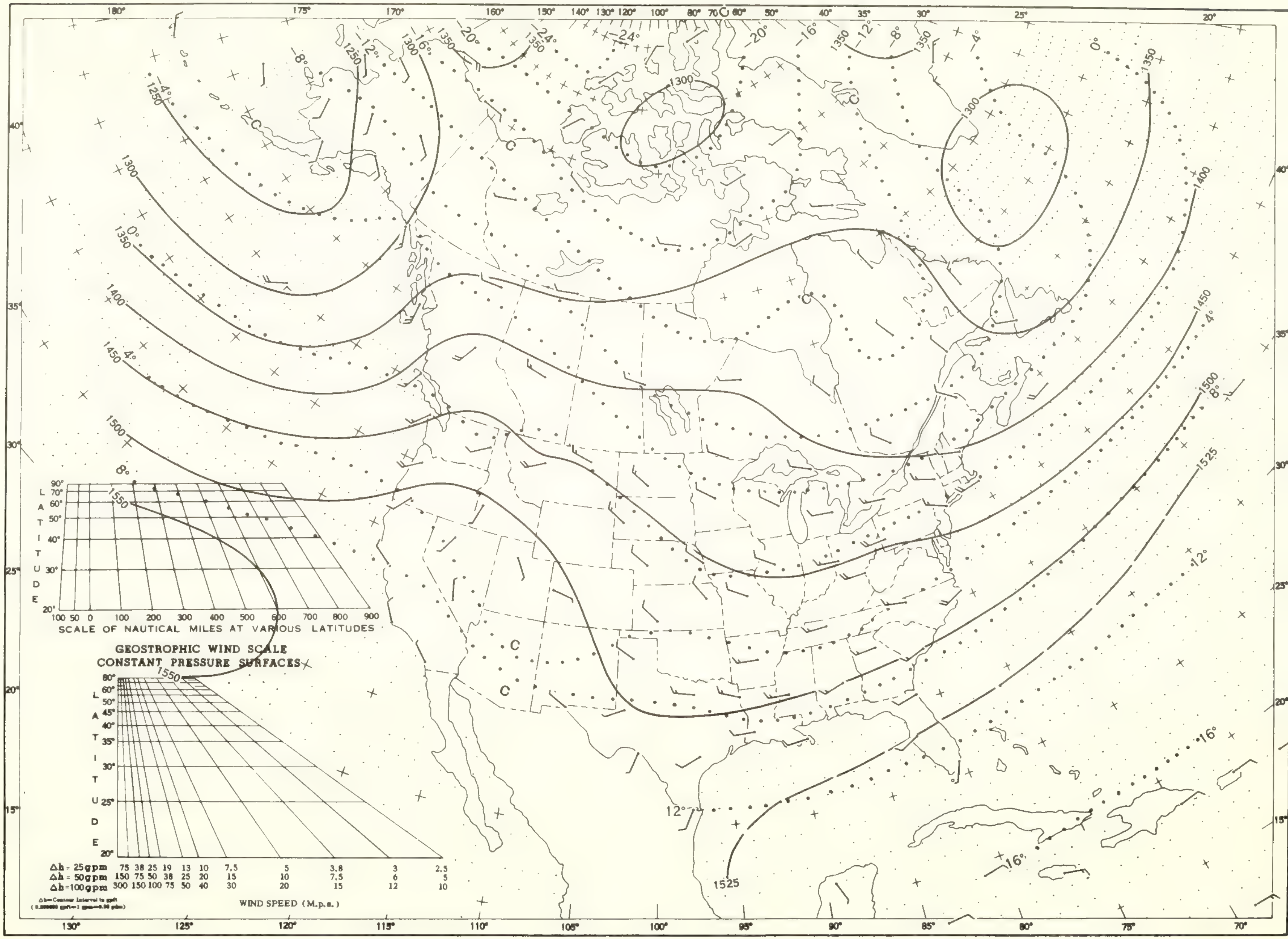
Circle indicates position of center at 7:00 a.m. E.S.T. Figure above circle indicates date, figure below, pressure to nearest millibar. Dots indicate intervening 6-hourly positions. Squares indicate position of stationary center for period shown. Dashed line in track indicates reformation at new position. Only those centers which could be identified for 24 hours or more are included.

Chart X. Average Sea Level Pressure (mb) and Resultant Surface Wind, November 1968. Inset: Departure of Average Pressure (mb) from Normal, November 1968.



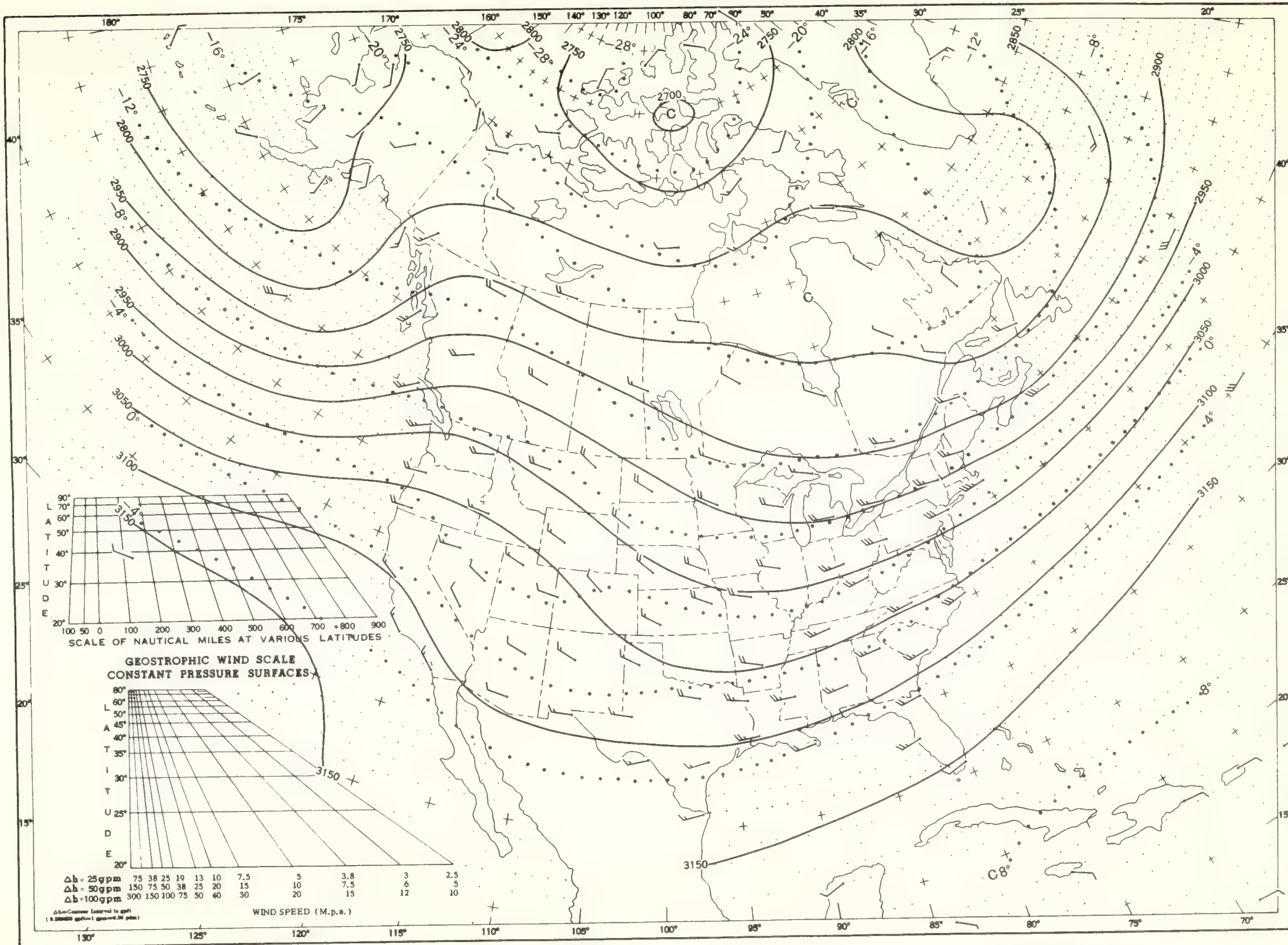
Average sea level pressures are obtained from eight daily 3-hourly observations. Resultant wind directions and speeds are shown by arrows. Constancy ratios (resultant speed÷average speed) are shown to two decimal places. Pressure normals are computed for stations having at least 10 years of record and for 10° intersections in a diamond grid over the oceans.

Chart XI. 850-mb. Surface, 1200 GMT, **November 1968**. Average Height and Temperature, and Resultant Winds.



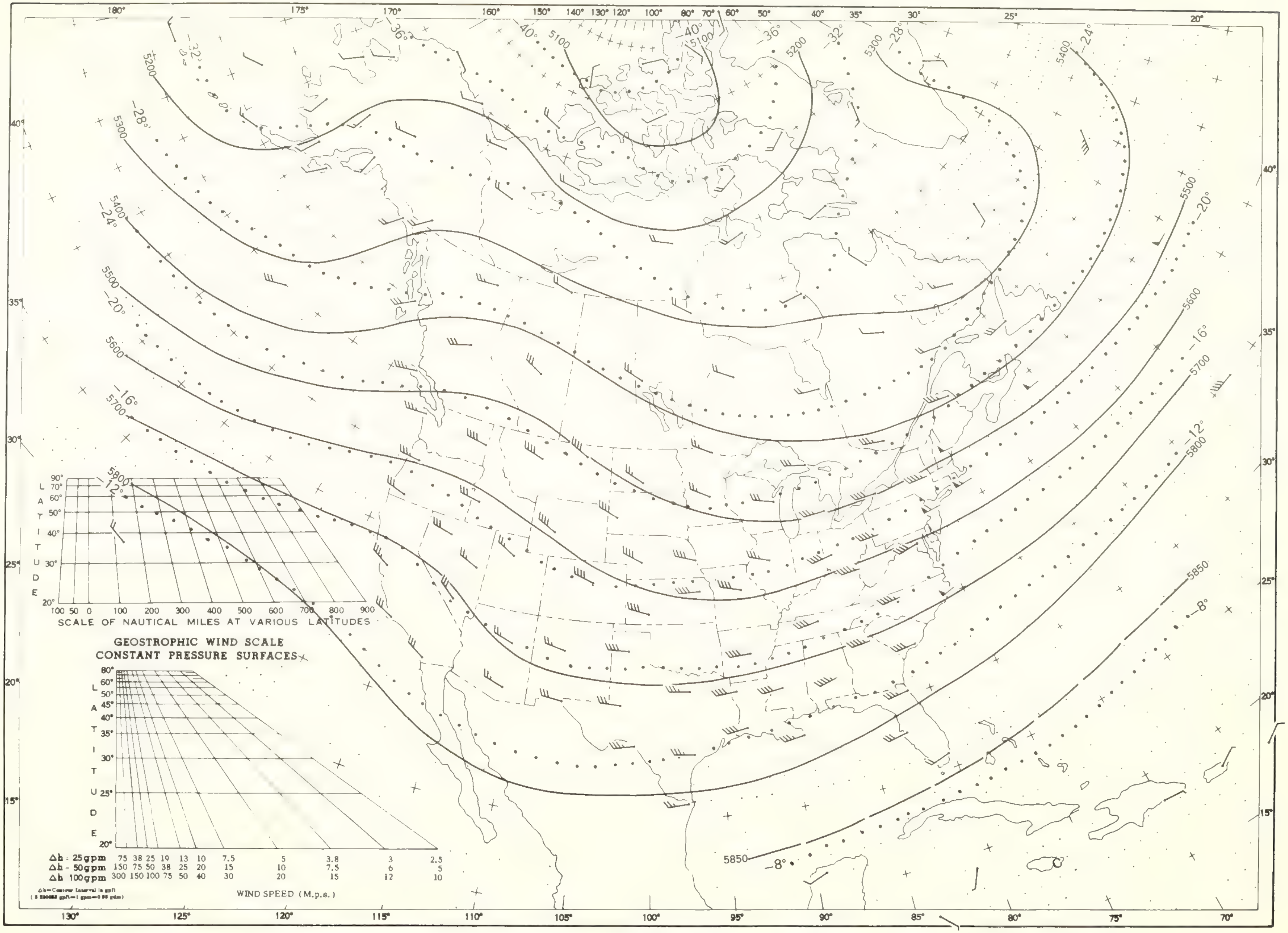
Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XII. 700-mb. Surface, 1200 GMT, November 1968. Average Height and Temperature, and Resultant Winds.



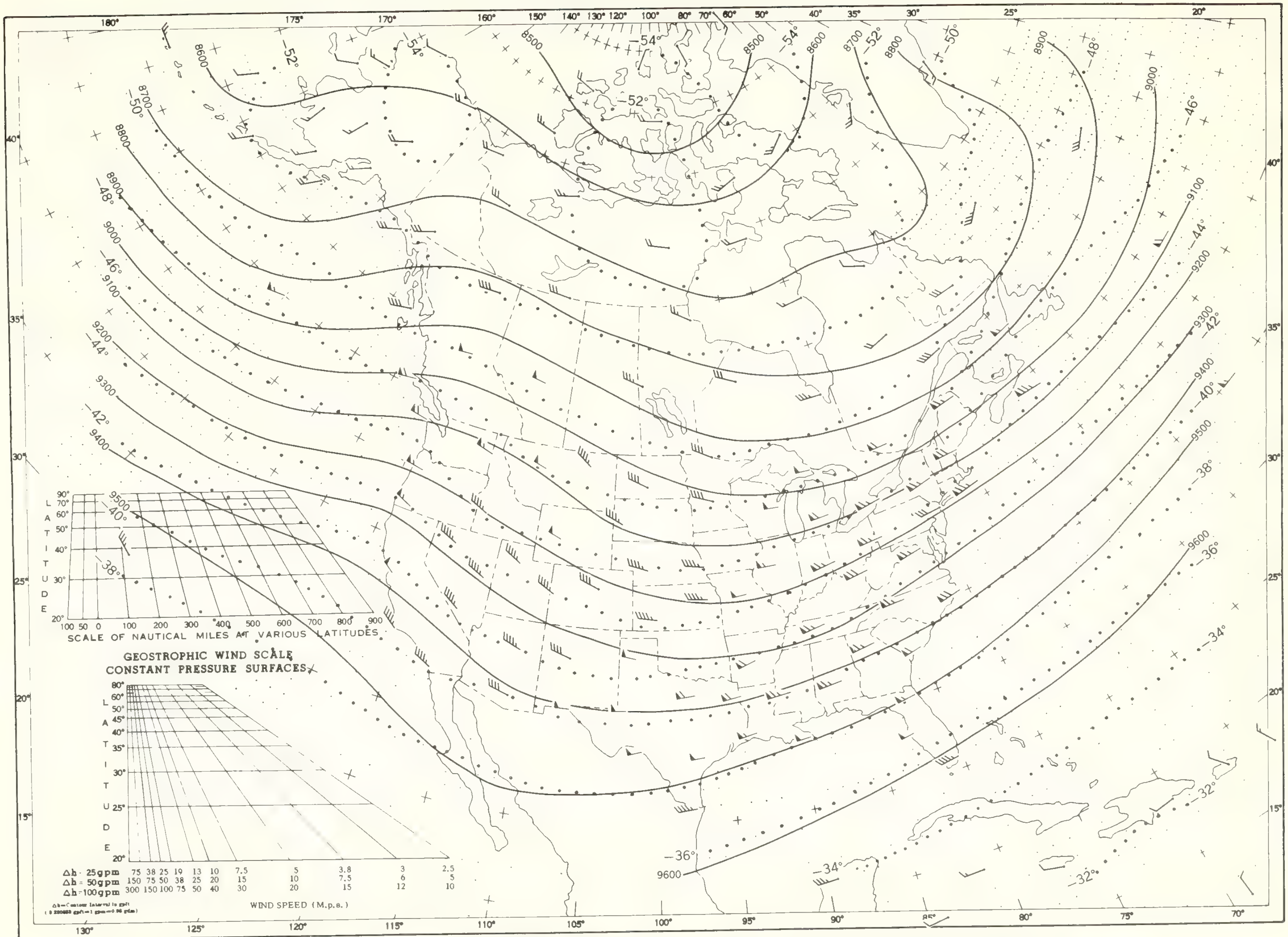
Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XIII. 500-mb. Surface, 1200 GMT, November 1968. Average Height and Temperature, and Resultant Winds.



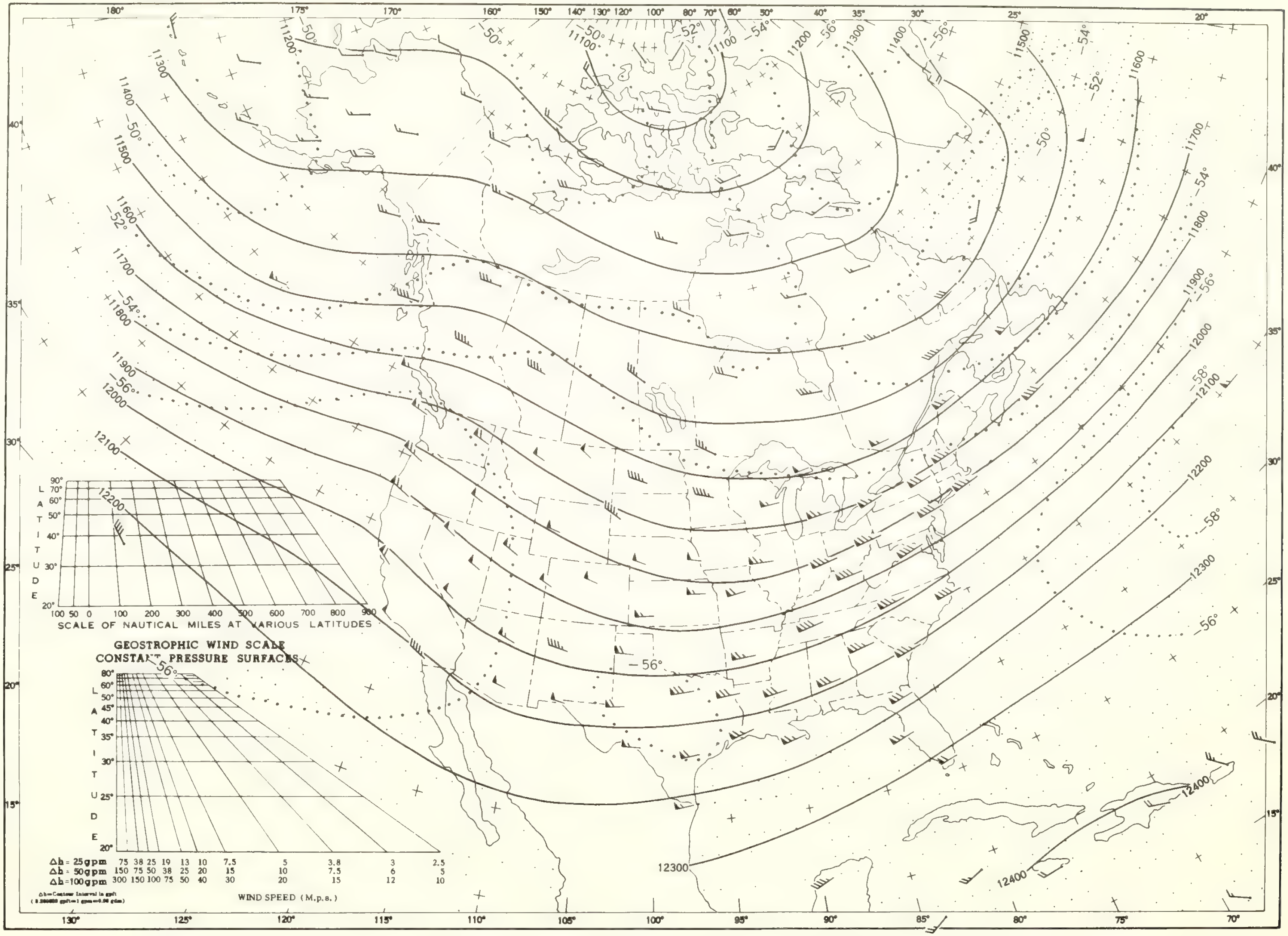
Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XIV. 300-mb. Surface, 1200 GMT, **November 1968**. Average Height and Temperature, and Resultant Winds.



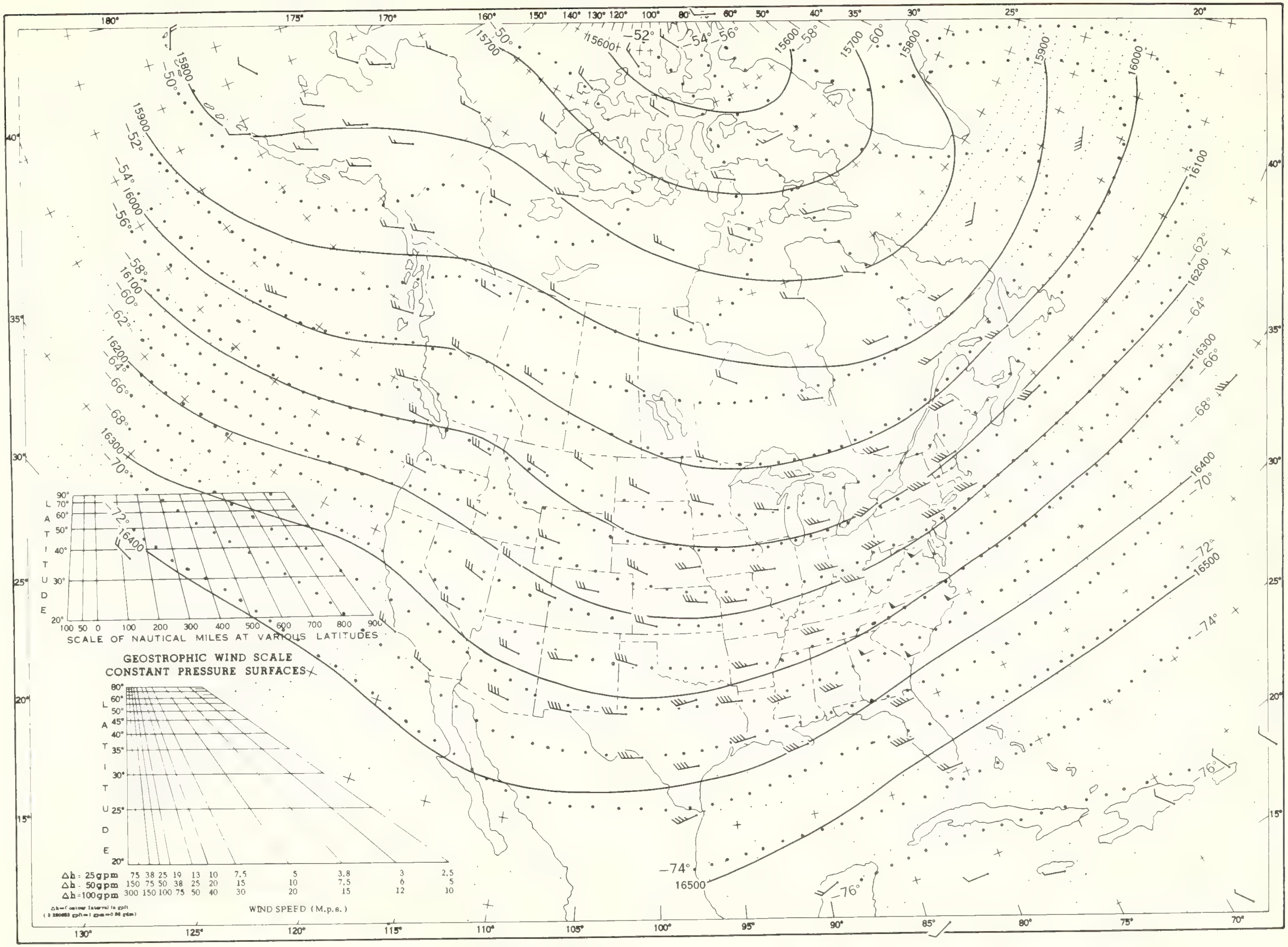
Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XV. 200-mb. Surface, 1200 GMT, November 1968. Average Height and Temperature, and Resultant Winds.



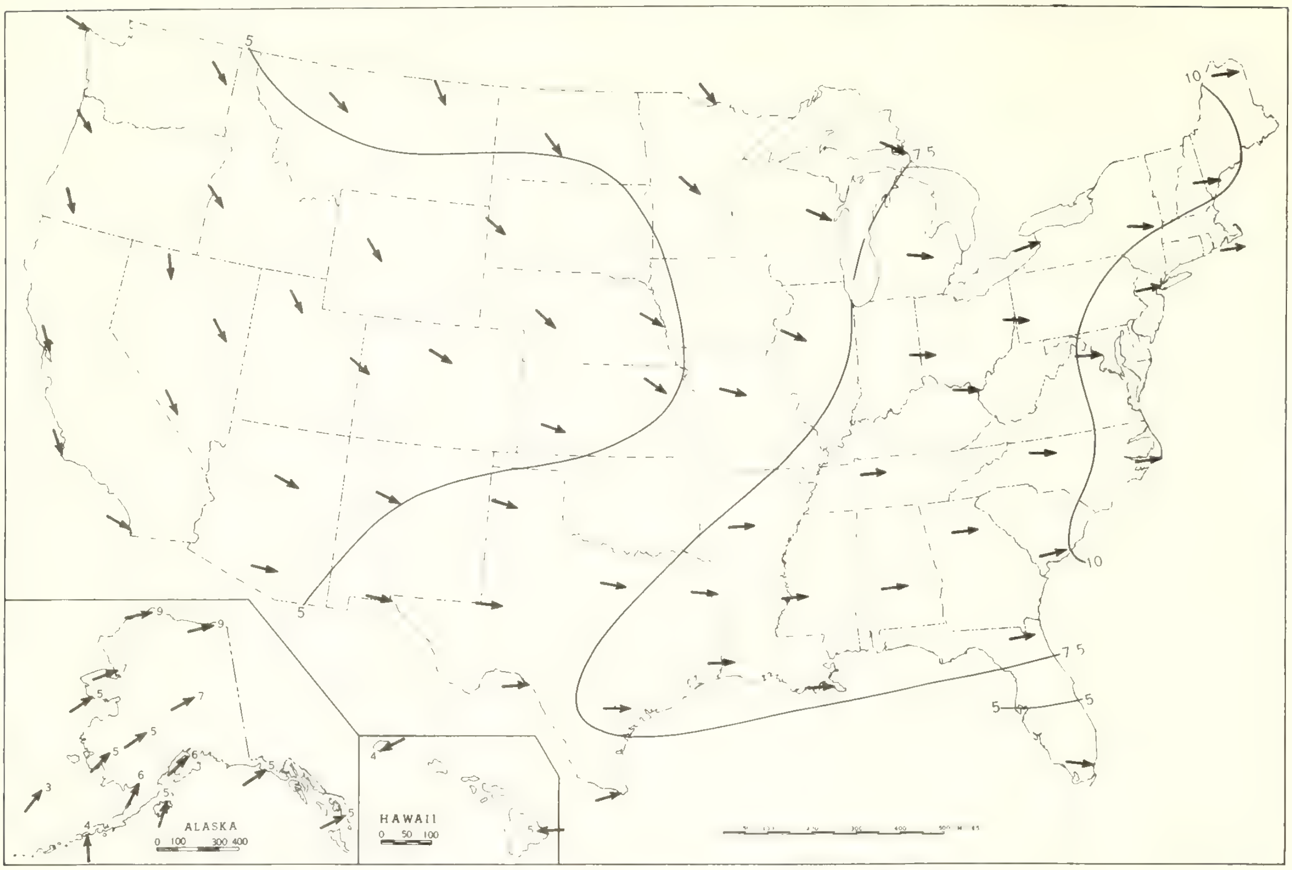
Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XVI. 100-mb. Surface, 1200 GMT, November 1968. Average Height and Temperature, and Resultant Winds.

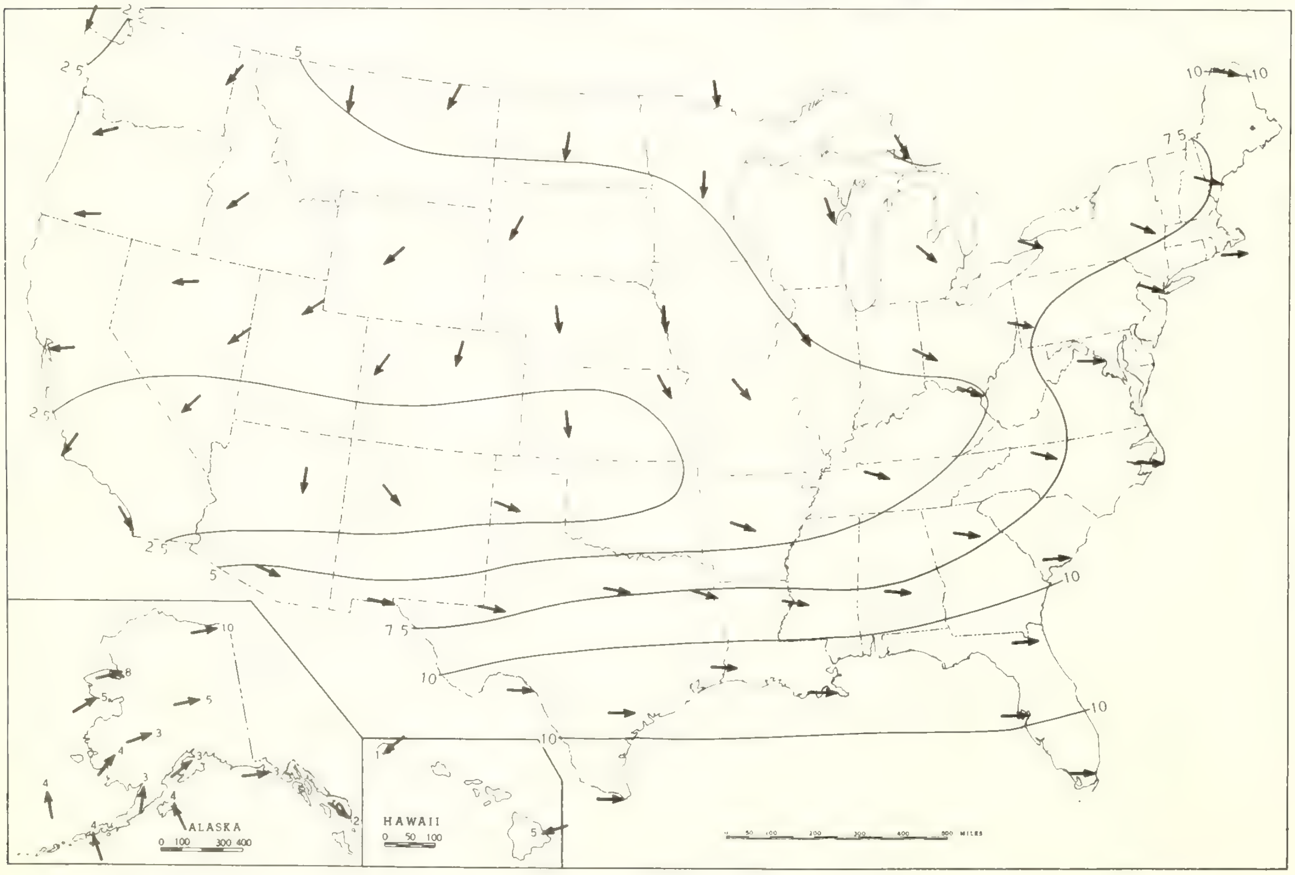


Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XVII. A. 50-mb. Surface, 1200 GMT, November 1968. Resultant Winds.



B. 30-mb. Surface, 1200 GMT, November 1968. Resultant Winds.



Wind speed (isotachs) in meters per second. Arrows show resultant wind direction. All wind data are based on rawin observations.

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CLIMATOLOGICAL DATA

NATIONAL SUMMARY

DECEMBER 1968

Volume 19 No. 12

Asheville 1969

CONTENTS

NOTE: Delayed data and corrections will be carried in the June and December issues of this publication. An explanatory page "Description of Charts" will be carried in the January and July issues.

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CLIMATOLOGICAL DATA

NATIONAL SUMMARY

Volume 19 No. 12 DECEMBER 1968

GENERAL SUMMARY OF WEATHER CONDITIONS

HIGHLIGHTS:

1. Cold, stormy, miserable weather prevailed over much of the Nation during most of December.
2. The few areas which remained sunny were colder than normal.

TEMPERATURE.--December temperatures averaged near or slightly above normal in southeastern Oregon, southwestern Idaho, eastern Wisconsin, eastern Maine, and below normal over the rest of the Nation. The eastern slope of the northern Rockies, the western slope of the central Rockies, and the northern and central Great Plains averaged 6° to 10° colder than most Decembers. The cold average temperatures resulted from the frequency and persistence of extremely cold daily temperature. Subzero temperatures occurred over the northern and central Rockies each week of the month and over the Great Plains in the last 2 weeks. Subfreezing weather occurred in the 48 States in each week with hard freezes reaching deep into central Florida in the second and third weeks.

Southerly winds brought a brief respite from the cold about midmonth with the temperature at Chadron, Nebr., climbing to 66° on the afternoon of the 16th but subzero weather returned to western Nebraska in about a week.

The last week of December was cold over almost the entire Nation. Much of the East had not seen such cold weather since early January 1968. Parts of the Northwest had not experienced such cold temperatures since the winter of 1949-50. Oregon reported the coldest weather in 40 years. The last 2 days of December were especially cold. The temperature at Moscow, Idaho, plunged to 50° below zero on the 30th, setting a new December record for the State. On many of the cold days, the strong wind and the snow made the weather more miserable.

Comparing the December 1968 records with previous December records, it is noted that 32° on the 21st at Los Angeles, Calif., is the lowest December temperature of record at that station. Temperatures at Albuquerque, N. Mex., averaged 30°--the coldest average temperature in 55 years. Yuma, Ariz., averaged 51.8°, experiencing the coldest December in 36 years. North Platte, Nebr., averaged 19.0°--the coldest in 44 years, and at Cairo, Ill., December 1968 was the first December in 34 years that the temperature did not reach 59°. On December 30, the temperature at Valentine, Nebr., climbed to only 15° below zero; never on any December day has it remained so cold.

PRECIPITATION.--Rains dampened the northern Pacific coast almost every day in December. On some days the rains fell as far south as San Francisco, Calif., or farther. Snow continued to pile up in the Cascades and northern Sierras. This is the usual winter pattern in the Northwest, but precipitation was heavier than normal in December 1968--exceeding the normal by more than 50% in some areas. By the end of the month, snow in Washington had accumulated to 75 inches at 3,000 feet and to 145 inches at 5,500 feet. Such accumulations are unusual by the end of December, having been exceeded only a few times. Almost 13 inches of rain fell at Portland, Oreg., during the month--more than in any previous December of record.

Strong winds accompained the rain and snow in Washington and Oregon on December 4 and 5. Flooding caused light damage but the heavy rains caused slides which resulted in considerable damage to roads and highways in most of Oregon. Blizzard conditions in the mountain passes and in Columbia Gorge made driving hazardous. More heavy snow accompanied by high winds occurred in Oregon on several days near the end of the third week of December. Snow plows could not keep the mountain passes open and freezing rain plus snow and strong winds curtailed the use of the highway through the Columbia Gorge for several hours on the 23d.

Heavy snow in Washington and Oregon in the last few days of the month, accompanied by strong wind and, in some places, mixed with freezing rain, hampered or stopped traffic. Deep drifts or slides prevented travel through mountain passes. In Portland and many other cities and towns in northern and central Oregon, stores, offices, factories, and other types of business closed on the 30th and remained closed until after New Years Day.

Heavy snows also occurred in parts of Minnesota, Wisconsin, Michigan, and in western New York in the lee of the eastern Great Lakes. On December 5, the first major snowstorm of the season dumped 12 to 16 inches of snow over northwestern Lower Michigan, closing roads and schools. Wet snow in central and southern Lower Michigan froze to the trees and power lines which, whipped by 45- to 50-m.p.h. winds, broke, causing widespread disruption of power and communications. In New York, this intense early-winter storm dumped 18 to 30 inches of snow in the lee of the Great Lakes from the 4th to the 6th. Strong winds, which gusted to 60 to 70 m.p.h. broke powerlines and tree limbs. The storm closed schools and disrupted travel and communications.

Blizzards from the 19th to 22d clogged roads in much of Minnesota. Many schools closed on the 19th and 20th. The worst storm since 1938 struck western Upper Michigan from the 22d to 24th, and freezing rain broke powerlines and glazed roads and airport runways in Lower Michigan and western New York.

Shortly after midmonth, a storm blanketed the Great Plains from the Dakotas to the Texas Panhandle and eastward to the Great Lakes and Ohio River Valley with heavy snow. Winds, gusting to 60 m.p.h. in parts of the Great Plains, piled the snow in drifts 4 to 10 feet deep in many places and to 20 feet deep in a few places. December snowfall totals in parts of the northern Great Plains exceeded the totals for any previous December. Among the new records established were:

Huron, S. Dak., 26.0 inches;
Sioux Falls, S. Dak., 41.1 inches;
Sioux City, Iowa, 20.6 inches;
St. Cloud, Minn., 25.4 inches;
Green Bay, Wis., 26.7 inches.

Precipitation over the middle and lower Mississippi River Valley ranged from 4 to 8 inches. Much of this fell as showers in the third week of December. Widespread severe weather--heavy rain, strong winds, thunderstorms, hail, funnel clouds, and a few tornadoes occurred in the South on the 27th. Most of the reports

came from Texas, Arkansas, Louisiana, Tennessee, Mississippi, and Alabama.

The areas that received little or no rain in December included the Desert Southwest, western Texas, and southern Florida.

CONDENSED CLIMATOLOGICAL SUMMARY

DECEMBER 1968

Section	Temperature						Precipitation			
	Monthly extremes						Monthly extremes			
	Station	Highest	Date	Station	Lowest	Date	Station	Greatest	Station	Least
		°F			°F			In.		In.
Alabama	Brantley	76	22	Valley Head	8	16	Melvin	11.64	Falkville 1N	3.64
Alaska	2 Stations	52	24+	Rampart No 2	-63	31	Beaver Falls	11.42	Clear Water	T
Arizona	Tucson Univ of Arizona	85	10	Hawley Lake	-27	22	Mc Nary	4.68	3 Stations	.00
Arkansas	Morobay Lock No 8	72	28	2 Stations	1	31	Hector	10.11	Newport	2.96
California	Avila Beach	88	31	Bridgeport	-31	21	Honeydew 2WSW	33.95	2 Stations	.00
Colorado	3 Stations	71	18+	Wagon Wheel Gap 3N	-38	31	Wolf Creek Pass 4W	5.42	Idalia	.03
Connecticut	Groton	62	2	Norfolk 2SW	-12	26	Groton	9.00	Woodbury	3.89
Delaware	3 Stations	65	29+	Milford 2WSW	6	11	Selbyville	3.83	Bridgeville 1NW	1.96
Florida	Tamiami Trl 40 Mi Bend	90	20+	2 Stations	13	16+	Wewahitchka	8.20	5 Stations	.00
Georgia	2 Stations	81	22+	Blairsville Exp Sta	8	9	Morgan 5NW	8.32	Swainsboro	2.02
Hawaii	Mauna Kea Beach 98	90	15	Mauna Loa Slope Obs	28	26	Pahoa 65	45.48	Mauna Key Beach 98	4.11
Idaho	Riggins Ranger Station	63	10	Potlatch 3NNE	-48	30	Clarkia Ranger Station	D 9.81	Chilly Barton Flat	.35
Illinois	3 Stations	61	27+	3 Stations	-15	31	Cairo WB City	6.79	Keithsburg 1NW	1.23
Indiana	do	60	29+	Valparaiso Waterworks	-8	31	Mount Vernon	5.99	Logansport Radio WSAL	.62
Iowa	7 Stations	65	12	Le Mars 2N	-25	31	Lake Park	6.13	Esterville 2N	.81
Kansas	Elkhart	74	4	2 Stations	-18	31	Columbus 6NNW	3.87	Lakin	T
Kentucky	2 Stations	66	29+	do	0	17+	Mayfield Radio WNGO	6.10	Cumberland Falls St Pk	D 1.55
Louisiana	3 Stations	78	27+	3 Stations	19	24+	Pine Grove Fire Tower	11.16	Lafayette FAA AP	3.16
Maine	5 Stations	53	13+	Hiram	-27	26	Saco	8.23	Fort Kent	3.32
Maryland	Baltimore WB City	69	28	Oakland 1SE	-21	11	Cumberland Police Brks	5.48	2 Stations	1.60
Massachusetts	Hyannis 2NNE	60	14	3 Stations	-15	26	Sterling	9.00	Hubbardston	3.80
Michigan	2 Stations	54	12	Kincheloe AF Base	-22	25	Watersmeet	8.28	Jackson FAA AP	1.19
Minnesota	Winona	61	13	Cotton 10E	-41	25	Cass Lake	4.46	Warroad	.14
Mississippi	Hattiesburg	78	2	3 Stations	13	16	Columbia	15.34	Baldwyn	2.96
Missouri	Oregon	68	13	8 Stations	-13	31	Bernie	7.04	Lucerne	.62
Montana	2 Stations	61	10	Loma 1WNW	-53	29	Summit	6.16	2 Stations	.03
Nebraska	3 Stations	69	12+	Fort Robinson	-34	30	York	3.71	Harrisburg 10NW	.12
Nevada	Sunrise Manor Las Vegas	70	17	Diamond Valley-Hall	-27	22	Mt. Rose-Christmas Tree	4.74	Blue Jay Hwy Station	.00
New Hampshire	Windham	56	14	Mount Washington	-39	25	Mount Washington	16.10	Jefferson 5SSW	2.55
New Jersey	Long Branch 2N	63	13	High Point Park	-5	26	Milton	5.22	Canton	1.42
New Mexico	2 Stations	74	25+	Gavilan	-29	22	Sandia Crest	3.64	7 Stations	.00
New York	New York Laurel Hill	62	13	3 Stations	-38	26	Hooker 4N	8.47	Whitesville	2.12
North Carolina	Laurinburg	78	13	Grandfather Mountain	-2	15	Coweeta Exp Station	7.83	New Holland	1.22
North Dakota	Mandan Exp Station	55	1	2 Stations	-39	30	Beach 1NE	5.46	Hansboro 3W	.05
Ohio	Canton Repository	79	19	Canfield 1S	-10	10	Hiram	8.02	Lancaster 2NW	D 1.31
Oklahoma	5 Stations	73	26+	Pawhuska	-5	31	Kiamichi Tower	8.89	Goodwell	.08
Oregon	Echo	68	10	2 Stations	-24	31+	Valsetz	30.52	Lake 2N	.25
Pennsylvania	Uniontown	67	28	Bradford FAA AP	-16	11+	Corry	7.36	Donora	.85
Puerto Rico	Redhook Bay	95	7	San Sebastian	53	26	Arecibo 2ESE	16.60	Ensenada	.66
Rhode Island	Newport	57	14	Greenville	-5	26	Greenville	7.00	Block Island WBAP	5.38
South Carolina	2 Stations	78	19	Ninety Nine Islands	10	16	Longcreek 1N	5.95	Georgetown	1.14
South Dakota	do	70	11	Camp Crook	-33	30	Madison Research Farm	4.39	Interior 3NE	.10
Tennessee	Sevierville 1SE	69	19	Mountain City No 2	0	16	Covington 1W	6.29	Greenville Exp Sta	1.58
Texas	2 Stations	95	28+	Follett	-2	31	Livingston 2NNE	8.21	22 Stations	.00
Utah	Veyo Power House	69	10	Woodruff	-25	21	Alta	9.85	Garrison	.03
Vermont	2 Stations	53	14+	Mount Mansfield	-31	26	Mount Mansfield	D 9.96	Cornwall	3.01
Virginia	Boykins	71	28	Partlow 3WNW	-3	11	Chincoteague WL Ref	D 3.92	Staunton Sewage Plant	.46
Washington	Lower Granite Dam Near	67	11	2 Stations	-48	30	Spruce	25.66	Othello 6ESE	.57
West Virginia	2 Stations	67	28	Bayard	-18	11	Rowlesburg 1	5.11	Athens Concord College	.70
Wisconsin	Alma Dam 4	61	12	Minong 5WSW	-42	25	Marinette	D 4.73	Coddington 1E	1.52
Wyoming	2 Stations	68	12+	Lamar Ranger Station	-39	31	Linch 10ESE	D 2.89	Clark 7NE	.11

\+ And also on an earlier date or dates.

NOTE: Dates in the above Condensed Climatological Summary apply to the period 24 hours prior to time of observation. In some cases the actual occurrence is on the calendar date preceding that shown. (See individual Climatological Data for times of observations).

D Water equivalent of snowfall wholly or partly estimated, using a ratio of 1 inch water equivalent to every 10 inches of snowfall.

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temp: Average maximum	Temp: Average minimum	Temp: Average	Temp: Departure from normal	Temp: Highest	Date	Temp: Lowest	Date	No. of days: Max. 90°F. or above	No. of days: Min. 32°F. or below	Average dew point	Average relative humidity	Precip: Total	Precip: Departure from normal	Precip: Greatest in 24 hours	No. of days: .01 inch or more	No. of days: With thunderstorms	Snow, Sleet: Total	Snow, Sleet: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Fastest mile: Speed	Fastest mile: Direction	Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	Ft.	Mb.	Mb.	°F.	°F.	°F.	F.	°F.		°F.				°F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
ALABAMA																																
BIRMINGHAM	620	998.0	1021.1	52	31	41.5	- 5.8	63	27+	15	15	0	19	30	65	7.38	2.36	3.38	10	2	T	0	0.8	28	37	W	27	9	8	14	6.0	58
HUNTSVILLE	624	997.0	1020.8	48	29	38.7	- 4.9	62	27	14	16	0	21	29	70	5.19	0.28	2.16	11	1	T	0	1.4	23	38	26	22	9	6	16	6.3	
MOBILE	211	1012.9	1020.8	60	39	49.5	- 4.6	72	22	24	16	0	7	39	70	10.70	5.24	5.50	12	3	0.0	0	1.2	4	29	18	27	11	6	14	5.5	
MONTGOMERY	183	1013.9	1021.4	57	34	45.6	- 2.6	75	22	20	16+	0	15	35	71	5.65	0.84	1.25	12	3	0.0	0	1.9	30	43	S	27	12	6	13	5.5	57
ALASKA												B																				
ANCHORAGE	114	1005.4	1010.5	14	- 1	6.3	- 7.2	42	15	-16	8+	0	31	- 2	67	0.45	- 0.49	0.12	8	0	7.9	16	1.8	2	32	16	15	11	4	16	5.8	39
ANNETTE	110	1005.1	1009.2	36	26	31.2	- 4.8	47	14	5	28	0	21	22	70	4.87	- 7.24	1.29	16	0	14.7	7	4.0	9	40	12	6	10	3	18	6.1	
BARROW	31			- 6	-20	-12.9	- 1.7	26	22	-34	8	0	31	-19	74	0.25	0.08	0.09	10	0	3.4	8			40	10	26	Z	Z	Z		
BARTER ISLAND	39	1018.6	1020.7	- 6	-20	-13.1	- 2.7	29	23	-44	7	0	31	-23	60	0.22	- 0.07	0.15	4	0	4.2	6	7.1	26	54	26	17	Z	Z	Z		
BETHEL	125	1010.2	1016.3	8	- 6	0.9	- 3.9	39	18	-29	7	0	30	- 3	82	0.96	- 0.06	0.52	7	0	8.3	12	4.4	1	44	21	15	9	4	18	6.6	
COLD BAY	96	1009.8	1013.6	35	27	30.9	2.1	46	14	15	14	0	22	25	80	1.17	- 1.42	0.23	13	0	7.8	7	2.9	31	51	29	1	0	3	28	9.0	
FAIRBANKS	436	1001.0	1019.9	- 8	-28	-17.7	-10.0	36	19	-53	31	0	31	-26	63	1.38	0.84	1.25	4	0	20.2	24	0.8	36	22	23	19	6	11	14	6.4	
JUNEAU	12	1010.2	1011.0	26	13	19.4	- 9.0	38	14	-13	31	0	31	13	78	1.90	- 2.32	0.41	15	0	35.6	14	5.5	9	31	11	16	11	3	17	6.0	42
KING SALMON	49	1010.2	1012.3	12	- 5	3.4	- 9.8	38	18	-29	2	0	31	- 4	68	1.25	0.23	0.48	8	0	10.8	8	3.8	35	35	14	15	11	6	14	5.7	
KOTZEBUE	10	1018.6	1019.2	1	-11	- 5.0	- 1.4	29	21	-33	1	0	31	-14	66	0.15	- 0.14	0.05	6	0	4.6	7	6.1	8	43	11	9	11	5	15	5.8	
MC GRATH	344	1004.4	1018.4	- 6	-24	-15.1	- 8.1	38	19+	-47	31+	0	31	-24	63	0.93	- 0.08	0.59	6	0	16.4	19	0.7	31	30	20	19	13	6	12	5.0	
NOME	13	1016.6	1017.5	8	- 8	- 0.2	- 6.5	32	21+	-32	30	0	31	- 7	71	0.40	- 0.59	0.11	9	0	4.0	12	4.2	6	35	8	18+	12	2	17	5.9	29
ST. PAUL ISLAND	22	1012.5	1013.5	34	26	29.9	3.5	41	17	8	5	0	22	26	86	2.74	0.91	0.76	22	0	10.0	6	1.7	2	51	33	12	1	1	29	9.2	
SHEMYA	122	1008.1	1011.8	37	29	33.3	1.9	42	17+	21	22	0	26	28	79	2.33	0.19	0.67	20	0	6.9	4	8.7	22	62	22	11	2	8	21	8.2	
YAKUTAT	28	1006.1	1007.3	27	12	19.1	- 9.0	37	16	- 3	22	0	31	13	76	6.59	- 5.68	1.48	18	0	70.5	32	6.1	9	30	15	16	6	5	20	7.2	
ARIZONA																																
FLAGSTAFF	7006	786.0	1020.1	39	11	25.0	- 5.4	54	4	-16	22	0	31	10	56	2.71	1.06	1.23	9	0	27.5	14	3.2	22	23	23	25	10	7	14	5.9	
PHOENIX	1117	978.3	1018.0	63	36	49.5	- 2.1	77	10	24	22	0	8	28	50	0.69	- 0.16	0.37	3	0	T	0	1.3	12	32Y	W	26	14	7	10	4.8	87
TUCSON	2584	927.9	1017.1	65	36	50.6	- 1.3	80	10	19	22	0	11	23	40	0.32	- 0.60	0.21	3	0	0.4	T	3.6	15	31	S	20	17	4	10	4.1	85
WINSLOW	4895	852.4	1022.1	42	14	27.8	- 4.7	61	11	- 9	22	0	30	10	53	0.45	- 0.07	0.24	6	0	6.4	3	2.4	20	37	23	11	12	9	10	4.9	
YUMA	194	1011.2	1018.6	66	38	51.8	- 3.2	75	11	27	22	0	3	27	44	0.06	- 0.26	0.04	2	1	0.0	0	4.6	36	31	W	26	14	5	12	4.8	84
ARKANSAS																																
FORT SMITH	447	1002.7	1019.6	51	28	39.1	- 3.2	68	26	12	31	0	23	27	63	5.55	2.73	2.55	6	2	T	T	1.1	34	33	W	28	8	7	16	6.2	60
LITTLE ROCK	257	1010.2	1019.9	52	33	42.2	0.3	69	18	19	16+	0	17	30	63	4.56	0.47	1.53	9	0	0.0	0	2.0	26	38	NW	28	11	4	16	5.9	56
CALIFORNIA																																
BAKERSFIELD	475	1003.1	1020.9	56	38	47.0	- 1.8	69	15	25	22	0	6	37	73	0.67	- 0.30	0.23	9	0	T	0	1.1	2	23	34	11	8	6	17	6.5	
BISHOP	4108	874.7		50	18	33.9	- 5.4	65	6	4	22	0	30			0.48	- 0.70	0.33	4		2.2	2						10	9	12	5.7	
BLUE CANYON	5280			39	27	32.9	- 7.4	59	6	13	20	0	23			13.62	3.38	2.94	17		81.5	44			37	18	10	6	3	22	7.9	
EUREKA U	43			53	40	46.5	- 2.4	64	31	29	21+	0	3			8.32	1.61	1.39	21		T	T			42	SE	22	3	6	22	8.2	38
FRESNO	328	1008.8	1020.7	52	35	43.3	- 3.7	63	15	25	22	0	13	37	83	2.44	0.47	0.88	11	1	1.2	1	1.1	9	23	SE	14	5	7	19	7.3	31
LONG BEACH	34	1017.6	1018.9	66	43	54.0	- 2.0	79	31+	31	21	0	1	36	56	1.55	- 0.42	0.99	7	0	0.0	0	2.3	31	23	27	26+	10	8	13	5.6	
LOS ANGELES	97	1014.6	1018.3	63	46	54.3	- 2.6	79	4	32	21	0	1	38	59	1.42	- 0.97	0.97	6	0	0.0	0	1.7	32	32Y	NW	20+	10	9	12	5.6	
LOS ANGELES U	270			66	47	56.2	- 2.0	80	4	33	21	0	0			1.28	- 1.59	0.89	6		0.0	0			24	N	20	9	10	12	5.4	82
MT SHASTA R	3544			39	24	31.3	- 4.6	50	5+	6	21	0	29			11.85	5.63	2.94	18		63.6	37										
OAKLAND	6	1019.6	1020.0	54	44	48.7	- 0.8	59	10+	32	21	0	1	42	77	3.21	- 0.37	0.81	17	1	0.0	0	2.1	14	35	17	13	7	10	14	6.5	
RED BLUFF	342	1007.1	1020.0	51	36	43.4	- 3.7	63	5	24	21	0	9	35	75	7.17	2.96	1.67	15	0	8.0	5	0.9	21	40	SE	15	4	6	21	7.7	45
SACRAMENTO	17	1019.3	1020.3	51	36	43.5	- 2.9	61	9	25	21	0	7	39	85	2.77	- 0.47	0.77	14	0	T	0	1.3	16	29	W	15	8	5	18	7.0	52
SANDBERG R	4517	863.5		43	30	36.7	- 6.0	59	8	14	20	0	19	16	52	0.72	- 1.77	0.20	7		3.4	2			53	34	16	6	8	17	6.8	
SAN DIEGO	13	1017.3	1018.4	64	46	54.9	- 2.2	73	31+	36	22	0	0	41	62	0.61	- 1.44	0.47	6	0	0.0	0	2.2	31	27	NW	26	9	10	12	5.5	78
SAN FRANCISCO	8	1019.3	1019.9	54	41	47.8	- 2.3	62	13	29	21	0	1	41	77	4.49	0.40	1.34	16	1	T	T	1.2	21	44	S	15	5	11	15	6.7	
SAN FRANCISCO U	52			54	45	49.8	- 2.7	60	10+	38	21	0	0			3.91	- 0.36	0.73	17		0.0	0										53
SANTA MARIA	236			62	37	49.9	- 2.5	79	4	27	21	0	6			1.41	- 1.17	0.32	11		0.0	0			35	SE	15	13	7	11	5.3	
STOCKTON	22			49	35	42.0	- 3.9	60	9	22	21	0	13	38	88	4.38	1.72	1.12	16	0	T	0			29	14	15	6	6	19	7.3	
COLORADO																																
ALAMOSA	7536	768.7		36	- 4	16.2	- 3.0	50	16	-29	19	0	31			0.38	0.13	0.38	2		6.3	6						13	8	10	4.5	
COLORADO SPRINGS	6145	806.3	1016.1	43	16	29.4	- 2.3	63	4	- 1	22	0	30	8	47	0.24	0.00	0.18	3	0	4.9	4	3.2	1	44	34	30	7	8	16	6.4	
DENVER	5283	831.7	1014.0	44	14	28.9	- 2.7	66	11+	-12	22	0	30	11	55	0.51	0.04	0.25	6	0	6.9	4	2.0	23	39	W	12	7	11	13	6.0	69
GRAND JUNCTION	4855	853.0	1022.5	34	11	22.7	- 6.4	59	11	- 9	22	0	31	12	68	0.47	- 0.10	0.17	7	0	7.8	4	1.3	3	38	W	11	4	10	17	7.2	42
PUEBLO	4684	852.4	1015.7	46	16	30.8	- 2.4	67	10+	- 2	23+	0	31	10	49	0.36	0.06	0.26	4	0	7.1	6	3.3	29	41	W	12	8	14	9	5.4	72

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure: Station ∅	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	No. of days: Max. 90 F. or above	No. of days: Min. 32 F. or below	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	No. of days: .01 inch or more	No. of days: With thunderstorms	Snow, Sleet: Total	Snow, Sleet: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Fastest mile: Speed	Fastest mile: Direction	Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	Ft.	Mb.	Mb.	F.	F.	F.	F.	F.		F.				F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
CONNECTICUT																																
BRIDGEPORT	7	1013.5	1014.3	39	26	32.4	-0.8	56	2	6	26	0	23	22	65	7.45	3.94	3.69	13	0	2.4	1	9.6	31	44	30	24	6	11	14	6.5	
HARTFORD	169	1006.8	1013.5	33	18	25.4	-3.5	56	2	-5	26	0	26	16	68	5.22	1.75	2.12	12	0	13.9	6	5.9	30	35	NW	25	7	7	17	6.6	53
NEW HAVEN	6	1013.9		39	24	31.2	-1.2	55	2	2	26	0	23			6.60	2.58	2.73	13		4.0	2			35	W	5	7	10	14	6.3	58
DELAWARE																																
WILMINGTON	74	1013.5	1016.4	42	27	34.2	-0.9	65	28	10	11	0	22	20	59	2.33	-0.70	0.67	12	0	0.6	1	6.9	27	35	27	4	7	7	17	6.8	
DIST.OF COLUMBIA																																
WASH NATL AP	10	1015.2	1017.6	44	29	36.6	-1.5	69	28	13	11	0	23	22	57	2.22	-0.56	0.68	8	0	T	0	5.2	29	41	W	5	6	8	17	6.7	47
FLORIDA																																
APALACHICOLA U	13			60	43	51.7	-4.1	71	7	27	16	0	3			4.69	1.73	1.28	10	1	0.0	0			25	S	28+	14	9	8	4.5	63
DAYTONA BEACH	31	1020.0	1021.3	68	45	56.2	-4.1	84	2	27	17	0	3	45	69	1.38	-0.57	0.85	7	1	0.0	0	2.2	29	25	20	28	13	10	8	4.6	
FORT MYERS	15	1020.3	1020.8	73	51	62.3	-2.7	84	31	32	16	0	1	51	72	0.16	-1.13	0.10	2	0	0.0	0	2.8	5	26	31	4	14	9	8	4.5	
JACKSONVILLE	20	1020.0	1021.1	66	43	54.7	-1.4	83	2	26	16	0	6	42	66	1.09	-1.13	0.28	8	1	0.0	0	3.0	28	32	NW	15	12	12	7	4.5	67
KEY WEST	4	1019.0	1019.6	73	65	69.0	-1.6	81	31	51	17	0	0	61	77	0.18	-1.51	0.12	4	0	0.0	0	7.2	6	29	SE	13	10	11	10	5.3	69
LAKELAND U	214			70	49	59.2	-3.2	84	2	27	16	0	1			0.49	-1.37	0.35	7		0.0	0						16	10	5	3.9	69
MIAMI	7	1019.6	1019.8	76	57	66.6	-1.5	85	23+	34	16	0	0	55	67	0.13	-1.54	0.13	2	0	0.0	0	2.1	4	29	31	4	10	10	11	5.1	
ORLANDO	108	1016.9	1021.3	70	47	58.7	-2.2	85	2	29	16	0	2	47	71	0.88	-1.01	0.56	5	1	0.0	0	1.7	34	23	28	23	14	11	6	4.4	
PENSACOLA	112	1016.6	1020.8	60	40	49.8	-4.5	73	22	24	15	0	8	40	71	5.49	1.27	1.89	13		0.0	0	2.2	4	40	N	31	11	6	14	5.5	63
TALLAHASSEE	55	1019.0	1021.5	65	36	50.0	-4.1	76	21+	19	16	0	15	38	71	6.72	3.28	3.57	10	1	0.0	0	0.7	35	25	18	28	14	9	8	4.4	
TAMPA	19	1020.7	1020.9	69	46	57.6	-4.7	80	31+	27	17	0	2	46	70	0.59	-1.30	0.26	8	1	0.0	0	1.7	5	25	33	4	13	9	9	4.7	73
WEST PALM BEACH	15	1019.6	1020.3	74	54	63.7	-4.5	85	28	33	16	0	0	51	65	0.06	-2.51	0.05	2	0	0.0	0	1.6	36	29	30	4	9	10	12	5.6	
GEORGIA																																
ATHENS	802	990.9	1020.5	50	30	40.1	-4.5	63	13	18	15	0	19	26	63	5.94	1.41	2.47	10	0	0.0	0	2.9	29	24	29	7	9	9	13	5.7	
ATLANTA	1010	983.1	1020.7	51	30	40.2	-4.6	62	28+	17	15	0	21	27	65	4.89	0.51	1.97	10	0	T	0	2.4	32	39	SW	28	10	9	12	5.8	66
AUGUSTA	145	1015.2	1020.5	57	30	43.5	-3.7	73	19+	18	17+	0	20	30	66	2.89	-0.44	0.86	12	1	0.0	0	3.0	27	28	31	7	12	6	13	5.4	
COLUMBUS	385			56	32	43.7	-4.0	68	22	18	15	0	19	32	68	4.88	0.32	1.36	11	1	T	0	1.6	33	23	32	14	10	8	13	5.6	
MACON	354	1007.8	1021.1	57	31	43.9	-5.1	72	13	18	15	0	18	29	61	3.39	-0.66	1.14	12	1	0.0	0	2.7	29	31	S	28	12	7	12	5.4	62
ROME	637			51	26	38.5	-3.9	62	28+	14	16	0	23			5.58	0.45	2.46	10		T	0										
SAVANNAH	46	1019.0	1020.7	61	34	47.6	-3.8	78	19	19	16	0	14	34	65	3.97	1.16	1.90	8	1	0.0	0	2.4	27	30	NW	7	13	5	13	5.4	69
HAWAII																																
HILO	27	1012.2	1013.4	81	67	73.7	2.2	87	16+	60	12	0	0	67	83	24.82	9.64	7.01	19	0	0.0	0	2.3	22	27	NW	29	3	11	17	7.6	25
HONOLULU	7	1012.2	1012.7	80	66	72.7	-0.9	84	7	59	30+	0	0	65	80	9.63	6.64	2.94	15	2	0.0	0	3.4	4	35	NE	13	10	8	13	6.1	53
KAHULUI	48	1010.5	1012.8	81	64	72.5	-0.2	87	7	56	27	0	0	66	82	7.07	4.37	1.97	17	1	0.0	0	2.0	8	27	E	14+	5	11	15	6.7	55
LIHUE	103	1008.5	1013.5	77	65	70.8	-1.4	82	6	59	29	0	0	65	82	22.91	17.73	11.54	17	2	0.0	0	1.7	3	26	E	14+	7	9	15	6.7	39
IDAHO																																
BOISE	2838	915.0	1017.1	42	29	35.1	2.9	59	10	6	21+	0	19	25	68	1.95	0.63	0.67	16	0	11.4	4	5.1	13	28	SE	15	2	7	22	8.6	23
LEWISTON	1413			37	25	31.1	-3.8	62	10	-22	30	0	22			2.13	0.76	0.77	16		18.7	8						2	1	28	9.2	
POCATELLO	4454	861.8	1019.4	34	16	24.8	-2.6	54	10	-11	31+	0	30	16	70	0.78	-0.22	0.23	15	0	17.9	9	7.1	21	38	SW	29	1	8	22	8.5	21
ILLINOIS																																
CAIRO U	314			44	31	37.4	-2.1	58	18	15	15	0	19			6.79	3.12	2.41	11		0.1	T			36	S	19	8	10	13	6.1	47
CHICAGO O HARE	658	991.2	1016.4	35	21	27.8	0.4	53	12	-9	31	0	26	20	74	2.77	0.94	0.83	12	0	10.9	4	5.0	24	46	30	5	6	3	22	7.6	
CHICAGO MIDWAY	607	993.2	1016.5	35	22	28.7	-0.4	55	12	-9	31	0	26	20	71	3.92	2.02	1.27	12	0	11.9	4	5.9	23	38	W	4	6	2	23	7.7	24
MOLINE	582	994.6	1016.9	32	17	24.5	-2.4	57	12	-14	31	0	29	18	74	2.76	1.11	0.81	10	0	5.4	2	4.6	25	44	NW	5	7	3	21	7.4	39
PEORIA	652	992.6	1017.2	35	20	27.6	-1.5	54	12+	-10	31	0	25	20	73	2.80	0.86	1.21	10	0	4.6	1	4.5	24	41	NW	4	5	4	22	7.5	31
ROCKFORD	724	988.2	1016.1	32	18	25.3	-0.3	53	12	-12	31	0	27	19	77	3.31	1.61	1.09	11	0	8.9	4	3.7	25	36	30	5	7	3	21	7.6	
SPRINGFIELD	588	994.6	1017.5	37	22	29.1	-2.9	54	12	-5	31	0	25	22	74	2.64	0.75	1.07	12	0	4.7	2	5.5	23	42	W	23+	6	6	19	7.2	38
INDIANA																																
EVANSVILLE	381	1004.7	1019.3	42	27	34.3	-1.8	58	27	10	31	0	23	26	72	5.60	2.52	1.98	13	0	T	T	3.5	23	36	SW	28	7	6	18	7.3	40
FORT WAYNE	791	986.1	1017.0	35	22	28.3	-0.1	50	12	0	31	0	27	22	78	3.44	1.35	1.72	13	0	3.3	1	7.0	24	40	W	23	2	5	24	8.4	32
INDIANAPOLIS	792	987.5	1017.7	38	24	30.6	-0.5	55	12	5	31	0	26	22	73	4.18	1.50	1.55	17	0	1.6	1	4.8	24	42	NW	5	3	5	23	8.2	20
SOUTH BEND	773	987.1	1016.0	33	21	27.0	-1.7	52	12	-6	31	0	28	23	84	3.42	1.23	0.85	17	0	27.9	10	4.7	23	32	24	22	3	2	26	8.8	

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure: Station ⌀	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No. of days: Max. 90°F. or above	Temperature: No. of days: Min. 32°F. or below	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No. of days: .01 inch or more	Precipitation: No. of days: With thunderstorms	Snow, Sleet: Total	Snow, Sleet: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Fastest mile: Speed	Fastest mile: Direction	Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	Ft.	Mb.	Mb.	°F.	F.	°F.	F.	°F.		°F.				F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
IOWA																																
BURLINGTON	692			34	17	25.7	- 2.7	58	12	-12	31	0	29	19	72	1.91	0.31		11	1	3.2		3.9	27	46	30	4	6	4	21	7.5	
DES MOINES	938	981.4	1017.6	29	13	21.3	- 4.0	64	12	-15	31+	0	28	13	71	1.71	0.57	0.98	13	1	5.2	4	3.4	31	38	NW	22	6	4	21	7.3	49
DUBUQUE	1056	975.6		28	14	20.7	- 2.8	54	12	-17	31	0	31			2.70	0.80	0.92	13		12.9	9						7	3	21	7.4	
SIOUX CITY	1095	976.3	1018.0	27	12	19.4	- 5.6	57	4	-19	31	0	30	13	76	1.96	1.22	0.94	12	2	20.6	15	4.6	34	53	NW	22	5	5	21	7.5	41
WATERLOO	868	983.7	1016.9	27	10	18.6	- 4.6	58	12	-16	31	0	31	13	77	2.80	1.67	1.05	14	2	14.5	9	2.1	29	39	33	4	7	5	19	7.3	
KANSAS																																
CONCORDIA	1470	962.8	1017.7	35	16	25.5	- 6.5	58	10	-11	31	0	30	17	74	0.97	0.26	0.63	6	1	6.6	6	2.9	30	42	NW	22	6	12	13	6.4	62
DODGE CITY	2582	923.5	1017.2	39	18	28.4	- 6.3	68	4	- 7	31	0	30	17	69	0.43	- 0.04	0.21	6	0	2.6	2	2.3	30	40	NW	18+	6	9	16	7.0	54
GOODLAND	3650	885.2	1016.3	36	13	24.4	- 6.0	66	11+	-12	31	0	30	13	70	1.31	0.87	0.55	6	1	16.4	9	4.5	28	43	33	12	7	8	16	6.4	
TOPEKA	876	985.1	1018.2	38	20	29.0	- 4.4	63	12	- 6	31	0	29	19	69	2.10	0.71	1.17	8	1	0.8	1	3.3	29	38	SW	12	7	8	16	6.7	52
WICHITA	1321	968.5	1018.0	41	20	30.7	- 5.1	62	4	- 5	31	0	28	20	68	1.31	0.37	0.55	5	1	2.8	3	2.6	30	43	NW	22+	4	14	13	6.5	68
KENTUCKY																																
COVINGTON	869	985.8	1018.2	41	26	33.7	0.4	58	28	9	31	0	23	23	67	4.01	1.26	1.15	16	0	2.0	1	5.6	24	33	25	28	2	8	21	8.2	
LEXINGTON	966	982.7	1019.1	43	26	34.6	- 1.3	60	27	9	31+	0	22	24	66	2.89	- 0.56	0.84	14	0	1.5	1	5.3	22	32	25	28	3	6	22	7.9	
LOUISVILLE	477	1000.7	1018.8	43	28	35.7	- 0.6	59	28+	10	31	0	22	24	64	3.62	0.40	0.88	18	0	1.1	T	4.1	25	52	W	23	6	5	20	7.6	40
LOUISIANA																																
ALEXANDRIA	92	1016.6	1020.8	60	36	48.3	- 3.0	72	6	23	16	0	12			4.72	- 1.01	1.27	10	3	0.0	0	1.0	31	29	30	28+	11	8	12	5.6	
BATON ROUGE	64	1018.0	1020.8	62	39	50.8	- 2.9	72	27+	24	16	0	7	39	68	7.04	1.94	2.55	11	1	0.0	0	1.1	7	25	31	3	14	5	12	5.1	
LAKE CHARLES	9	1019.3	1020.3	63	42	52.2	- 2.4	74	26	30	24	0	5	41	69	4.73	- 1.03	1.65	10	4	0.0	0	2.1	9	25	33	3	12	8	11	5.4	
NEW ORLEANS	3	1020.0	1020.9	62	40	50.8	- 4.6	75	27	23	16	0	9	42	71	6.14	2.04	2.55	12	1	0.0	0	1.0	6	30	16	1	12	5	14	5.4	
SHREVEPORT	254	1010.5	1020.0	57	36	46.6	- 3.0	70	27	24	24	0	11	35	66	3.27	- 1.67	1.39	9	2	T	T	1.4	20	33	28	27	11	4	16	6.1	52
MAINE																																
CARIBOU	624	985.1		25	11	18.0	2.5	42	13	-15	26	0	29			4.16	1.73	1.53	16		31.2	24						3	5	23	8.4	
PORTLAND	47	1008.8	1011.0	33	17	25.2	- 0.6	51	13	- 9	26	0	27	15	65	7.70	3.85	2.3■	11	1	18.8	10	4.1	29	31	W	6	8	7	16	6.4	49
MARYLAND																																
BALTIMORE	148	1011.5	1017.2	42	27	34.6	- 1.2	67	28	9	11	0	21	21	59	2.60	- 0.39	0.79	8	0	T	0	6.6	29	43	W	5	8	8	15	6.5	46
MASSACHUSETTS																																
BLUE HILL OBS R	629			34	20	27.0	- 3.0	54	13	- 8	26	0	25			6.37	2.41	1.92	10		5.2	3			54	WNW	24					53
BOSTON	15	1011.5	1012.4	37	25	30.9	- 2.4	57	13	- 3	26	0	22	18	61	6.23	2.60	2.17	12	1	5.1	2	10.1	28	43	W	24	8	9	14	6.2	56
NANTUCKET	43	1012.2	1012.7	41	27	33.6	- 2.5	55	4	4	26	0	20	27	75	5.97	2.04	2.05	14	0	2.9	2	8.0	28	40	W	17+	4	10	17	7.4	33
WORCESTER	986	974.3	1012.5	31	17	24.0	- 3.2	51	13	-11	26	0	27	15	68	6.16	2.57	2.02	11	0	12.2	8	7.9	27	35	28	25+	9	8	14	6.2	
MICHIGAN																																
ALPENA	689	988.5	1014.8	29	15	22.0	- 2.1	44	13+	-11	30	0	30	17	80	3.02	1.18	0.87	23	0	35.2	20	1.8	27	28	NE	28	4	4	23	8.3	25
DETROIT	619			34	23	28.5	- 1.4	50	12	1	31	0	25	20	70	3.41	1.33	1.75	14	0	3.6		5.9	27	35	27	5					
DETROIT M WAYNE CO	633	990.5	1015.5	35	21	28.1	- 0.8	53	12	1	31	0	26	21	74	3.59	1.67	1.86	14	0	5.9	2	5.0	26	38	W	5	1	7	23	8.6	19
FLINT	770	986.1	1014.9	32	20	26.3	- 1.3	49	12	1	31	0	26	19	73	2.38	0.58	0.99	14	0	8.1	2	4.8	25	31	22	23+	1	7	23	8.4	
GRAND RAPIDS	784	985.1	1015.3	31	18	24.3	- 2.7	48	12	- 2	31	0	29	20	82	3.16	1.13	0.59	17	0	26.2	6	2.6	24	37	W	5	3	3	25	8.5	29
HOUGHTON LAKE	1149	971.2	1014.9	29	14	21.0	- 2.5	44	13+	- 8	31+	0	30	17	82	2.50	0.83	0.57	18	0	30.4	13	1.3	27	30	28	5	4	6	21	7.9	
LANSING	841	982.7	1015.6	32	19	25.5	- 2.0	52	12	- 1	31	0	28	20	80	2.62	0.63	1.06	19	0	8.6	3	4.4	25	40	NW	5	2	8	21	8.3	32
MARQUETTE U	677			29	19	24.1	0.0	44	13	-12	31	0	29			3.96	2.04	0.62	22		41.1	22			37	SW	11	1	4	26	9.1	19
MUSKEGON	627	991.2	1015.1	32	21	26.6	- 3.3	49	12	- 1	31	0	28	20	76	3.71	1.71	0.79	22	0	37.4	12	1.8	27	35	24	13+	1	3	27	9.0	
SAULT STE MARIE	721	987.5	1015.1	25	11	18.3	- 2.6	41	13	-12	31+	0	30	14	79	3.01	0.73	0.77	20	0	32.4	22	3.1	5	28	SE	30+	4	8	19	7.6	32
MINNESOTA																																
DULUTH	1428	963.1	1017.4	20	4	11.9	- 2.1	35	12+	-24	25	0	31	7	76	3.70	2.54	1.04	17	0	37.7	25	3.0	36	45	NW	5	3	4	24	8.3	34
INTERNATIONAL FALLS	1179	973.6	1019.2	16	- 1	7.4	- 2.0	35	1	-34	25	0	31	4	82	1.60	0.76	0.62	14	0	18.0	14	2.7	1	33	3	12	5	3	23	7.9	
MINNEAPOLIS	834	985.1	1017.1	24	10	16.9	- 1.2	53	12	-19	31	0	29	11	74	2.21	1.35	0.56	14	1	28.7	21	2.5	36	35	N	13	6	2	23	7.8	38
ROCHESTER	1297	966.5	1016.2	25	9	17.2	- 1.4	58	12	-21	31	0	30	11	73	1.86	0.89	0.57	13	1	20.7	19	2.3	29	35	30	5	5	3	23	8.1	
ST CLOUD	1034	977.7	1017.3	20	5	12.5	- 4.1	40	4	-25	25+	0	31		73	1.95	1.22	0.60	11		25.4	17						4	5	22	8.0	
MISSISSIPPI																																
JACKSON	310	1008.5	1020.7	57	34	45.7	- 3.7	72	22	17	16	0	12	35	71	5.5■	0.28	1.83	11	3	0.0	0	1.2	16	32	NW	19	11	6	14	5.7	52

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	No. of days: Max. 90°F. or above	No. of days: Min. 32°F. or below	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	No. of days: .01 inch or more	No. of days: With thunderstorms	Snow, Sleet: Total	Snow, Sleet: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Fastest mile: Speed	Fastest mile: Direction	Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	Ft.	Mb.	Mb.	°F.	°F.	°F.	°F.	°F.		°F.				°F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
MISSISSIPPI																																
MERIDIAN	290	1006.1	1021.7	57	33	44.8	- 3.5	69	27	19	16	0	19	35	73	9.16	3.85	3.50	11	2	0.0	0	1.5	25	23	22	27	7	8	16	6.2	
MISSOURI																																
COLUMBIA	778	988.2	1017.4	40	22	30.9	- 2.9	61	12	- 6	31	0	26	22	70	2.92	0.96	2.05	9	1	2.4	2	3.8	24	42	NW	4	6	6	19	7.1	41
KANSAS CITY	742	989.8	1017.9	38	21	29.7	- 6.1	64	12	- 7	31	0	27	21	73	1.29	- 0.24	0.59	6	1	0.8	1	3.1	27	43	SW	22	9	4	18	6.8	57
ST JOSEPH	811			39	20	29.5	- 2.0	66	12	- 8	31	0	28	19	69	2.08	0.72		7	1	1.0		2.9	29	32	28	22	9	8	14	6.5	
ST LOUIS	535	997.3	1018.3	41	24	32.3	- 2.5	59	11	2	31	0	25	24	73	2.63	0.66	1.18	8	1	1.3	1	4.3	23	44	W	22	3	9	19	7.3	37
SPRINGFIELD	1268	971.6	1018.3	43	22	32.6	- 4.1	63	26	- 2	31	0	24	21	65	3.53	1.34	2.62	8	4	1.4	1	4.1	21	35	NW	23+	9	7	15	6.1	59
MONTANA																																
BILLINGS	3567	888.6	1017.3	29	11	19.9	- 8.5	54	11	-25	29	0	29	9	64	0.81	0.22	0.27	11	0	8.6	6	4.5	25	30	SW	3	4	6	21	7.7	18
GLASGOW	2284	933.3	1019.4	19	1	9.9	- 7.8	47	3	-35	29	0	31	4	76	0.39	- 0.06	0.09	14	0	5.7	5	3.7	8	32	31	4	2	5	24	8.5	
GREAT FALLS	3662	885.2	1018.4	26	7	16.1	-11.2	52	10	-43	29	0	29	4	61	1.36	0.76	0.48	11	0	13.6	9	8.3	23	47	SW	3	3	5	23	8.2	44
HAVRE	2584	922.1	1018.9	19	- 1	8.8	-12.1	49	3	-46	29	0	31	2	71	0.77	0.30	0.19	12	0	11.3	7	3.2	25	47	SW	3	1	6	24	8.5	48
HELENA	3828	877.8	1018.9	26	7	16.7	- 7.5	51	10	-37	30	0	31	7	67	0.75	0.22	0.22	12	0	11.0	6	4.3	27	37	W	5	2	5	24	8.7	24
KALISPELL	2965	908.6	1017.2	25	11	17.8	- 7.2	45	3	-35	30	0	31	12	78	2.56	1.23	0.46	18	0	30.3	13	1.8	7	35	4	28+	3	1	27	8.5	
MILES CITY	2629	921.1	1018.8	21	3	12.3	-10.9	45	4	-28	30	0	31	5	73	1.78	1.41		19	0	18.0		2.4	33								
MISSOULA	3190	901.8	1017.5	29	14	21.8	- 1.7	45	3	-27	30	0	31	16	80	1.17	0.09	0.42	13	0	19.5	10	0.7	33	26	W	4+	3	1	27	8.8	26
NEBRASKA																																
GRAND ISLAND	1841	949.2	1018.2	30	11	20.4	- 6.8	63	4	-16	31	0	31	12	75	2.17	1.61	1.20	8	0	21.8	20	5.3	32	46	33	22	5	8	18	7.4	
LINCOLN U	1150			32	16	24.1	- 6.5	58	4	-13	31+	0	29			1.89	0.99	1.28	9		11.7	9			41	NW	12	5	10	16	6.9	38
NORFOLK	1544			27	10	18.7	- 6.5	59	4	-19	31	0	30			1.75	1.02	0.92	10		19.1	17						4	7	20	7.7	
NORTH PLATTE	2775	916.0	1018.1	31	7	19.0	- 8.4	60	10+	-20	31	0	31	9	72	0.87	0.47	0.70	6	0	10.3	10	4.4	33	48	NW	12	6	10	15	6.5	51
OMAHA	977	980.7	1017.5	33	15	24.0	- 4.2	63	12	-13	30	0	28	14	69	2.04	1.24	1.18	10	2	8.6	4	3.9	33	47	NW	4	5	7	19	7.3	35
SCOTTSBLUFF	3957	876.7	1017.6	36	9	22.7	- 5.9	66	11	-22	31	0	31	11	66	0.55	0.15	0.26	7	0	6.1	4	3.9	33	44	32	12	5	11	15	6.5	
VALENTINE	2587			27	6	16.5	- 8.6	67	11	-22	30	0	31			0.62	0.28	0.22	9		9.6	7			46	NW	12+	5	4	22	7.5	41
NEVADA																																
ELKO	5050	843.2	1018.1	39	18	28.1	1.7	53	10+	-11	22	0	29	16	61	1.93	0.92	0.86	14	1	24.9	13	3.2	24	28	27	11	2	6	23	8.3	
ELY	6253	807.0	1018.9	39	9	23.8	- 3.0	55	5+	-15	22	0	30	9	58	0.79	0.11	0.21	9	1	22.3	6	6.1	20	38	S	10	3	7	21	7.6	63
LAS VEGAS	2162	941.8	1019.8	53	29	40.8	- 4.3	64	16	15	22	0	23	12	32	0.07	- 0.33	0.07	1	0	0.0	0	3.3	27	42	SW	11	9	10	12	5.7	70
RENO	4404	865.2	1018.0	43	20	31.4	- 0.5	62	9	- 3	21	0	28	20	65	1.03	- 0.05	0.36	9	0	9.1	3	2.1	22	68	SW	10	7	6	18	7.0	55
WINNEMUCCA	4301	867.3	1018.2	40	19	29.7	- 0.1	57	15	- 3	20	0	29	22	72	1.22	0.28	0.73	12	0	11.3	8	3.6	19	35	SW	10	4	5	22	8.0	29
NEW HAMPSHIRE																																
CONCORD	342	999.3	1012.4	31	14	22.5	- 2.5	52	13	-11	26	0	28	14	69	5.82	2.57	1.98	12	0	13.4	9	5.2	29	31	NW	9+	6	8	17	6.7	50
MT WASHINGTON OBS	6262			16	- 1	7.4	- 1.4	34	13	-39	25	0	31			16.10	9.79	6.05	22	0	103.7	20			136Y	W	5	5	4	22	7.9	29
NEW JERSEY																																
ATLANTIC CITY	64	1013.5	1015.9	42	21	31.5	- 5.1	61	13	0	10	0	26	20	62	3.89	0.67	1.51	12	0	4.3	4	8.6	28	37	28	5	5	11	15	6.5	49
ATLANTIC CITY U	11			42	29	35.6	- 2.7	57	4+	15	10	0	21			3.85	0.37	1.36	9						48	W	5					
NEWARK	7	1014.2	1015.1	40	25	32.5	- 2.2	58	13+	8	10	0	27	23	69	4.32	1.10	1.90	12	2	4.7	3	7.9	27	33	30	25	10	9	12	5.8	
TRENTON U	56			40	27	33.7	- 1.5	59	28+	12	10	0	24			3.07	0.20	1.18	13		4.8	4			34	NW	24	9	8	14	6.0	56
NEW MEXICO																																
ALBUQUERQUE	5311	838.5	1020.4	42	18	30.0	- 7.0	54	10	4	22	0	31	16	61	0.82	0.36	0.30	6	0	7.4	2	1.0	3	33	S	21	14	7	10	4.9	74
CLAYTON	4969			49	18	33.5	- 2.5	71	4	2	31	0	29			0.20	- 0.15	0.11	3		2.1	2						11	8	12	5.4	
ROSWELL	3617	891.0		56	20	38.2	- 0.8	71	6	6	23	0	30	16	46	0.22	- 0.32	0.22	2	0	0.0	0	3.1	28	40	SW	21	17	5	9	4.1	75
NEW YORK																																
ALBANY	275	1003.7	1014.7	32	15	23.5	- 3.0	48	3	-12	27+	0	28	13	63	4.60	2.01	1.13	16	1	18.1	8	6.9	27	35	W	29	5	4	22	7.6	42
BINGHAMTON	1590	953.6	1014.5	30	18	23.6	- 3.2	47	13	- 4	26+	0	28	17	77	3.17	0.61	1.48	19	1	11.9	4	6.2	27	52	W	5	1	6	24	8.7	29
BUFFALO	705	988.2	1014.5	33	21	26.8	- 0.9	54	13	2	11	0	25	19	74	3.42	0.42	1.26	23	1	11.7	3	6.8	27	43	SW	29	1	3	27	8.9	26
J.F. KENNEDY	13	1014.2	1015.0	39	27	33.0	- 1.9	58	4	9	10	0	23	22	65	4.55	1.32	2.05	12	0	4.4	4	8.9	29	46	27	5	8	11	12	6.1	
NEW YORK U	132	1010.8	1014.3	41	28	34.3	- 1.6	60	13+	9	10	0	22	20	58	4.15	0.89	1.78	10	0	7.0	5	5.7	29	38	NW	9					61
NEW YORK LA GUARDIA	11	1013.2	1015.1	40	27	33.5	- 2.9	61	13	9	10	0	22	19	57	3.80	0.41	1.76	11	0	4.9	4	8.3	30	43	W	5	7	11	13	6.2	
ROCHESTER	547	993.6	1014.5	34	22	27.7	- 1.0	56	13	3	11	0	26	20	73	3.31	0.93	1.05	21	0	22.2	5	7.0	26	42	SW	5	2	1	28	8.9	25
SYRACUSE	410	999.0	1014.5	34	21	27.2	- 0.6	50	13	- 3	26	0	25	21	76	4.67	1.52	1.45	18	0	25.4	10	4.5	27	42	W	5	1	6	24	8.6	20

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	No. of days: Max. 90° F. or above	No. of days: Min. 32° F. or below	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	No. of days: .01 inch or more	No. of days: With thunderstorms	Snow, Sleet: Total	Snow, Sleet: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Fastest mile: Speed	Fastest mile: Direction	Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	Ft.	Mb.	Mb.	°F.	°F.	°F.	°F.	°F.		°F.				F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
NORTH CAROLINA																																
ASHEVILLE	2140	940.7	1018.8	46	26	36.2	-1.7	61	18+	14	10	0	23	25	70	3.10	-0.52	0.88	10	0	T	T	4.1	35	32	18	28+	12	7	12	5.5	62
CAPE HATTERAS R	7	1018.3	1018.7	54	38	45.6	-2.6	70	28	23	18	0	11	36	71	2.64	-1.94	0.69	11	0	T	T	5.9	31	44	SSW	28	9	8	14	5.9	50
CHARLOTTE	736	991.2	1019.6	49	29	38.6	-4.1	64	13	15	16	0	22	25	61	2.29	-1.33	0.79	10	0	T	0	2.4	27	38	SW	28	11	5	15	5.6	66
GREENSBORO	897	986.8	1019.3	48	27	37.5	-2.4	64	28	14	11	0	23	23	60	2.25	-0.88	0.65	9	0	T	T	3.2	25	39	SW	28	9	9	13	6.3	55
RALEIGH	434	1002.7	1019.0	49	28	38.8	-3.1	69	28	13	11	0	22	26	64	2.75	-0.27	0.60	10	1	0.7	1	3.7	28	35	21	28	8	8	15	6.2	55
WILMINGTON	28	1018.3	1019.7	57	33	45.0	-3.2	74	19	22	16+	0	15	33	66	2.26	-1.16	0.69	10	0	0.3	T	2.9	28	35	SW	28+	11	6	14	5.6	59
NORTH DAKOTA																																
BISMARCK	1647	957.3	1020.4	20	3	11.4	-6.4	43	4	-24	31	0	31	4	69	0.78	0.42	0.29	11	0	13.0	9	3.6	34	46	NW	4	4	5	22	8.1	34
FARGO	896	985.1	1019.9	17	1	8.9	-5.5	37	4	-28	31	0	31	5	79	1.11	0.53	0.38	13	0	11.4	7	5.7	36	56	N	13	4	5	22	8.0	22
WILLISTON	1899	947.9	1020.4	18	-2	7.9	-8.3	44	4	-35	30	0	31	2	76	1.09	0.59	0.30	14	0	11.6	11	1.8	34	37	NW	4	3	7	21	7.7	61
OHIO																																
AKRON	1208	970.5	1016.4	38	23	30.4	-0.1	61	28	5	31+	0	26	23	73	3.88	1.61	1.53	21	1	11.1	4	6.5	24	40	24	28	0	5	26	9.0	
CINCINNATI OBS	761			40	26	32.8	-2.5	56	28+	8	31	0	24			3.73	0.96	1.18	16		1.1	1			35	SW	28					39
CLEVELAND	777	986.5	1016.6	36	24	30.0	-0.5	57	28	4	31	0	26	19	64	3.94	1.60	1.62	18	0	8.3	5	7.5	24	49	SW	28	0	4	27	9.2	8
COLUMBUS	812	987.1	1018.1	38	24	31.1	-0.4	53	28+	8	31	0	26	21	69	3.40	1.06	1.21	15	0	6.8	5	5.3	24	42	W	28	2	7	22	8.3	25
DAYTON	1002	980.4	1017.6	38	23	30.5	-0.8	56	28	6	31	0	26	21	70	3.48	1.11	1.19	13	0	3.7	1	5.5	24	42	W	28	1	10	20	8.1	24
MANSFIELD	1295			37	23	29.7	0.5	54	28	5	31	0	26	23	78	3.17	0.52	1.50	17	0	7.5	2	7.7	24	40	24	28	2	5	24	8.5	
TOLEDO	669	990.9	1016.9	34	19	26.6	-1.7	51	12	-2	31	0	28	21	80	3.97	2.02	2.01	16	0	8.2	3	5.4	26	35	W	5	1	8	22	8.3	35
YOUNGSTOWN	1178	972.2	1016.4	34	21	27.6	-1.8	57	28	5	31+	0	28	22	79	4.00	1.32	1.51	22	1	21.6	8	5.6	25	38	25	28+	1	1	29	9.1	
OKLAHOMA																																
OKLAHOMA CITY	1285	970.9	1018.3	50	27	38.1	-2.2	68	26	1	31	0	24	26	67	1.33	-0.08	0.64	3	1	1.3	1	1.4	24	43	SW	18	8	10	13	6.0	60
TULSA	650	993.9	1018.8	48	25	36.8	-2.8	69	26	1	31	0	23	24	64	2.01	0.39	1.24	6	3	1.4	1	3.0	24	43	SW	12	11	7	13	5.9	58
OREGON																																
ASTORIA	8	1011.9	1012.7	45	34	39.5	-3.6	55	23	19	30	0	12	35	84	13.85	0.20	2.60	29	1	4.5	4	2.6	13	32	18	3	2	1	28	9.3	
BURNS U	4151	870.0	1016.0	36	20	28.3	-0.8	52	10	3	29	0	30	22	75	1.83	0.40	0.47	15		18.3	9	2.9	23				2	7	22	8.5	
EUGENE	359	1001.4	1015.0	47	35	41.0	-0.8	56	14+	13	31	0	9	37	88	12.52	5.91	2.97	26	0	2.3	1	5.5	18	32	20	11+	0	0	31	9.8	
MEACHAM	4050	872.0	1015.6	30	20	24.6	-5.2	46	10	-20	30	0	29			5.57	1.04	0.82	22		49.0	23			23	27	28	0	3	28	9.4	
MEDFORD	1298	968.8	1017.4	45	32	38.2	1.3	63	9	20	20	0	12	31	77	2.78	-0.60	0.67	17	0	2.0	1	1.6	14	36	14	13	0	7	24	8.9	
PENDLETON	1482	961.1	1015.9	39	27	33.3	-3.2	62	10	-12	30	0	17	25	74	2.19	0.70	0.65	17	0	11.9	6	3.2	22	38	23	10	2	3	26	8.7	
PORTLAND	21	1013.2	1014.5	42	32	37.3	-4.0	52	10	8	30	0	10	33	84	11.12	4.74	2.11	26	0	15.7	11	6.7	14	40	E	13	0	1	30	9.8	11
SALEM	196	1007.1	1014.4	43	31	37.0	-4.5	54	7	8	31	0	19	35	91	11.05	3.68	2.52	24	0	12.6	7	5.8	19	35	19	7	0	0	31	9.6	
SEXTON SUMMIT R	3836	880.1	1015.7	35	27	31.1	-5.7	50	7	13	21	0	26			7.60	2.84	1.48	21		39.6	18			53	20	10	1	4	26	9.1	
PACIFIC AREA																																
JOHNSTON	7	1010.2	1010.8	84	75	79.4	1.3	86	8+	72	23+	0	0	70	73	5.31	2.31	3.20	12	0	0.0	0	9.5	8	34	E	4	11	15	5	5.0	47
KOROR R	94	1005.4	1009.0	87	76	81.2	0.3	89	21+	73	17	0	0	75	85	15.95	4.23	2.94	27	1	0.0	0	7.6	6	23	E	6	0	0	31	9.8	55
KWAJALEIN	8	1007.1	1007.9	87	78	82.3	1.5	89	4	74	10+	0	0	75	80	9.57	0.61	3.56	18	0	0.0	0	11.8	7	31	9	15	1	5	25	8.8	
MAJURO	10	1007.8	1008.2	86	76	80.6	0.3	88	12	71	20	0	0	75	82	25.08	13.96	5.38	24	1	0.0	0	7.6	6	27	NE	4	2	3	26	8.7	45
PAGO PAGO	12	1009.5	1009.6	88	75	81.7		90	31+	71	16+	4	0	76	84	6.24		2.93	22	3	0.0	0	5.3	10	21	E	9	4	16	11	6.5	59
PONAPE R	123	1002.0	1007.6	88	74	80.6	0.4	91	29+	70	28	7	0	75	84	13.33	-5.01	1.95	27	6	0.0	0	5.2	8	18	NE	13	0	9	22	8.6	40
TAGUAC GUAM R	361			83	72	77.7	-1.0	85	18+	65	28	0	0			3.36	-2.75	1.12	19		0.0	0			23	E	4	0	18	13	6.9	51
TRUK MOEN ISLAND	5	1007.5	1007.7	86	75	80.8	0.0	91	16	70	15	2	0	75	83	24.51	11.27	4.11	26	4	0.0	0	7.8	6	24	E	9	1	6	24	8.6	62
WAKE	11	1011.5	1011.6	83	73	78.0	-0.9	87	1	70	25+	0	0	67	71	2.03	0.21	0.64	15	1	0.0	0	10.8	6	35	NE	24	10	12	9	5.0	67
YAP R	44	1006.8	1008.7	86	75	80.4	-0.6	87	21+	73	16+	0	0	74	82	8.34	-1.82	2.35	23	1	0.0	0	9.0	7	22	E	18+	0	4	27	9.2	40
PENNSYLVANIA																																
ALLENTOWN	387	1001.4	1015.8	37	22	29.6	-1.7	55	13	2	11	0	28	18	64	3.67	0.40	1.05	11	1	3.7	2	7.3	29	37	28	5	7	9	15	6.5	
ERIE	731	988.2	1015.6	37	25	30.5	-0.2	54	28	6	11	0	25	22	71	4.06	1.45	1.86	20	1	18.8	4	6.9	25	36	26	5	1	1	29	9.4	
HARRISBURG	338	1003.4	1016.7	38	25	31.3	-1.7	56	13	6	11	0	27	19	61	2.12	-0.79	0.54	12	1	0.2	T	5.9	29	42	W	5	5	6	20	7.2	44
PHILADELPHIA	5	1014.9	1016.0	40	25	32.3	-1.6	60	13	10	11	0	26	19	61	2.54	-0.40	0.76	12	0	3.1	3	6.7	29	45	W	5	7	8	16	6.4	48
PITTSBURGH	1137	971.2	1016.7	35	20	27.6	-3.1	60	28	-3	10	0	28	19	71	3.24	0.84	0.99	22	1	13.3	6	6.0	26	48	25	28	0	7	24	8.9	21
READING U	266			40	27	33.4	-1.3	60	28	10	11	0	22			2.64	-0.50	0.98	13		0.7	T			54	W	5	10	6	15	5.9	51
SCRANTON	930	980.4	1015.8	34	21	27.2	-2.2	53	28	1	11	0	28	19	72	1.95	-0.52	0.59	17	1	5.8	2	5.8	27	38	W	5	6	4	21	7.5	43
WILLIAMSPORT	524	996.6	1016.2	37	24	30.5	0.1	52	13	4	11	0	26	22	72	2.96	-0.08	1.11	13	2	2.1	1	5.2	30	38	25	5	5	5	21	7.6	

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No. of days: Max. 90°F. or above	Temperature: No. of days: Min. 32°F. or below	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No. of days: .01 inch or more	Precipitation: No. of days: With thunderstorms	Precipitation: Snow, Sleet: Total	Precipitation: Snow, Sleet: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile: Speed	Wind: Fastest mile: Direction	Wind: Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	No. of days (sunrise to sunset): Partly cloudy, 4-7	No. of days (sunrise to sunset): Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	Ft.	Mb.	Mb.	°F.	°F.	°F.	°F.	°F.		°F.				F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
RHODE ISLAND																																
BLOCK ISLAND	110			39	27	32.8	- 3.1	55	4	0	26	0	20			5.38	1.79	1.38	12		0.1	T						6	11	14	6.6	
PROVIDENCE	51	1010.8	1013.1	38	22	30.2	- 1.8	56	28+	- 2	26	0	24	18	64	6.70	3.08	2.22	12	0	2.7	2	8.0	29	40	30	17	9	8	14	5.8	56
SOUTH CAROLINA																																
CHARLESTON	40	1018.6	1020.4	58	35	46.5	- 3.5	74	19	22	16+	0	14	33	63	3.65	0.80	1.78	9	0	0.0	0	2.8	27	54Y	S	28	10	8	13	5.5	60
CHARLESTON U	9			57	40	48.5	- 3.2	69	19	27	16+	0	7			2.86	0.12	1.30	9		0.0	0			33	N	7+					
COLUMBIA	213	1011.9	1020.2	55	30	42.7	- 3.7	72	13	17	12	0	19	28	62	3.26	- 0.26	0.71	9	0	0.0	0	2.9	28	25	30	7	12	8	11	5.3	68
GNVLE-SPARTANBURG	957	984.4	1020.1	49	29	39.0	- 4.6	60	7+	18	9	0	21	25	62	3.18	- 0.85	1.24	12	1	T	0	2.7	30	34	NW	16	14	5	12	5.2	55
SOUTH DAKOTA																																
ABERDEEN	1296	969.9	1019.2	21	6	13.8	- 4.3	41	4	-26	31	0	31	9	78	0.94	0.33	0.39	13	0	12.7	7	6.6	35	40	35	13	5	8	18	7.5	
HURON	1282	969.5	1018.6	24	8	16.0	- 2.8	49	4	-22	31	0	31	9	74	1.53	0.97	0.67	14	0	26.0	18	4.1	33	45	NW	13+	5	3	23	7.8	47
RAPID CITY	3162	902.1	1017.8	28	9	18.5	- 8.7	61	11	-21	30	0	31	8	66	0.58	0.28	0.26	8	0	7.5	3	6.3	34	56	NW	12	4	8	19	7.7	33
SIOUX FALLS	1418	963.8	1017.6	24	8	16.2	- 4.9	53	11	-22	31	0	31	9	73	2.62	1.88	1.25	14	0	41.1	34	4.2	34	39	32	4	5	5	21	7.4	
TENNESSEE																																
BRISTOL	1507	964.1	1019.9	46	24	35.2	- 3.1	65	19	6	16	0	26	23	63	2.13	- 1.08	0.77	9	0	1.0	1	3.7	26	40	24	28	5	10	16	7.2	
CHATTANOOGA	665	995.6	1020.8	49	29	38.9	- 3.6	61	28+	14	16	0	23	28	68	3.98	- 1.21	1.77	9	0	T	T	2.3	26	34	SW	28	10	3	18	6.4	44
KNOXVILLE	980	983.7	1019.7	47	27	37.0	- 4.6	64	28	14	16	0	23	25	64	3.22	- 1.01	1.05	8	0	T	T	2.3	27	38	SW	28	6	7	18	7.3	32
MEMPHIS	258	1009.8	1020.1	50	33	41.7	- 0.8	66	27+	18	16+	0	16	28	61	6.04	1.11	1.79	9	2	0.0	0	2.5	23	35	SW	28	13	6	12	5.4	63
NASHVILLE	590	997.6	1019.9	48	28	38.1	- 3.3	61	27+	15	31+	0	20	25	61	3.58	- 0.61	1.30	13	1	T	0	3.7	23	34	S	13	7	7	17	6.5	50
OAK RIDGE R	905			45	27	36.4	- 3.7	61	28	16	16	0	22			4.28	- 1.62	1.26	10		0.5	T			37Y		4	8	3	20	7.3	
TEXAS																																
ABILENE	1762	955.3	1017.9	59	32	45.5	- 0.6	73	17	12	31	0	19	29	57	0.12	- 1.14	0.09	2	0	0.0	0	5.5	21	42	W	27+	12	6	13	5.1	75
AMARILLO	3604	889.3	1015.1	52	22	36.9	- 2.4	72	11	3	31	0	28	17	52	0.26	- 0.51	0.14	2	0	1.8	2	4.2	23	43	SW	21	13	6	12	5.0	65
AUSTIN	597	997.3	1019.7	62	39	50.4	- 2.3	76	18+	27	31	0	7	38	66	0.55	- 1.98	0.34	5	0	0.0	0	0.3	26	42	W	27	11	5	15	5.7	56
BROWNSVILLE	19	1018.0	1018.4	75	54	64.7	1.8	87	27	37	24+	0	0	55	71	0.10	- 1.62	0.05	4	0	0.0	0	3.2	14	33	N	3	7	8	16	6.7	33
CORPUS CHRISTI	41	1017.6	1019.1	70	48	58.9	- 0.3	88	27	30	24	0	2	48	72	0.13	- 1.95	0.10	3	0	0.0	0	3.8	11	36	S	26	8	7	16	6.7	51
DALLAS	481	1001.7	1019.3	59	37	48.2	0.1	75	18	16	31	0	8	32	57	0.54	- 2.13	0.37	5	0	0.0	0	2.6	19	38	W	27	11	7	13	5.5	68
DEL RIO	1026	982.1	1018.8	64	39	51.3	- 1.0	74	26+	25	23	0	5	35	60	T	- 0.82	T	0	0	0.0	0	2.1	9	35	29	27	12	4	15	5.5	
EL PASO	3918	883.2	1017.8	56	26	41.3	- 2.8	68	11	13	23	0	28	20	47	0.23	- 0.26	0.21	2	0	T	T	2.7	27	57	SW	27	18	6	7	3.6	88
FORT WORTH	537	998.6	1019.5	60	35	47.4	- 0.3	75	18	16	31	0	12	34	65	1.20	- 1.15	0.51	6	1	0.0	0	2.8	22	53	32	27	12	4	15	5.5	
GALVESTON U	7			61	50	55.8	- 1.4	69	27	38	23	0	0			3.22	- 0.67	2.87	6		0.0	0			31	NW	3					57
HOUSTON	50	1018.0	1020.1	66	45	55.7	0.0	78	30+	32	24	0	1	42	65	1.19	- 3.17	0.38	9	2	0.0	0	1.6	11	35	31	22+	10	4	17	6.3	53
LUBBOCK	3254	902.8	1016.4	55	25	39.9	- 1.1	69	25+	9	31	0	29	21	54	0.48	- 0.17	0.38	3	0	0.6	T	6.0	25	51	26	21	13	7	11	5.0	
MIDLAND	2851	917.0	1017.0	59	28	43.3	- 2.6	73	6	16	23	0	27	22	50	0.18	- 0.48	0.16	3	0	T	T	4.7	24	39	29	21	15	4	12	4.7	
PORT ARTHUR	16	1020.0	1020.5	64	44	53.8	- 1.0	76	6	28	24	0	2	45	74	2.74	- 2.35	1.51	9	2	0.0	0	2.0	9	42	NW	3	13	4	14	5.7	49
SAN ANGELO	1903	950.2	1018.0	63	31	47.2	- 0.5	76	29	16	23	0	19	29	55	T	- 0.85	T	0	0	0.0	0	6.1	23	40	30	27	13	8	10	4.7	
SAN ANTONIO	788	990.9	1019.5	63	38	50.7	- 3.0	76	17	24	24	0	9	39	67	0.66	- 1.09	0.41	6	0	0.0	0	1.0	34	41	NW	21	10	6	15	5.6	58
VICTORIA	104	1015.6	1019.5	68	44	56.0	- 1.2	83	27	30	24	0	6	45	72	0.95	- 1.66	0.50	7	1	0.0	0	2.1	9	49Y	N	3	8	5	18	6.7	
WACO	501	1001.4	1019.6	61	38	49.1	- 1.2	74	12	22	31	0	7	36	64	0.45	- 2.29	0.25	4	0	0.0	0	3.4	19	35	29	27	11	6	14	5.5	
WICHITA FALLS	994	980.7	1018.1	56	30	42.9	- 1.7	75	17	9	31	0	22	29	65	0.72	- 0.73	0.37	3	2	T	0	3.0	21	51	26	18	10	5	16	5.9	
UTAH																																
MILFORD	5028	845.9		39	12	25.2	- 3.0	58	10	-23	22	0	31			0.83	0.12	0.27	11		11.6	5						6	5	20	7.0	
SALT LAKE CITY	4220	871.7	1019.4	36	18	26.8	- 3.3	53	10	2	31	0	29	19	71	2.27	1.03	0.79	13	1	33.3	9	3.4	18	41	NW	11	1	6	24	8.7	31
WENDOVER	4237	871.0	1020.2	33	18	25.8	- 4.0	47	28	2	22	0	31			0.20	- 0.09	0.07	6		2.5	1										
VERMONT																																
BURLINGTON	332	1000.0	1013.2	26	10	17.9	- 3.6	43	14+	-23	27	0	30	9	68	3.12	0.99	0.95	16	0	28.6	20	2.5	28	38	S	13	4	4	23	8.1	33
VIRGINIA																																
LYNCHBURG	916			44	24	34.0	- 4.5	64	28+	7	11	0	27			1.78	- 1.36	0.67	9		T	T			40	SW	28	9	9	13	6.1	50
NORFOLK	22	1016.9	1018.0	50	33	41.4	- 1.1	68	28	19	12	0	16	28	61	3.14	0.40	0.70	11	1	3.8	4	5.1	27	45	W	5	12	5	14	5.7	64
RICHMOND	164	1012.2	1018.4	47	27	37.0	- 2.7	68	28	12	11	0	24	24	61	2.28	- 0.69	0.72	10	0	2.8	3	3.4	27	40	SW	28	8	7	16	6.4	54
ROANOKE	1149	975.3	1018.0	43	25	33.7	- 4.7	63	2	7	11	0	26	19	59	1.80	- 1.18	0.66	8	0	T	0	5.7	28	37	26	28+	9	10	12	6.0	
WALLOPS ISLAND	9			43	29	36.3		57	28	17	26+	0	20			3.83		1.11	9		1.7	1			54Y	NW	5					

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

DECEMBER 1968

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	No. of days: Max. 90° F. or above	No. of days: Min. 32° F. or below	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	No. of days: .01 inch or more	No. of days: With thunderstorms	Snow, Sleet: Total	Snow, Sleet: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Fastest mile: Speed	Fastest mile: Direction	Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	Ft.	Mb.	Mb.	°F.	°F.	F.	°F.	F.		°F.				F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
WASHINGTON																																
OLYMPIA	195	1005.8	1013.1	41	30	35.6	- 5.1	53	14	6	30	0	16	32	85	9.95	0.90	1.37	26	0	21.4	9	4.1	21	25	22	9	2	2	27	9.0	
QUILLAYUTE	179	1003.7	1011.0	43	31	36.7	- 4.5	51	23+	12	29+	0	17	34	90	15.90	- 0.91	3.37	25	1	4.0	3	2.0	11	28	S	3	3	5	23	8.4	18
SEATTLE TACOMA	400	996.3	1012.9	41	32	36.6	- 4.2	53	9	6	30	0	10	31	81	8.55	2.26	1.85	24	1	22.1	10	4.4	14	33	SW	8+	2	2	27	9.0	19
SPOKANE	2356	928.5	1014.8	30	19	24.6	- 5.5	53	10	-25	30	0	27	19	79	2.93	0.50	0.59	18	0	19.8	11	2.8	18	50	SW	3	5	5	21	7.8	20
STAMPEDE PASS R	3958	872.7		24	16	20.0	- 7.0	38	3	-21	30	0	31			16.31	0.12	2.97	30		106.7	97						0	4	27	9.3	
WALLA WALLA U	949			40	27	33.3	- 4.5	65	10	-13	30	0	19			3.77	1.92	1.02	19		21.9	16			30	S	10	1	4	26	9.1	9
YAKIMA	1052	976.3	1016.1	36	21	28.4	- 3.1	60	3	-10	30+	0	30	22	79	1.91	0.79	0.45	15	0	15.3	9	3.6	28	29	22	26+	3	6	22	8.3	
WEST INDIES																																
SAN JUAN P.R.	13	1013.2	1015.7	83	72	77.5	1.3	88	4	67	24	0	0	69	78	3.56	- 1.89	0.80	19	0	0.0	0	4.0	8	26	SE	28	2	23	6	5.9	54
SWAN ISLAND	28			83	75	78.7	0.0	85	31+	70	5	0	0			4.72	- 0.92	1.47	17		0.0	0						5	16	10	6.0	
WEST VIRGINIA																																
BECKLEY	2504	926.9	1018.9	38	22	29.9	- 4.1	58	19	4	16	0	26	21	71	2.24	- 1.46	0.53	18	0	12.0	4	5.4	25	38	30	5	3	7	21	7.9	
CHARLESTON	939	983.4	1018.4	44	25	34.2	- 2.9	63	28	10	16+	0	23	23	66	2.38	- 0.87	0.95	18	0	4.7	2	4.9	24	30	25	29	2	8	21	8.0	
ELKINS	1970	944.5		39	18	28.6	- 4.4	61	28	- 5	11	0	30			3.04	- 0.04	0.69	22		19.7	4			35	28	5	2	6	23	8.7	
HUNTINGTON	827	987.8	1019.0	43	25	33.8	- 3.6	63	19	9	16	0	24	23	66	2.20	- 0.61	0.54	16	1	2.5	1	4.6	23	29	24	28+	3	4	24	8.1	
PARKERSBURG U	615			42	26	33.8	- 2.0	61	28	10	16	0	23			2.10	- 0.74	0.57	12		2.1	2			41	SW	5					26
WISCONSIN																																
GREEN BAY	682	988.8	1015.6	29	14	21.9	- 0.1	52	12	-18	31	0	29	16	78	2.69	1.51	0.54	13	1	26.7	18	3.5	30	40	W	5	3	8	20	7.9	36
LA CROSSE	651	991.5	1017.0	27	12	19.7	- 2.1	57	12	-22	25	0	28	14	75	2.24	1.09		13	2	26.6		2.3	30								
MADISON	858	983.1	1015.8	30	15	22.6	0.5	53	12	-13	31	0	28	17	78	2.89	1.58	1.24	13	0	11.4	7	3.1	27	36	SW	12	5	6	20	7.7	34
MILWAUKEE	672	989.5	1015.5	33	18	25.6	1.0	53	12	-11	31	0	27	19	76	2.65	1.02	0.84	13	0	11.6	7	5.3	26	41	SW	13	4	4	23	8.1	34
WYOMING																																
CASPER	5338	833.1	1016.6	30	8	18.8	- 8.5	52	11	-28	30	0	31	10	67	0.71	0.23	0.37	9	0	16.4	7	11.3	23	44	22	28+	6	7	18	7.3	
CHEYENNE	6126	806.3	1014.4	40	16	28.0	- 1.5	60	11+	-13	30	0	30	7	43	0.28	- 0.17	0.20	4	0	5.5	5	11.0	29	65	W	3	5	14	12	6.6	47
LANDER	5563	824.2	1017.5	30	5	17.5	- 5.6	49	11+	-22	31	0	31	6	65	0.70	0.28	0.33	4	0	12.3	10	1.4	23	33	NW	11	5	9	17	6.8	49
SHERIDAN	3964	875.7	1018.6	27	5	15.8	-10.5	54	11+	-28	30	0	31	9	73	0.97	0.35	0.22	14	0	15.3	6	4.1	29	35	NW	11	3	9	19	7.8	44

Data from airport unless otherwise specified. U indicates Urban, R indicates Rural, sites.

Precipitation data in column headed "Greatest in 24 hours" are computed on a 24-hour basis without regard to calendar day - data may include precipitation with a measurable amount from the last day of the previous month or the first day of the following month.

Wind directions under resultant direction are in tens of degrees.

Value entered in column "Fastest Mile" is the highest observed 1-minute wind speed when the direction is in tens of degrees. These stations are not equipped with a recording anemometer from which "Fastest Mile" data can be evaluated.

B Number of days maximum 70°F. or above for Alaskan Stations.
Y Peak Gust.
\+ And also on an earlier date or dates.
Ø Station pressures apply to elevations shown in the "Elevations - Station Pressure" table of the annual issue of this publication.

Z Sun continuously below horizon.

CLIMATOLOGICAL DATA
METRIC UNITS

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No. of days: Max 32.2 °C or above	Temperature: No. of days: Min 0 °C or lower	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No. of days: 25 mm or more	Precipitation: No. of days: With thunderstorms	Snow, Sleet: Total	Snow, Sleet: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile (1.6 kilometers): Speed	Wind: Fastest mile: Direction	Wind: Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	No. of days: Partly cloudy, 4-7	No. of days: Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	M.	Mb.	Mb.	C.	C.	C.	C.	C.		C.				C.	%	Mm.	Mm.	Mm.			Mm	Mm.	M.p.s.		M.p.s.							%
ALABAMA																																
BIRMINGHAM	189	998.0	1021.1	11.1	- 0.6	5.3	-3.2	17.2	27+	- 9.4	15	0	19	- 1.1	65	187	60	86	10	2	T	0	0.4	28	16.5	W	27	9	8	14	6.0	58
HUNTSVILLE	190	997.0	1020.8	8.9	- 1.7	3.7	-2.7	16.7	27	-10.0	16	0	21	- 1.7	70	132	7	55	11	1	T	0	0.6	23	17.0	26	22	9	6	16	6.3	
MOBILE	64	1012.9	1020.8	15.6	3.9	9.7	-2.6	22.2	22	- 4.4	16	0	7	3.9	70	272	133	140	12	3	0	0	0.5	4	13.0	18	27	11	6	14	5.5	
MONTGOMERY	56	1013.9	1021.4	13.9	1.1	7.6	-1.4	23.9	22	- 6.7	16+	0	15	1.7	71	144	21	32	12	3	0	0	0.8	30	19.2	S	27	12	6	13	5.5	57
ALASKA												B																				
ANCHORAGE	35	1005.4	1010.5	-10.0	-18.3	-14.3	-4.0	5.6	15	-26.7	8+	0	31	-18.9	67	11	- 12	3	8	0	201	406	0.8	2	14.3	16	15	11	4	16	5.8	39
ANNETTE	34	1005.1	1009.2	2.2	- 3.3	- 0.4	-2.7	8.3	14	-15.0	28	0	21	- 5.6	70	124	-184	33	16	0	373	178	1.8	9	17.9	12	6	10	3	18	6.1	
BARROW	9			-21.1	-28.9	-24.9	-0.9	- 3.3	22	-36.7	8	0	31	-28.3	74	6	2	2	10	0	86	203			17.9	10	26	Z	Z	Z		
BARTER ISLAND	12	1018.6	1020.7	-21.1	-28.9	-25.1	-1.5	- 1.7	23	-42.2	7	0	31	-30.6	60	6	- 2	4	4	0	107	152	3.2	26	24.1	26	17	Z	Z	Z		
BETHEL	38	1010.2	1016.3	-13.3	-21.1	-17.3	-2.2	3.9	18	-33.9	7	0	30	-19.4	82	24	- 2	13	7	0	211	305	2.0	1	19.7	21	15	9	4	18	6.6	
COLD BAY	29	1009.8	1013.6	1.7	- 2.8	- 0.6	1.2	7.8	14	- 9.4	14	0	22	- 3.9	80	30	- 36	6	13	0	198	178	1.3	31	22.8	29	1	0	3	28	9.0	
FAIRBANKS	33	1001.0	1019.9	-22.2	-33.3	-27.6	-5.6	2.2	19	-47.2	31	0	31	-32.2	63	35	21	32	4	0	513	610	0.4	36	9.8	23	19	6	11	14	6.4	
JUNEAU	4	1010.2	1011.0	- 3.3	-10.6	- 7.0	-5.0	3.3	14	-25.0	31	0	31	-10.6	78	48	- 59	10	15	0	904	356	2.5	9	13.9	11	16	11	3	17	6.0	42
KING SALMON	15	1010.2	1012.3	-11.1	-20.6	-15.9	-5.4	3.3	18	-33.9	2	0	31	-20.0	68	32	6	12	8	0	274	203	1.7	35	15.6	14	15	11	6	14	5.7	
KOTZEBUE	3	1018.6	1019.2	-17.2	-23.9	-20.6	-0.8	- 1.7	21	-36.1	1	0	31	-25.6	66	4	- 4	1	6	0	117	178	2.7	8	19.2	11	9	11	5	15	5.8	
MC GRATH	105	1004.4	1018.4	-21.1	-31.1	-26.2	-4.5	3.3	19+	-43.9	31+	0	31	-31.1	63	24	- 2	15	6	0	417	483	0.3	31	13.4	20	19	13	6	12	5.0	
NOME	4	1016.6	1017.5	-13.3	-22.2	-17.9	-3.6	0.0	21+	-35.6	30	0	31	-21.7	71	10	- 15	3	9	0	102	305	1.9	6	15.6	8	18+	12	2	17	5.9	29
ST. PAUL ISLAND	7	1012.5	1013.5	1.1	- 3.3	- 1.2	1.9	5.0	17	-13.3	5	0	22	- 3.3	86	70	23	19	22	0	254	152	0.8	2	22.8	33	12	1	1	29	9.2	
SHEMYA	37	1008.1	1011.8	2.8	- 1.7	0.7	1.1	5.6	17+	- 6.1	22	0	26	- 2.2	79	59	5	17	20	0	175	102	3.9	22	27.7	22	11	2	8	21	8.2	
YAKUTAT	9	1006.1	1007.3	- 2.8	-11.1	- 7.2	-5.0	2.8	16	-19.4	22	0	31	-10.6	76	167	-144	38	18	0	1791	813	2.7	9	13.4	15	16	6	5	20	7.2	
ARIZONA																																
FLAGSTAFF	2135	786.0	1020.1	3.9	-11.7	- 3.9	-3.0	12.2	4	-26.7	22	0	31	-12.2	56	69	27	31	9	0	699	356	1.4	22	10.3	23	25	10	7	14	5.9	
PHOENIX	340	978.3	1018.0	17.2	2.2	9.7	-1.2	25.0	10	- 4.4	22	0	8	- 2.2	50	18	- 4	9	3	0	T	0	0.6	12	14.3Y	W	26	14	7	10	4.8	87
TUCSON	788	927.9	1017.1	18.3	2.2	10.3	-0.7	26.7	10	- 7.2	22	0	11	- 5.0	40	8	- 15	5	3	0	10	T	1.6	15	13.9	S	20	17	4	10	4.1	85
WINSLOW	1492	852.4	1022.1	5.6	-10.0	- 2.3	-2.6	16.1	11	-22.8	22	0	30	-12.2	53	11	- 2	6	6	0	163	76	1.1	20	16.5	23	11	12	9	10	4.9	
YUMA	59	1011.2	1018.6	18.9	3.3	11.0	-1.8	23.9	11	- 2.8	22	0	3	- 2.8	44	2	- 7	1	2	1	0	0	2.1	36	13.9	W	26	14	5	12	4.8	84
ARKANSAS																																
FORT SMITH	136	1002.7	1019.6	10.6	- 2.2	3.9	-1.8	20.0	26	-11.1	31	0	23	- 2.8	63	141	69	65	6	2	T	T	0.5	34	14.8	W	28	8	7	16	6.2	60
LITTLE ROCK	78	1010.2	1019.9	11.1	0.6	5.7	0.2	20.6	18	- 7.2	16+	0	17	- 1.1	63	116	12	39	9	0	0	0	0.9	26	17.0	NW	28	11	4	16	5.9	56
CALIFORNIA																																
BAKERSFIELD	145	1003.1	1020.9	13.3	3.3	8.3	-1.0	20.6	15	- 3.9	22	0	6	2.8	73	17	- 8	6	9	0	T	0	0.5	2	10.3	34	11	8	6	17	6.5	
BISHOP	1252	874.7		10.0	- 7.8	1.1	-3.0	18.3	6	-15.6	22	0	30			12	- 18	8	4		56	51						10	9	12	5.7	
BLUE CANYON	1609			3.9	- 2.8	0.5	-4.1	15.0	6	-10.6	20	0	23			346	86	75	17		2070	1118			16.5	18	10	6	3	22	7.9	
EUREKA U	13			11.7	4.4	8.1	-1.3	17.8	31	- 1.7	21+	0	3			211	41	35	21		T	T			18.8	SE	22	3	6	22	8.2	38
FRESNO	100	1008.8	1020.7	11.1	1.7	6.3	-2.1	17.2	15	- 3.9	22	0	13	2.8	83	62	12	22	11	1	30	25	0.5	9	10.3	SE	14	5	7	19	7.3	31
LONG BEACH	10	1017.6	1018.9	18.9	6.1	12.2	-1.1	26.1	31+	- 0.6	21	0	1	2.2	56	39	- 11	25	7	0	0	0	1.0	31	10.3	27	26+	10	8	13	5.6	
LOS ANGELES	30	1014.6	1018.3	17.2	7.8	12.4	-1.4	26.1	4	0.0	21	0	1	3.3	59	36	- 25	25	6	0	0	0	0.8	32	14.3Y	NW	20+	10	9	12	5.6	
LOS ANGELES U	82			18.9	8.3	13.4	-1.1	26.7	4	0.6	21	0	0			33	- 40	23	6		0	0			10.7	N	20	9	10	12	5.4	82
MT SHASTA R	1080			3.9	- 4.4	- 0.4	-2.6	10.0	5+	-14.4	21	0	29			301	143	75	18		1615	940										
OAKLAND	2	1019.6	1020.0	12.2	6.7	9.3	-0.4	15.0	10+	0.0	21	0	1	5.6	77	82	- 9	21	17	1	0	0	0.9	14	15.6	17	13	7	10	14	6.5	
RED BLUFF	104	1007.1	1020.0	10.6	2.2	6.3	-2.1	17.2	5	- 4.4	21	0	9	1.7	75	182	75	42	15	0	203	127	0.4	21	17.9	SE	15	4	6	21	7.7	45
SACRAMENTO	5	1019.3	1020.3	10.6	2.2	6.4	-1.6	16.1	9	- 3.9	21	0	7	3.9	85	70	- 12	20	14	0	T	0	0.6	16	13.0	W	15	8	5	18	7.0	52
SANDBERG R	1377	863.5		6.1	- 1.1	2.6	-3.3	15.0	8	-10.0	20	0	19	- 8.9	52	18	- 45	5	7		86	51			23.7	34	16	6	8	17	6.8	
SAN DIEGO	4	1017.3	1018.4	17.8	7.8	12.7	-1.2	22.8	31+	2.2	22	0	0	5.0	62	15	- 37	12	6	0	0	0	1.0	31	12.1	NW	26	9	10	12	5.5	78
SAN FRANCISCO	2	1019.3	1019.9	12.2	5.0	8.8	-1.3	16.7	13	- 1.7	21	0	1	5.0	77	114	10	34	16	1	T	T	0.5	21	19.7	S	15	5	11	15	6.7	
SAN FRANCISCO U	16			12.2	7.2	9.9	-1.5	15.6	10+	3.3	21	0	0			99	- 9	19	17		0	0			15.6	SE	15					53
SANTA MARIA	72			16.7	2.8	9.9	-1.4	26.1	4	- 2.8	21	0	6			36	- 30	8	11		0	0						13	7	11	5.3	
STOCKTON	7			9.4	1.7	5.6	-2.2	15.6	9	- 5.6	21	0	13	3.3	88	111	44	28	16	0	T	0			13.0	14	15	6	6	19	7.3	
COLORADO																																
ALAMOSA	2297	768.7		2.2	-20.0	- 8.8	-1.7	10.0	16	-33.9	19	0	31			10	3	10	2		160	152						13	8	10	4.5	
COLORADO SPRINGS	1873	806.3	1016.1	6.1	- 8.9	- 1.4	-1.3	17.2	4	-18.3	22	0	30	-13.3	47	6	0	5	3	0	124	102	1.4	1	19.7	34	30	7	8	16	6.4	
DENVER	1610	831.7	1014.0	6.7	-10.0	- 1.7	-1.5	18.9	11+	-24.4	22	0	30	-11.7	55	13	1	6	6	0	175	102	0.9	23	17.4	W	12	7	11	13	6.0	69
GRAND JUNCTION	1480	853.0	1022.5	1.1	-11.7	- 5.2	-3.6	15.0	11	-22.8	22	0	31	-11.1	68	12	- 3	4	7	0	198	102	0.6	3	17.0	W	11	4	10	17	7.2	42
PUEBLO	1428	852.4	1015.7	7.8	- 8.9	- 0.7	-1.3	19.4	10+	-18.9	23+	0	31	-12.2	49	9	2	7	4	0	180	152	1.5	29	18.3	W	12	8	14	9	5.4	72
CONNECTICUT																																
BRIDGEPORT	2	1013.5	1014.3	3.9	- 3.3	0.2	-0.4	13.3	2	-14.4	26	0	23	- 5.6	65	189	100	94	13	0	61	25	4.3	31	19.7	30	24	6	11	14	6.5	

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No. of days: Max. 32.2 °C or above	Temperature: No. of days: Min. 0 °C or lower	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No. of days: .25 mm. or more	Precipitation: No. of days: With thunderstorms	Snow, Sleet: Total	Snow, Sleet: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile (1.6 kilometers): Speed	Wind: Fastest mile: Direction	Wind: Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	No. of days: Partly cloudy, 4-7	No. of days: Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
#	M.	Mb.	Mb.	C.	C.	C.	C.	C.		C.				C.	%	Mm.	Mm.	Mm.			Mm.	Mm.	M.p.s.		M.p.s.							%
CONNECTICUT																																
HARTFORD	52	1006.8	1013.5	0.6	- 7.8	- 3.7	-1.9	13.3	2	-20.6	26	0	26	- 8.9	68	133	44	54	12	0	353	152	2.6	30	15.6	NW	25	7	7	17	6.6	53
NEW HAVEN	2	1013.9		3.9	- 4.4	- 0.4	-0.7	12.8	2	-16.7	26	0	23			168	66	69	13		102	51			15.6	W	5	7	10	14	6.3	58
DELAWARE																																
WILMINGTON	23	1013.5	1016.4	5.6	- 2.8	1.2	-0.5	18.3	28	-12.2	11	0	22	- 6.7	59	59	- 18	17	12	0	15	25	3.1	27	15.6	27	4	7	7	17	6.8	
DIST.OF COLUMBIA																																
WASH NATL AP	3	1015.2	1017.6	6.7	- 1.7	2.6	-0.8	20.6	28	-10.6	11	0	23	- 5.6	57	56	- 14	17	8	0	T	0	2.3	29	18.3	W	5	6	8	17	6.7	47
FLORIDA																																
APALACHICOLA U	4			15.6	6.1	10.9	-2.3	21.7	7	- 2.8	16	0	3			119	44	33	10	1	0	0			11.2	S	28+	14	9	8	4.5	63
DAYTONA BEACH	9	1020.0	1021.3	20.0	7.2	13.4	-2.3	28.9	2	- 2.8	17	0	3	7.2	69	35	- 14	22	7	1	0	0	1.0	29	11.2	20	28	13	10	8	4.6	
FORT MYERS	5	1020.3	1020.8	22.8	10.6	16.8	-1.5	28.9	31	0.0	16	0	1	10.6	72	4	- 29	3	2	0	0	0	1.3	5	11.6	31	4	14	9	8	4.5	
JACKSONVILLE	6	1020.0	1021.1	18.9	6.1	12.6	-0.8	28.3	2	- 3.3	16	0	6	5.6	66	28	- 29	7	8	1	0	0	1.3	28	14.3	NW	15	12	12	7	4.5	67
KEY WEST	1	1019.0	1019.6	22.8	18.3	20.6	-0.9	27.2	31	10.6	17	0	0	16.1	77	5	- 38	3	4	0	0	0	3.2	6	13.0	SE	13	10	11	10	5.3	69
LAKELAND U	65			21.1	9.4	15.1	-1.8	28.9	2	- 2.8	16	0	1			12	- 35	9	7		0	0						16	10	5	3.9	69
MIAMI	2	1019.6	1019.8	24.4	13.9	19.2	-0.8	29.4	23+	1.1	16	0	0	12.8	67	3	- 39	3	2	0	0	0	0.9	4	13.0	31	4	10	10	11	5.1	
ORLANDO	33	1016.9	1021.3	21.1	8.3	14.8	-1.2	29.4	2	- 1.7	16	0	2	8.3	71	22	- 26	14	5	1	0	0	0.8	34	10.3	28	23	14	11	6	4.4	
PENSACOLA	34	1016.6	1020.8	15.6	4.4	9.9	-2.5	22.8	22	- 4.4	15	0	8	4.4	71	139	32	48	13		0	0	1.0	4	17.9	N	31	11	6	14	5.5	63
TALLAHASSEE	17	1019.0	1021.5	18.3	2.2	10.0	-2.3	24.4	21+	- 7.2	16	0	15	3.3	71	171	83	91	10	1	0	0	0.3	35	11.2	18	28	14	9	8	4.4	
TAMPA	6	1020.7	1020.9	20.6	7.8	14.2	-2.6	26.7	31+	- 2.8	17	0	2	7.8	70	15	- 33	7	8	1	0	0	0.8	5	11.2	33	4	13	9	9	4.7	73
WEST PALM BEACH	5	1019.6	1020.3	23.3	12.2	17.6	-2.5	29.4	28	0.6	16	0	0	10.6	65	2	- 64	1	2	0	0	0	0.7	36	13.0	30	4	9	10	12	5.6	
GEORGIA																																
ATHENS	244	990.9	1020.5	10.0	- 1.1	4.5	-2.5	17.2	13	- 7.8	15	0	19	- 3.3	63	151	36	63	10	0	0	0	1.3	29	10.7	29	7	9	9	13	5.7	
ATLANTA	308	983.1	1020.7	10.6	- 1.1	4.6	-2.6	16.7	28+	- 8.3	15	0	21	- 2.8	65	124	13	50	10	0	T	0	1.1	32	17.4	SW	28	10	9	12	5.8	66
AUGUSTA	44	1015.2	1020.5	13.9	- 1.1	6.4	-2.1	22.8	19+	- 7.8	17+	0	20	- 1.1	66	73	- 11	22	12	1	0	0	1.3	27	12.5	31	7	12	6	13	5.4	
COLUMBUS	117			13.3	0.0	6.5	-2.2	20.0	22	- 7.8	15	0	19	0.0	68	124	8	35	11	1	T	0	0.7	33	10.3	32	14	10	8	13	5.6	
MACON	108	1007.8	1021.1	13.9	- 0.6	6.6	-2.8	22.2	13	- 7.8	15	0	18	- 1.7	61	86	- 17	29	12	1	0	0	1.2	29	13.9	S	28	12	7	12	5.4	62
ROME	194			10.6	- 3.3	3.6	-2.2	16.7	28+	-10.0	16	0	23			142	11	62	10		T	0										
SAVANNAH	14	1019.0	1020.7	16.1	1.1	8.7	-2.1	25.6	19	- 7.2	16	0	14	1.1	65	101	29	48	8	1	0	0	1.1	27	13.4	NW	7	13	5	13	5.4	69
HAWAII																																
HILO	8	1012.2	1013.4	27.2	19.4	23.2	1.2	30.6	16+	15.6	12	0	0	19.4	83	630	245	178	19	0	0	0	1.0	22	12.1	NW	29	3	11	17	7.6	25
HONOLULU	2	1012.2	1012.7	26.7	18.9	22.6	-0.5	28.9	7	15.0	30+	0	0	18.3	80	245	169	75	15	2	0	0	1.5	4	15.6	NE	13	10	8	13	6.1	53
KAHULUI	15	1010.5	1012.8	27.2	17.8	22.5	-0.1	30.6	7	13.3	27	0	0	18.9	82	180	111	50	17	1	0	0	0.9	8	12.1	E	14+	5	11	15	6.7	55
LIHUE	31	1008.5	1013.5	25.0	18.3	21.6	-0.8	27.8	6	15.0	29	0	0	18.3	82	582	450	293	17	2	0	0	0.8	3	11.6	E	14+	7	9	15	6.7	39
IDAHO																																
BOISE	865	915.0	1017.1	5.6	- 1.7	1.7	1.6	15.0	10	-14.4	21+	0	19	- 3.9	68	50	16	17	16	0	290	102	2.3	13	12.5	SE	15	2	7	22	8.6	23
LEWISTON	431			2.8	- 3.9	- 0.5	-2.1	16.7	10	-30.0	30	0	22			54	19	20	16		475	203						2	1	28	9.2	
POCATELLO	1358	861.8	1019.4	1.1	- 8.9	- 4.0	-1.4	12.2	10	-23.9	31+	0	30	- 8.9	70	20	- 6	6	15	0	455	229	3.2	21	17.0	SW	29	1	8	22	8.5	21
ILLINOIS																																
CAIRO U	96			6.7	- 0.6	3.0	-1.2	14.4	18	- 9.4	15	0	19			172	79	61	11		T	T			16.1	S	19	8	10	13	6.1	47
CHICAGO O HARE	201	991.2	1016.4	1.7	- 6.1	- 2.3	0.2	11.7	12	-22.8	31	0	26	- 6.7	74	70	24	21	12	0	277	102	2.2	24	20.6	30	5	6	3	22	7.6	
CHICAGO MIDWAY	185	993.2	1016.5	1.7	- 5.6	- 1.8	-0.2	12.8	12	-22.8	31	0	26	- 6.7	71	100	51	32	12	0	302	102	2.6	23	17.0	W	4	6	2	23	7.7	24
MOLINE	177	994.6	1016.9	0.0	- 8.3	- 4.2	-1.3	13.9	12	-25.6	31	0	29	- 7.8	74	70	28	21	10	0	137	51	2.1	25	19.7	NW	5	7	3	21	7.4	39
PEORIA	199	992.6	1017.2	1.7	- 6.7	- 2.4	-0.8	12.2	12+	-23.3	31	0	25	- 6.7	73	71	22	31	10	0	117	25	2.0	24	18.3	NW	4	5	4	22	7.5	31
ROCKFORD	221	988.2	1016.1	0.0	- 7.8	- 3.7	-0.2	11.7	12	-24.4	31	0	27	- 7.2	77	84	41	28	11	0	226	102	1.7	25	16.1	30	5	7	3	21	7.6	
SPRINGFIELD	179	994.6	1017.5	2.8	- 5.6	- 1.6	-1.6	12.2	12	-20.6	31	0	25	- 5.6	74	67	19	27	12	0	119	51	2.5	23	18.8	W	23+	6	6	19	7.2	38
INDIANA																																
EVANSVILLE	116	1004.7	1019.3	5.6	- 2.8	1.3	-1.0	14.4	27	-12.2	31	0	23	- 3.3	72	142	64	50	13	0	T	T	1.6	23	16.1	SW	28	7	6	18	7.3	40
FORT WAYNE	241	986.1	1017.0	1.7	- 5.6	- 2.1	-0.1	10.0	12	-17.8	31	0	27	- 5.6	78	87	34	44	13	0	84	25	3.1	24	17.9	W	23	2	5	24	8.4	32
INDIANAPOLIS	241	987.5	1017.7	3.3	- 4.4	- 0.8	-0.3	12.8	12	-15.0	31	0	26	- 5.6	73	106	38	39	17	0	41	25	2.1	24	18.8	NW	5	3	5	23	8.2	20
SOUTH BEND	236	987.1	1016.0	0.6	- 6.1	- 2.8	-0.9	11.1	12	-21.1	31	0	28	- 5.0	84	87	31	22	17	0	709	254	2.1	23	14.3	24	22	3	2	26	8.8	
IOWA																																
BURLINGTON	211			1.1	- 8.3	- 3.5	-1.5	14.4	12	-24.4	31	0	29	- 7.2	72	49	8		11	1	81		1.7	27	20.6	30	4	6	4	21	7.5	

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No. of days: Max 32.2 °C or above	Temperature: No. of days: Min. 0 C or lower	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No. of days: .25 mm. or more	Precipitation: No. of days: With thunderstorms	Snow, Sleet: Total	Snow, Sleet: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile (1.6 kilometers): Speed	Wind: Fastest mile: Direction	Wind: Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	No. of days: Partly cloudy, 4-7	No. of days: Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	M.	Mb.	Mb.	C.	C.	C.	C.	C.		C.				C.	%	Mm.	Mm.	Mm.			Mm.	Mm.	M.p.s.		M.p.s.							%
IOWA																																
DES MOINES	286	981.4	1017.6	- 1.7	-10.6	- 5.9	-2.2	17.8	12	-26.1	31+	0	28	-10.6	71	43	14	25	13	1	132	102	1.5	31	17.0	NW	22	6	4	21	7.3	49
DUBUQUE	322	975.6		- 2.2	-10.0	- 6.3	-1.6	12.2	12	-27.2	31	0	31			69	20	23	13		328	229						7	3	21	7.4	
SIOUX CITY	334	976.3	1018.0	- 2.8	-11.1	- 7.0	-3.1	13.9	4	-28.3	31	0	30	-10.6	76	50	31	24	12	2	523	381	2.1	34	23.7	NW	22	5	5	21	7.5	41
WATERLOO	265	983.7	1016.9	- 2.8	-12.2	- 7.4	-2.6	14.4	12	-26.7	31	0	31	-10.6	77	71	42	27	14	2	368	229	0.9	29	17.4	33	4	7	5	19	7.3	
KANSAS																																
CONCORDIA	448	962.8	1017.7	1.7	- 8.9	- 3.6	-3.6	14.4	10	-23.9	31	0	30	- 8.3	74	25	7	6	6	1	168	152	1.3	30	18.8	NW	22	6	12	13	6.4	62
DODGE CITY	787	923.5	1017.2	3.9	- 7.8	- 2.0	-3.5	20.0	4	-21.7	31	0	30	- 8.3	69	11	- 1	5	6	0	66	51	1.0	30	17.9	NW	18+	6	9	16	7.0	54
GOODLAND	1113	885.2	1016.3	2.2	-10.6	- 4.2	-3.3	18.9	11+	-24.4	31	0	30	-10.6	70	33	22	14	6	1	417	229	2.0	28	19.2	33	12	7	8	16	6.4	
TOPEKA	267	985.1	1018.2	3.3	- 6.7	- 1.7	-2.4	17.2	12	-21.1	31	0	29	- 7.2	69	53	18	30	8	1	20	25	1.5	29	17.0	SW	12	7	8	16	6.7	52
WICHITA	403	968.5	1018.0	5.0	- 6.7	- 0.7	-2.8	16.7	4	-20.6	31	0	28	- 6.7	68	33	9	14	5	1	71	76	1.2	30	19.2	NW	22+	4	14	13	6.5	68
KENTUCKY																																
COVINGTON	265	985.8	1018.2	5.0	- 3.3	0.9	0.2	14.4	28	-12.8	31	0	23	- 5.0	67	102	32	29	16	0	51	25	2.5	24	14.8	25	28	2	8	21	8.2	
LEXINGTON	294	982.7	1019.1	6.1	- 3.3	1.4	-0.7	15.6	27	-12.8	31+	0	22	- 4.4	66	73	- 14	21	14	0	38	25	2.4	22	14.3	25	28	3	6	22	7.9	
LOUISVILLE	145	1000.7	1018.8	6.1	- 2.2	2.1	-0.3	15.0	28+	-12.2	31	0	22	- 4.4	64	92	10	22	18	0	28	T	1.8	25	23.2	W	23	6	5	20	7.6	40
LOUISIANA																																
ALEXANDRIA	28	1016.6	1020.8	15.6	2.2	9.1	-1.7	22.2	6	- 5.0	16	0	12			120	- 26	32	10	3	0	0	0.4	31	13.0	30	28+	11	8	12	5.6	
BATON ROUGE	20	1018.0	1020.8	16.7	3.9	10.4	-1.6	22.2	27+	- 4.4	16	0	7	3.9	68	179	49	65	11	1	0	0	0.5	7	11.2	31	3	14	5	12	5.1	
LAKE CHARLES	3	1019.3	1020.3	17.2	5.6	11.2	-1.3	23.3	26	- 1.1	24	0	5	5.0	69	120	- 26	42	10	4	0	0	0.9	9	11.2	33	3	12	8	11	5.4	
NEW ORLEANS	1	1020.0	1020.9	16.7	4.4	10.4	-2.6	23.9	27	- 5.0	16	0	9	5.6	71	156	52	65	12	1	0	0	0.4	6	13.4	16	1	12	5	14	5.4	
SHREVEPORT	77	1010.5	1020.0	13.9	2.2	8.1	-1.7	21.1	27	- 4.4	24	0	11	1.7	66	83	- 42	35	9	2	T	T	0.6	20	14.8	28	27	11	4	16	6.1	52
MAINE																																
CARIBOU	190	985.1		- 3.9	-11.7	- 7.8	1.4	5.6	13	-26.1	26	0	29			106	44	39	16		792	610						3	5	23	8.4	
PORTLAND	14	1008.8	1011.0	0.6	- 8.3	- 3.8	-0.3	10.6	13	-22.8	26	0	27	- 9.4	65	196	98	60	11	1	478	254	1.[illegible]	29	13.9	W	6	8	7	16	6.4	49
MARYLAND																																
BALTIMORE	45	1011.5	1017.2	5.6	- 2.8	1.4	-0.7	19.4	28	-12.8	11	0	21	- 6.1	59	66	- 10	20	8	0	T	0	3.0	29	19.2	W	5	8	8	15	6.5	46
MASSACHUSETTS																																
BLUE HILL OBS R	192			1.1	- 6.7	- 2.8	-1.7	12.2	13	-22.2	26	0	25			162	61	49	10		132	76			24.1	WNW	24					53
BOSTON	5	1011.5	1012.4	2.8	- 3.9	- 0.6	-1.3	13.9	13	-19.4	26	0	22	- 7.8	61	158	66	55	12	1	130	51	4.5	28	19.2	W	24	8	9	14	6.2	56
NANTUCKET	13	1012.2	1012.7	5.0	- 2.8	0.9	-1.4	12.8	4	-15.6	26	0	20	- 2.8	75	152	52	52	14	0	74	51	3.6	28	17.9	W	17+	4	10	17	7.4	33
WORCESTER	301	974.3	1012.5	- 0.6	- 8.3	- 4.4	-1.8	10.6	13	-23.9	26	0	27	- 9.4	68	156	65	51	11	0	310	203	3.5	27	15.6	28	25+	9	8	14	6.2	
MICHIGAN																																
ALPENA	210	988.5	1014.8	- 1.7	- 9.4	- 5.6	-1.2	6.7	13+	-23.9	30	0	30	- 8.3	80	77	30	22	23	0	894	508	0.8	27	12.5	NE	28	4	4	23	8.3	25
DETROIT	189			1.1	- 5.0	- 1.9	-0.8	10.0	12	-17.2	31	0	25	- 6.7	70	87	34	44	14	0	91		2.6	27	15.6	27	5					
DETROIT M WAYNE CO	193	990.5	1015.5	1.7	- 6.1	- 2.2	-0.4	11.7	12	-17.2	31	0	26	- 6.1	74	91	42	47	14	0	150	51	2.2	26	17.0	W	5	1	7	23	8.6	19
FLINT	235	986.1	1014.9	0.0	- 6.7	- 3.2	-0.7	9.4	12	-17.2	31	0	26	- 7.2	73	60	15	25	14	0	206	51	2.1	25	13.9	22	23+	1	7	23	8.4	
GRAND RAPIDS	239	985.1	1015.3	- 0.6	- 7.8	- 4.3	-1.5	8.9	12	-18.9	31	0	29	- 6.7	82	80	29	15	17	0	665	152	1.2	24	16.5	W	5	3	3	25	8.5	29
HOUGHTON LAKE	350	971.2	1014.9	- 1.7	-10.0	- 6.1	-1.4	6.7	13+	-22.2	31+	0	30	- 8.3	82	64	21	14	18	0	772	330	0.6	27	13.4	28	5	4	6	21	7.9	
LANSING	256	982.7	1015.6	0.0	- 7.2	- 3.6	-1.1	11.1	12	-18.3	31	0	28	- 6.7	80	67	16	27	19	0	218	76	2.0	25	17.9	NW	5	2	8	21	8.3	32
MARQUETTE U	206			- 1.7	- 7.2	- 4.4	0.0	6.7	13	-24.4	31	0	29			101	52	16	22		1044	559			16.5	SW	11	1	4	26	9.1	19
MUSKEGON	191	991.2	1015.1	0.0	- 6.1	- 3.0	-1.8	9.4	12	-18.3	31	0	28	- 6.7	76	94	43	20	22	0	950	305	0.8	27	15.6	24	13+	1	3	27	9.0	
SAULT STE MARIE	220	987.5	1015.1	- 3.9	-11.7	- 7.6	-1.4	5.0	13	-24.4	31+	0	30	-10.0	79	76	19	20	20	0	823	559	1.4	5	12.5	SE	30+	4	8	19	7.6	32
MINNESOTA																																
DULUTH	435	963.1	1017.4	- 6.7	-15.6	-11.2	-1.2	1.7	12+	-31.1	25	0	31	-13.9	76	94	65	26	17	0	958	635	1.3	36	20.1	NW	5	3	4	24	8.3	34
INTERNATIONAL FALLS	359	973.6	1019.2	- 8.9	-18.3	-13.7	-1.1	1.7	1	-36.7	25	0	31	-15.6	82	41	19	16	14	0	457	356	1.2	1	14.8	3	12	5	3	23	7.9	
MINNEAPOLIS	254	985.1	1017.1	- 4.4	-12.2	- 8.4	-0.7	11.7	12	-28.3	31	0	29	-11.7	74	56	34	14	14	1	729	533	1.1	36	15.6	N	13	6	2	23	7.8	38
ROCHESTER	395	966.5	1016.2	- 3.9	-12.8	- 8.2	-0.8	14.4	12	-29.4	31	0	30	-11.7	73	47	23	14	13	1	526	483	1.0	29	15.6	30	5	5	3	23	8.1	
ST CLOUD	315	977.7	1017.3	- 6.7	-15.0	-10.8	-2.3	4.4	4	-31.7	25+	0	31		73	50	31	15	11		645	432						4	5	22	8.0	
MISSISSIPPI																																
JACKSON	94	1008.5	1020.7	13.9	1.1	7.6	-2.1	22.2	22	- 8.3	16	0	12	1.7	71	142	7	46	11	3	0	0	0.5	16	14.3	NW	19	11	6	14	5.7	52
MERIDIAN	88	1006.1	1021.7	13.9	0.6	7.1	-1.9	20.6	27	- 7.2	16	0	19	1.7	73	233	98	89	11	2	0	0	0.7	25	10.3	22	27	7	8	16	6.2	
MISSOURI																																
COLUMBIA	237	988.2	1017.4	4.4	- 5.6	- 0.6	-1.6	16.1	12	-21.1	31	0	26	- 5.6	70	74	24	52	9	1	61	51	1.7	24	18.8	NW	4	6	6	19	7.1	41

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No. of days: Max. 32.2 °C or above	Temperature: No. of days: Min. 0 °C or lower	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No. of days: .25 mm. or more	Precipitation: No. of days: With thunderstorms	Snow, Sleet: Total	Snow, Sleet: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile (1.6 kilometers): Speed	Wind: Fastest mile: Direction	Wind: Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	No. of days: Partly cloudy, 4-7	No. of days: Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	M.	Mb.	Mb.	°C.	°C.	C.	C.	°C.		°C.				C.	%	Mm.	Mm.	Mm.			Mm.	Mm.	M.p.s.		M.p.s.							%
MISSOURI																																
KANSAS CITY	226	989.8	1017.9	3.3	- 6.1	- 1.3	-3.4	17.8	12	-21.7	31	0	27	- 6.1	73	33	- 6	15	6	1	20	25	1.4	27	19.2	SW	22	9	4	18	6.8	57
ST JOSEPH	247			3.9	- 6.7	- 1.4	-1.1	18.9	12	-22.2	31	0	28	- 7.2	69	53	18		7	1	25		1.3	29	14.3	28	22	9	8	14	6.5	
ST LOUIS	163	997.3	1018.3	5.0	- 4.4	0.2	-1.4	15.0	11	-16.7	31	0	25	- 4.4	73	67	17	30	8	1	33	25	1.9	23	19.7	W	22	3	9	19	7.3	37
SPRINGFIELD	386	971.6	1018.3	6.1	- 5.6	0.3	-2.3	17.2	26	-18.9	31	0	24	- 6.1	65	90	34	67	8	4	36	25	1.8	21	15.6	NW	23+	9	7	15	6.1	59
MONTANA																																
BILLINGS	1087	888.6	1017.3	- 1.7	-11.7	- 6.7	-4.7	12.2	11	-31.7	29	0	29	-12.8	64	21	6	7	11	0	218	152	2.0	25	13.4	SW	3	4	6	21	7.7	18
GLASGOW	696	933.3	1019.4	- 7.2	-17.2	-12.3	-4.3	8.3	3	-37.2	29	0	31	-15.6	76	10	- 2	2	14	0	145	127	1.7	8	14.3	31	4	2	5	24	8.5	
GREAT FALLS	1116	885.2	1018.4	- 3.3	-13.9	- 8.8	-6.2	11.1	10	-41.7	29	0	29	-15.6	61	35	19	12	11	0	345	229	3.7	23	21.0	SW	3	3	5	23	8.2	44
HAVRE	788	922.1	1018.9	- 7.2	-18.3	-12.9	-6.7	9.4	3	-43.3	29	0	31	-16.7	71	20	8	5	12	0	287	178	1.4	25	21.0	SW	3	1	6	24	8.5	48
HELENA	1167	877.8	1018.9	- 3.3	-13.9	- 8.5	-4.2	10.6	10	-38.3	30	0	31	-13.9	67	19	6	6	12	0	279	152	1.9	27	16.5	W	5	2	5	24	8.7	24
KALISPELL	904	908.6	1017.2	- 3.9	-11.7	- 7.9	-4.0	7.2	3	-37.2	30	0	31	-11.1	78	65	31	12	18	0	770	330	0.8	7	15.6	4	28+	3	1	27	8.5	
MILES CITY	801	921.1	1018.8	- 6.1	-16.1	-10.9	-6.1	7.2	4	-33.3	30	0	31	-15.0	73	45	36		19	0	457		1.1	33								
MISSOULA	972	901.8	1017.5	- 1.7	-10.0	- 5.7	-0.9	7.2	3	-32.8	30	0	31	- 8.9	80	30	2	11	13	0	495	254	0.3	33	11.6	W	4+	3	1	27	8.8	26
NEBRASKA																																
GRAND ISLAND	561	949.2	1018.2	- 1.1	-11.7	- 6.4	-3.8	17.2	4	-26.7	31	0	31	-11.1	75	55	41	30	8	0	554	508	2.4	32	20.6	33	22	5	8	18	7.4	
LINCOLN U	351			0.0	- 8.9	- 4.4	-3.6	14.4	4	-25.0	31+	0	29			48	25	33	9		297	229			18.3	NW	12	5	10	16	6.9	38
NORFOLK	471			- 2.8	-12.2	- 7.4	-3.6	15.0	4	-28.3	31	0	30			44	26	23	10		485	432						4	7	20	7.7	
NORTH PLATTE	846	916.0	1018.1	- 0.6	-13.9	- 7.2	-4.7	15.6	10+	-28.9	31	0	31	-12.8	72	22	12	18	6	0	262	254	2.0	33	21.5	NW	12	6	10	15	6.5	51
OMAHA	298	980.7	1017.5	0.6	- 9.4	- 4.4	-2.3	17.2	12	-25.0	30	0	28	-10.0	69	52	31	30	10	2	218	102	1.7	33	21.0	NW	4	5	7	19	7.3	35
SCOTTSBLUFF	1206	876.7	1017.6	2.2	-12.8	- 5.2	-3.3	18.9	11	-30.0	31	0	31	-11.7	66	14	4	7	7	0	155	102	1.7	33	19.7	32	12	5	11	15	6.5	
VALENTINE	789			- 2.8	-14.4	- 8.6	-4.8	19.4	11	-30.0	30	0	31			16	7	6	9		244	178			20.6	NW	12+	5	4	22	7.5	41
NEVADA																																
ELKO	1539	843.2	1018.1	3.9	- 7.8	- 2.2	0.9	11.7	10+	-23.9	22	0	29	- 8.9	61	49	23	22	14	1	632	330	1.4	24	12.5	27	11	2	6	23	8.3	
ELY	1906	807.0	1018.9	3.9	-12.8	- 4.6	-1.7	12.8	5+	-26.1	22	0	30	-12.8	58	20	3	5	9	1	566	152	2.7	20	17.0	S	10	3	7	21	7.6	63
LAS VEGAS	659	941.8	1019.8	11.7	- 1.7	4.9	-2.4	17.8	16	- 9.4	22	0	23	-11.1	32	2	- 8	2	1	0	0	0	1.5	27	18.8	SW	11	9	10	12	5.7	70
RENO	1342	865.2	1018.0	6.1	- 6.7	- 0.3	-0.3	16.7	9	-19.4	21	0	28	- 6.7	65	26	- 1	9	9	0	231	76	0.9	22	30.4	SW	10	7	6	18	7.0	55
WINNEMUCCA	1311	867.3	1018.2	4.4	- 7.2	- 1.3	-0.1	13.9	15	-19.4	20	0	29	- 5.6	72	31	7	19	12	0	287	203	1.6	19	15.6	SW	10	4	5	22	8.0	29
NEW HAMPSHIRE																																
CONCORD	104	999.3	1012.4	- 0.6	-10.0	- 5.3	-1.4	11.1	13	-23.9	26	0	28	-10.0	69	148	65	50	12	0	340	229	2.3	29	13.9	NW	9+	6	8	17	6.7	50
MT WASHINGTON OBS	1909			- 8.9	-18.3	-13.7	-0.8	1.1	13	-39.4	25	0	31			409	249	154	22	0	2634	508			60.8Y	W	5	5	4	22	7.9	29
NEW JERSEY																																
ATLANTIC CITY	20	1013.5	1015.9	5.6	- 6.1	- 0.3	-2.8	16.1	13	-17.8	10	0	26	- 6.7	62	99	17	38	12	0	109	102	3.8	28	16.5	28	5	5	11	15	6.5	49
ATLANTIC CITY U	3			5.6	- 1.7	2.0	-1.5	13.9	4+	- 9.4	10	0	21			98	9	35	9						21.5	W	5					
NEWARK	2	1014.2	1015.1	4.4	- 3.9	0.3	-1.2	14.4	13+	-13.3	10	0	27	- 5.0	69	110	28	48	12	2	119	76	3.5	27	14.8	30	25	10	9	12	5.8	
TRENTON U	17			4.4	- 2.8	0.9	-0.8	15.0	28+	-11.1	10	0	24			78	5	30	13		122	102			15.2	NW	24	9	8	14	6.0	56
NEW MEXICO																																
ALBUQUERQUE	1619	838.5	1020.4	5.6	- 7.8	- 1.1	-3.9	12.2	10	-15.6	22	0	31	- 8.9	61	21	9	8	6	0	188	51	0.4	3	14.8	S	21	14	7	10	4.9	74
CLAYTON	1515			9.4	- 7.8	0.8	-1.4	21.7	4	-16.7	31	0	29			5	- 4	3	3		53	51						11	8	12	5.4	
ROSWELL	1102	891.0		13.3	- 6.7	3.4	-0.4	21.7	6	-14.4	23	0	30	- 8.9	46	6	- 8	6	2	0	0	0	1.4	28	17.9	SW	21	17	5	9	4.1	75
NEW YORK																																
ALBANY	84	1003.7	1014.7	0.0	- 9.4	- 4.7	-1.7	8.9	3	-24.4	27+	0	28	-10.6	63	117	51	29	16	1	460	203	3.1	27	15.6	W	29	5	4	22	7.6	42
BINGHAMTON	485	953.6	1014.5	- 1.1	- 7.8	- 4.7	-1.8	8.3	13	-20.0	26+	0	28	- 8.3	77	81	15	38	19	1	302	102	2.8	27	23.2	W	5	1	6	24	8.7	29
BUFFALO	215	988.2	1014.5	0.6	- 6.1	- 2.9	-0.5	12.2	13	-16.7	11	0	25	- 7.2	74	87	11	32	23	1	297	76	3.0	27	19.2	SW	29	1	3	27	8.9	26
J.F. KENNEDY	4	1014.2	1015.0	3.9	- 2.8	0.6	-1.1	14.4	4	-12.8	10	0	23	- 5.6	65	116	34	52	12	0	112	102	4.0	29	20.6	27	5	8	11	12	6.1	
NEW YORK U	40	1010.8	1014.3	5.0	- 2.2	1.3	-0.9	15.6	13+	-12.8	10	0	22	- 6.7	58	105	23	45	10	0	178	127	2.5	29	17.0	NW	9					61
NEW YORK LA GUARDIA	3	1013.2	1015.1	4.4	- 2.8	0.8	-1.6	16.1	13	-12.8	10	0	22	- 7.2	57	97	10	45	11	0	124	102	3.7	30	19.2	W	5	7	11	13	6.2	
ROCHESTER	167	993.6	1014.5	1.1	- 5.6	- 2.4	-0.6	13.3	13	-16.1	11	0	26	- 6.7	73	84	24	27	21	0	564	127	3.1	26	18.8	SW	5	2	1	28	8.9	25
SYRACUSE	125	999.0	1014.5	1.1	- 6.1	- 2.7	-0.3	10.0	13	-19.4	26	0	25	- 6.1	76	119	39	37	18	0	645	254	2.0	27	18.8	W	5	1	6	24	8.6	20
NORTH CAROLINA																																
ASHEVILLE	652	940.7	1018.8	7.8	- 3.3	2.3	-0.9	16.1	18+	-10.0	10	0	23	- 3.9	70	79	- 13	22	10	0	T	T	1.8	35	14.3	18	28+	12	7	12	5.5	62
CAPE HATTERAS R	2	1018.3	1018.7	12.2	3.3	7.6	-1.4	21.1	28	- 5.0	18	0	11	2.2	71	67	- 49	18	11	0	T	T	2.6	31	19.7	SSW	28	9	8	14	5.9	50
CHARLOTTE	224	991.2	1019.6	9.4	- 1.7	3.7	-2.3	17.8	13	- 9.4	16	0	22	- 3.9	61	58	- 34	20	10	0	T	0	1.1	27	17.0	SW	28	11	5	15	5.6	66

See footnotes at end of table

CLIMATOLOGICAL DATA
METRIC UNITS

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	No. of days: Max 32.2 °C or above	No. of days: Min 0 °C or lower	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	No. of days: 25 mm. or more	No. of days: With thunderstorms	Snow, Sleet: Total	Snow, Sleet: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Fastest mile (1.6 kilometers): Speed	Fastest mile: Direction	Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	M.	Mb.	Mb.	C.	C.	C.	C.	C.		C.				C.	%	Mm.	Mm.	Mm.			Mm.	Mm.	M.p.s.		M.p.s.							%
NORTH CAROLINA																																
GREENSBORO	273	986.8	1019.3	8.9	-2.8	3.1	-1.3	17.8	28	-10.0	11	0	23	-5.0	60	57	-22	17	9	0	T	T	1.4	25	17.4	SW	28	9	9	13	6.3	55
RALEIGH	132	1002.7	1019.0	9.4	-2.2	3.8	-1.7	20.6	28	-10.6	11	0	22	-3.3	64	70	-7	15	10	1	18	25	1.7	28	15.6	21	28	8	8	15	6.2	55
WILMINGTON	9	1018.3	1019.7	13.9	0.6	7.2	-1.8	23.3	19	-5.6	16+	0	15	0.6	66	57	-29	18	10	0	8	T	1.3	28	15.6	SW	28+	11	6	14	5.6	59
NORTH DAKOTA																																
BISMARCK	502	957.3	1020.4	-6.7	-16.1	-11.4	-3.6	6.1	4	-31.1	31	0	31	-15.6	69	20	11	7	11	0	330	229	1.6	34	20.6	NW	4	4	5	22	8.1	34
FARGO	273	985.1	1019.9	-8.3	-17.2	-12.8	-3.1	2.8	4	-33.3	31	0	31	-15.0	79	28	13	10	13	0	290	178	2.5	36	25.0	N	13	4	5	22	8.0	22
WILLISTON	579	947.9	1020.4	-7.8	-18.9	-13.4	-4.6	6.7	4	-37.2	30	0	31	-16.7	76	28	15	8	14	0	295	279	0.8	34	16.5	NW	4	3	7	21	7.7	61
OHIO																																
AKRON	368	970.5	1016.4	3.3	-5.0	-0.9	-0.1	16.1	28	-15.0	31+	0	26	-5.0	73	99	41	39	21	1	282	102	2.9	24	17.9	24	28	0	5	26	9.0	
CINCINNATI OBS	232			4.4	-3.3	0.4	-1.4	13.3	28+	-13.3	31	0	24			95	24	30	16		28	25			15.6	SW	28					39
CLEVELAND	237	986.5	1016.6	2.2	-4.4	-1.1	-0.3	13.9	28	-15.6	31	0	26	-7.2	64	100	41	41	18	0	211	127	3.4	24	21.9	SW	28	0	4	27	9.2	08
COLUMBUS	247	987.1	1018.1	3.3	-4.4	-0.5	-0.2	11.7	28+	-13.3	31	0	26	-6.1	69	86	27	31	15	0	173	127	2.4	24	18.8	W	28	2	7	22	8.3	25
DAYTON	305	980.4	1017.6	3.3	-5.0	-0.8	-0.4	13.3	28	-14.4	31	0	26	-6.1	70	88	28	30	13	0	94	25	2.5	24	18.8	W	28	1	10	20	8.1	24
MANSFIELD	395			2.8	-5.0	-1.3	0.3	12.2	28	-15.0	31	0	26	-5.0	78	81	13	38	17	0	191	51	3.4	24	17.9	24	28	2	5	24	8.5	
TOLEDO	204	990.9	1016.9	1.1	-7.2	-3.0	-0.9	10.6	12	-18.9	31	0	28	-6.1	80	101	51	51	16	0	208	76	2.4	26	15.6	W	5	1	8	22	8.3	35
YOUNGSTOWN	359	972.2	1016.4	1.1	-6.1	-2.4	-1.0	13.9	28	-15.0	31+	0	28	-5.6	79	102	34	38	22	1	549	203	2.5	25	17.0	25	28+	1	1	29	9.1	
OKLAHOMA																																
OKLAHOMA CITY	392	970.9	1018.3	10.0	-2.8	3.4	-1.2	20.0	26	-17.2	31	0	24	-3.3	67	34	-2	16	3	1	33	25	0.6	24	19.2	SW	18	8	10	13	6.0	60
TULSA	198	993.9	1018.8	8.9	-3.9	2.7	-1.6	20.6	26	-17.2	31	0	23	-4.4	64	51	10	31	6	3	36	25	1.3	24	19.2	SW	12	11	7	13	5.9	58
OREGON																																
ASTORIA	2	1011.9	1012.7	7.2	1.1	4.2	-2.0	12.8	23	-7.2	30	0	12	1.7	84	352	5	66	29	1	114	102	1.2	13	14.3	18	3	2	1	28	9.3	
BURNS U	1265	870.0	1016.0	2.2	-6.7	-2.1	-0.4	11.1	10	-16.1	29	0	30	-5.6	75	46	10	12	15		465	229	1.3	23				2	7	22	8.5	
EUGENE	109	1001.4	1015.0	8.3	1.7	5.0	-0.4	13.3	14+	-10.6	31	0	9	2.8	88	318	150	75	26	0	58	25	2.5	18	14.3	20	11+	0	0	31	9.8	
MEACHAM	1234	872.0	1015.6	-1.1	-6.7	-4.1	-2.9	7.8	10	-28.9	30	0	29			141	26	21	22		1245	584			10.3	27	28	0	3	28	9.4	
MEDFORD	396	968.8	1017.4	7.2	0.0	3.4	0.7	17.2	9	-6.7	20	0	12	-0.6	77	71	-15	17	17	0	51	25	0.7	14	16.1	14	13	0	7	24	8.9	
PENDLETON	452	961.1	1015.9	3.9	-2.8	0.7	-1.8	16.7	10	-24.4	30	0	17	-3.9	74	56	18	17	17	0	302	152	1.4	22	17.0	23	10	2	3	26	8.7	
PORTLAND	6	1013.2	1014.5	5.6	0.0	2.9	-2.2	11.1	10	-13.3	30	0	10	0.6	84	282	120	54	26	0	399	279	3.0	14	17.9	E	13	0	1	30	9.8	11
SALEM	60	1007.1	1014.4	6.1	-0.6	2.8	-2.5	12.2	7	-13.3	31	0	19	1.7	91	281	93	64	24	0	320	178	2.6	19	15.6	19	7	0	0	31	9.6	
SEXTON SUMMIT R	1169	880.1	1015.7	1.7	-2.8	-0.5	-3.2	10.0	7	-10.6	21	0	26			193	72	38	21		1006	457			23.7	20	10	1	4	26	9.1	
PACIFIC AREA																																
JOHNSTON	2	1010.2	1010.8	28.9	23.9	26.3	0.7	30.0	8+	22.2	23+	0	0	21.1	73	135	59	81	12	0	0	0	4.2	8	15.2	E	4	11	15	5	5.0	47
KOROR R	29	1005.4	1009.0	30.6	24.4	27.3	0.2	31.7	21+	22.8	17	0	0	23.9	85	405	107	75	27	1	0	0	3.4	6	10.3	E	6	0	0	31	9.8	55
KWAJALEIN	2	1007.1	1007.9	30.6	25.6	27.9	0.8	31.7	4	23.3	10+	0	0	23.9	80	243	15	90	18	0	0	0	5.3	7	13.9	9	15	1	5	25	8.8	
MAJURO	3	1007.8	1008.2	30.0	24.4	27.0	0.2	31.1	12	21.7	20	0	0	23.9	82	637	355	137	24	1	0	0	3.4	6	12.1	NE	4	2	3	26	8.7	45
PAGO PAGO	4	1009.5	1009.6	31.1	23.9	27.6		32.2	31+	21.7	16+	4	0	24.4	84	158		74	22	3	0	0	2.4	10	9.4	E	9	4	16	11	6.5	59
PONAPE R	37	1002.0	1007.6	31.1	23.3	27.0	0.2	32.8	29+	21.1	28	7	0	23.9	84	339	-127	50	27	6	0	0	2.3	8	8.0	NE	13	0	9	22	8.6	40
TAGUAC GUAM R	110			28.3	22.2	25.4	-0.6	29.4	18+	18.3	28	0	0			85	-70	28	19		0	0			10.3	E	4	0	18	13	6.9	51
TRUK MOEN ISLAND	2	1007.5	1007.7	30.0	23.9	27.1	0.0	32.8	16	21.1	15	2	0	23.9	83	623	286	104	26	4	0	0	3.5	6	10.7	E	9	1	6	24	8.6	62
WAKE	3	1011.5	1011.6	28.3	22.8	25.6	-0.5	30.6	1	21.1	25+	0	0	19.4	71	52	5	16	15	1	0	0	4.8	6	15.6	NE	24	10	12	9	5.0	67
YAP R	13	1006.8	1008.7	30.0	23.9	26.9	-0.3	30.6	21+	22.8	16+	0	0	23.3	82	212	-46	60	23	1	0	0	4.0	7	9.8	E	18+	0	4	27	9.2	40
PENNSYLVANIA																																
ALLENTOWN	118	1001.4	1015.8	2.8	-5.6	-1.3	-0.9	12.8	13	-16.7	11	0	28	-7.8	64	93	10	27	11	1	94	51	3.3	29	16.5	28	5	7	9	15	6.5	
ERIE	223	988.2	1015.6	2.8	-3.9	-0.8	-0.1	12.2	28	-14.4	11	0	25	-5.6	71	103	37	47	20	1	478	102	3.1	25	16.1	26	5	1	1	29	9.4	
HARRISBURG	103	1003.4	1016.7	3.3	-3.9	-0.4	-0.9	13.3	13	-14.4	11	0	27	-7.2	61	54	-20	14	12	1	5	T	2.6	29	18.8	W	5	5	6	20	7.2	44
PHILADELPHIA	2	1014.9	1016.0	4.4	-3.9	0.2	-0.9	15.6	13	-12.2	11	0	26	-7.2	61	65	-10	19	12	0	79	76	3.0	29	20.1	W	5	7	8	16	6.4	48
PITTSBURGH	347	971.2	1016.7	1.7	-6.7	-2.4	-1.7	15.6	28	-19.4	10	0	28	-7.2	71	82	21	25	22	1	338	152	2.7	26	21.5	25	28	0	7	24	8.9	21
READING U	81			4.4	-2.8	0.8	-0.7	15.6	28	-12.2	11	0	22			67	-13	25	13		18	T			24.1	W	5	10	6	15	5.9	51
SCRANTON	283	980.4	1015.8	1.1	-6.1	-2.7	-1.2	11.7	28	-17.2	11	0	28	-7.2	72	50	-13	15	17	1	147	51	2.6	27	17.0	W	5	6	4	21	7.5	43
WILLIAMSPORT	160	996.6	1016.2	2.8	-4.4	-0.8	0.1	11.1	13	-15.6	11	0	26	-5.6	72	75	-2	28	13	2	53	25	2.3	30	17.0	25	5	5	5	21	7.6	
RHODE ISLAND																																
BLOCK ISLAND	34			3.9	-2.8	0.4	-1.7	12.8	4	-17.8	26	0	20			137	45	35	12		T	T						6	11	14	6.6	
PROVIDENCE	16	1010.8	1013.1	3.3	-5.6	-1.0	-1.0	13.3	28+	-18.9	26	0	24	-7.8	64	170	78	56	12	0	69	51	3.6	29	17.9	30	17	9	8	14	5.8	56
SOUTH CAROLINA																																
CHARLESTON	12	1018.6	1020.4	14.4	1.7	8.1	-1.9	23.3	19	-5.6	16+	0	14	0.6	63	93	20	45	9	0	0	0	1.3	27	24.1Y	S	28	10	8	13	5.5	60

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Date	Temperature: Lowest	Date	No. of days: Max. 32.2 °C or above	No. of days: Min. 0 C or lower	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	No. of days: .25 mm. or more	No. of days: With thunderstorms	Snow, Sleet: Total	Snow, Sleet: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Fastest mile (1.6 kilometers): Speed	Fastest mile: Direction	Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	M.	Mb.	Mb.	C.	C.	C.	C.	C.		°C.				C.	%	Mm.	Mm.	Mm.			Mm.	Mm.	M.p.s.		M.p.s.							%
SOUTH CAROLINA																																
CHARLESTON U	3			13.9	4.4	9.2	-1.8	20.6	19	- 2.8	16+	0	7			73	3	33	9		0	0			14.8	N	7+					
COLUMBIA	65	1011.9	1020.2	12.8	- 1.1	5.9	-2.1	22.2	13	- 8.3	12	0	19	- 2.2	62	83	- 7	18	9	0	0	0	1.3	28	11.2	30	7	12	8	11	5.3	68
GNVLE-SPARTANBURG	292	984.4	1020.1	9.4	- 1.7	3.9	-2.6	15.6	7+	- 7.8	9	0	21	- 3.9	62	81	- 22	31	12	1	T	0	1.2	30	15.2	NW	16	14	5	12	5.2	55
SOUTH DAKOTA																																
ABERDEEN	395	969.9	1019.2	- 6.1	-14.4	-10.1	-2.4	5.0	4	-32.2	31	0	31	-12.8	78	24	8	10	13	0	323	178	3.0	35	17.9	35	13	5	8	18	7.5	
HURON	391	969.5	1018.6	- 4.4	-13.3	- 8.9	-1.6	9.4	4	-30.0	31	0	31	-12.8	74	39	25	17	14	0	660	457	1.8	33	20.1	NW	13+	5	3	23	7.8	47
RAPID CITY	964	902.1	1017.8	- 2.2	-12.8	- 7.5	-4.8	16.1	11	-29.4	30	0	31	-13.3	66	15	7	7	8	0	191	76	2.8	34	25.0	NW	12	4	8	19	7.7	33
SIOUX FALLS	432	963.8	1017.6	- 4.4	-13.3	- 8.8	-2.7	11.7	11	-30.0	31	0	31	-12.8	73	67	48	32	14	0	1044	864	1.9	34	17.4	32	4	5	5	21	7.4	
TENNESSEE																																
BRISTOL	459	964.1	1019.9	7.8	- 4.4	1.8	-1.7	18.3	19	-14.4	16	0	26	- 5.0	63	54	- 27	20	9	0	25	25	1.7	26	17.9	24	28	5	10	16	7.2	
CHATTANOOGA	203	995.6	1020.8	9.4	- 1.7	3.8	-2.0	16.1	28+	-10.0	16	0	23	- 2.2	68	101	- 31	45	9	0	T	T	1.0	26	15.2	SW	28	10	3	18	6.4	44
KNOXVILLE	299	983.7	1019.7	8.3	- 2.8	2.8	-2.6	17.8	28	-10.0	16	0	23	- 3.9	64	82	- 26	27	8	0	T	T	1.0	27	17.0	SW	28	6	7	18	7.3	32
MEMPHIS	79	1009.8	1020.1	10.0	0.6	5.4	-0.4	18.9	27+	- 7.8	16+	0	16	- 2.2	61	153	28	45	9	2	0	0	1.1	23	15.6	SW	28	13	6	12	5.4	63
NASHVILLE	180	997.6	1019.9	8.9	- 2.2	3.4	-1.8	16.1	27+	- 9.4	31+	0	20	- 3.9	61	91	- 15	33	13	1	T	0	1.7	23	15.2	S	13	7	7	17	6.5	50
OAK RIDGE R	276			7.2	- 2.8	2.4	-2.1	16.1	28	- 8.9	16	0	22			109	- 41	32	10		13	T			16.5Y		4	8	3	20	7.3	
TEXAS																																
ABILENE	537	955.3	1017.9	15.0	0.0	7.5	-0.3	22.8	17	-11.1	31	0	19	- 1.7	57	3	- 29	2	2	0	0	0	2.5	21	18.8	W	27+	12	6	13	5.1	75
AMARILLO	1098	889.3	1015.1	11.1	- 5.6	2.7	-1.3	22.2	11	-16.1	31	0	28	- 8.3	52	7	- 13	4	2	0	46	51	1.9	23	19.2	SW	21	13	6	12	5.0	65
AUSTIN	182	997.3	1019.7	16.7	3.9	10.2	-1.3	24.4	18+	- 2.8	31	0	7	3.3	66	14	- 50	9	5	0	0	0	0.1	26	18.8	W	27	11	5	15	5.7	56
BROWNSVILLE	6	1018.0	1018.4	23.9	12.2	18.2	1.0	30.6	27	2.8	24+	0	0	12.8	71	3	- 41	1	4	0	0	0	1.4	14	14.8	N	3	7	8	16	6.7	33
CORPUS CHRISTI	12	1017.6	1019.1	21.1	8.9	14.9	-0.2	31.1	27	- 1.1	24	0	2	8.9	72	3	- 50	3	3	0	0	0	1.7	11	16.1	S	26	8	7	16	6.7	51
DALLAS	147	1001.7	1019.3	15.0	2.8	9.0	0.1	23.9	18	- 8.9	31	0	8	0.0	57	14	- 54	9	5	0	0	0	1.2	19	17.0	W	27	11	7	13	5.5	68
DEL RIO	313	982.1	1018.8	17.8	3.9	10.7	-0.6	23.3	26+	- 3.9	23	0	5	1.7	60	T	- 21	T	0	0	0	0	0.9	9	15.6	29	27	12	4	15	5.5	
EL PASO	1194	883.2	1017.8	13.3	- 3.3	5.2	-1.6	20.0	11	-10.6	23	0	28	- 6.7	47	6	- 7	5	2	0	T	T	1.2	27	25.5	SW	27	18	6	7	3.6	88
FORT WORTH	164	998.6	1019.5	15.6	1.7	8.6	-0.2	23.9	18	- 8.9	31	0	12	1.1	65	30	- 29	13	6	1	0	0	1.3	22	23.7	32	27	12	4	15	5.5	
GALVESTON U	2			16.1	10.0	13.2	-0.8	20.6	27	3.3	23	0	0			82	- 17	73	6		0	0			13.9	NW	3					57
HOUSTON	15	1018.0	1020.1	18.9	7.2	13.2	0.0	25.6	30+	0.0	24	0	1	5.6	65	30	- 81	10	9	2	0	0	0.7	11	15.6	31	22+	10	4	17	6.3	53
LUBBOCK	992	902.8	1016.4	12.8	- 3.9	4.4	-0.6	20.6	25+	-12.8	31	0	29	- 6.1	54	12	- 4	10	3	0	15	T	2.7	25	22.8	26	21	13	7	11	5.0	
MIDLAND	869	917.0	1017.0	15.0	- 2.2	6.3	-1.4	22.8	6	- 8.9	23	0	27	- 5.6	50	5	- 12	4	3	0	T	T	2.1	24	17.4	29	21	15	4	12	4.7	
PORT ARTHUR	5	1020.0	1020.5	17.8	6.7	12.1	-0.6	24.4	6	- 2.2	24	0	2	7.2	74	70	- 60	38	9	2	0	0	0.9	9	18.8	NW	3	13	4	14	5.7	49
SAN ANGELO	580	950.2	1018.0	17.2	- 0.6	8.4	-0.3	24.4	29	- 8.9	23	0	19	- 1.7	55	T	- 22	T	0	0	0	0	2.7	23	17.9	30	27	13	8	10	4.7	
SAN ANTONIO	240	990.9	1019.5	17.2	3.3	10.4	-1.7	24.4	17	- 4.4	24	0	9	3.9	67	17	- 28	10	6	0	0	0	0.4	34	18.3	NW	21	10	6	15	5.6	58
VICTORIA	32	1015.6	1019.5	20.0	6.7	13.3	-0.7	28.3	27	- 1.1	24	0	6	7.2	72	24	- 42	13	7	1	0	0	0.9	9	21.9Y	N	3	8	5	18	6.7	
WACO	153	1001.4	1019.6	16.1	3.3	9.5	-0.7	23.3	12	- 5.6	31	0	7	2.2	64	11	- 58	6	4	0	0	0	1.5	19	15.6	29	27	11	6	14	5.5	
WICHITA FALLS	303	980.7	1018.1	13.3	- 1.1	6.1	-0.9	23.9	17	-12.8	31	0	22	- 1.7	65	18	- 19	9	3	2	T	0	1.3	21	22.8	26	18	10	5	16	5.9	
UTAH																																
MILFORD	1533	845.9		3.9	-11.1	- 3.8	-1.7	14.4	10	-30.6	22	0	31			21	3	7	11		295	127						6	5	20	7.0	
SALT LAKE CITY	1286	871.7	1019.4	2.2	- 7.8	- 2.9	-1.8	11.7	10	-16.7	31	0	29	- 7.2	71	58	26	20	13	1	846	229	1.5	18	18.3	NW	11	1	6	24	8.7	31
WENDOVER	1291	871.0	1020.2	0.6	- 7.8	- 3.4	-2.2	8.3	28	-16.7	22	0	31			5	- 2	2	6		64	25										
VERMONT																																
BURLINGTON	101	1000.0	1013.2	- 3.3	-12.2	- 7.8	-2.0	6.1	14+	-30.6	27	0	30	-12.8	68	79	25	24	16	0	726	508	1.1	28	17.0	S	13	4	4	23	8.1	33
VIRGINIA																																
LYNCHBURG	279			6.7	- 4.4	1.1	-2.5	17.8	28+	-13.9	11	0	27			45	- 35	17	9		T	T			17.9	SW	28	9	9	13	6.1	50
NORFOLK	7	1016.9	1018.0	10.0	0.6	5.2	-0.6	20.0	28	- 7.2	12	0	16	- 2.2	61	80	10	18	11	1	97	102	2.3	27	20.1	W	5	12	5	14	5.7	64
RICHMOND	50	1012.2	1018.4	8.3	- 2.8	2.8	-1.5	20.0	28	-11.1	11	0	24	- 4.4	61	58	- 18	18	10	0	71	76	1.5	27	17.9	SW	28	8	7	16	6.4	54
ROANOKE	350	975.3	1018.0	6.1	- 3.9	0.9	-2.6	17.2	2	-13.9	11	0	26	- 7.2	59	46	- 30	17	8	0	T	0	2.5	28	16.5	26	28+	9	10	12	6.0	
WALLOPS ISLAND	3			6.1	- 1.7	2.4		13.9	28	- 8.3	26+	0	20			97		28	9		43	25			24.1Y	NW	5					
WASHINGTON																																
OLYMPIA	59	1005.8	1013.1	5.0	- 1.1	2.0	-2.8	11.7	14	-14.4	30	0	16	0.0	85	253	23	35	26	0	544	229	1.8	21	11.2	22	9	2	2	27	9.0	
QUILLAYUTE	55	1003.7	1011.0	6.1	- 0.6	2.6	-2.5	10.6	23+	-11.1	29+	0	17	1.1	90	404	- 23	86	25	1	102	76	0.9	11	12.5	S	3	3	5	23	8.4	18
SEATTLE TACOMA	122	996.3	1012.9	5.0	0.0	2.6	-2.3	11.7	9	-14.4	30	0	10	- 0.6	81	217	57	47	24	1	561	254	2.0	14	14.8	SW	8+	2	2	27	9.0	19
SPOKANE	718	928.5	1014.8	- 1.1	- 7.2	- 4.1	-3.1	11.7	10	-31.7	30	0	27	- 7.2	79	74	13	15	18	0	503	279	1.3	18	22.4	SW	3	5	5	21	7.8	20
STAMPEDE PASS R	1206	872.7		- 4.4	- 8.9	- 6.7	-3.9	3.3	3	-29.4	30	0	31			414	3	75	30		2710	2464						0	4	27	9.3	

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No. of days: Max 32.2 °C or above	Temperature: No. of days: Min. 0 °C or lower	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No. of days: .25 mm. or more	Precipitation: No. of days: With thunderstorms	Snow, Sleet: Total	Snow, Sleet: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile (1.6 kilometers): Speed	Wind: Fastest mile: Direction	Wind: Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	No. of days: Partly cloudy, 4-7	No. of days: Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	M.	Mb.	Mb.	°C.	°C.	°C.	°C.	°C.		°C.				°C.	%	Mm.	Mm.	Mm.			Mm.	Mm.	M.p.s.		M.p.s.							%
WASHINGTON																																
WALLA WALLA U	289			4.4	- 2.8	0.7	-2.5	18.3	10	-25.0	30	0	19			96	49	26	19		556	406			13.4	S	10	1	4	26	9.1	09
YAKIMA	321	976.3	1016.1	2.2	- 6.1	- 2.0	-1.7	15.6	3	-23.3	30+	0	30	- 5.6	79	49	20	11	15	0	389	229	1.6	28	13.0	22	26+	3	6	22	8.3	
WEST INDIES																																
SAN JUAN P.R.	4	1013.2	1015.7	28.3	22.2	25.3	0.7	31.1	4	19.4	24	0	0	20.6	78	90	- 48	20	19	0	0	0	1.8	8	11.6	SE	28	2	23	6	5.9	54
SWAN ISLAND	9			28.3	23.9	25.9	0.0	29.4	31+	21.1	5	0	0			120	- 23	37	17		0	0						5	16	10	6.0	
WEST VIRGINIA																																
BECKLEY	763	926.9	1018.9	3.3	- 5.6	- 1.2	-2.3	14.4	19	-15.6	16	0	26	- 6.1	71	57	- 37	13	18	0	305	102	2.4	25	17.0	30	5	3	7	21	7.9	
CHARLESTON	286	983.4	1018.4	6.7	- 3.9	1.2	-1.6	17.2	28	-12.2	16+	0	23	- 5.0	66	60	- 22	24	18	0	119	51	2.2	24	13.4	25	29	2	8	21	8.0	
ELKINS	600	944.5		3.9	- 7.8	- 1.9	-2.4	16.1	28	-20.6	11	0	30			77	- 1	18	22		500	102			15.6	28	5	2	6	23	8.7	
HUNTINGTON	252	987.8	1019.0	6.1	- 3.9	1.0	-2.0	17.2	19	-12.8	16	0	24	- 5.0	66	56	- 15	14	16	1	64	25	2.1	23	13.0	24	28+	3	4	24	8.1	
PARKERSBURG U	187			5.6	- 3.3	1.0	-1.1	16.1	28	-12.2	16	0	23			53	- 19	14	12		53	51			18.3	SW	5					26
WISCONSIN																																
GREEN BAY	208	988.8	1015.6	- 1.7	-10.0	- 5.6	-0.1	11.1	12	-27.8	31	0	29	- 8.9	78	68	38	14	13	1	678	457	1.6	30	17.9	W	5	3	8	20	7.9	36
LA CROSSE	198	991.5	1017.0	- 2.8	-11.1	- 6.8	-1.2	13.9	12	-30.0	25	0	28	-10.0	75	57	28		13	2	676		1.0	30								
MADISON	262	983.1	1015.8	- 1.1	- 9.4	- 5.2	0.3	11.7	12	-25.0	31	0	28	- 8.3	78	73	40	31	13	0	290	178	1.4	27	16.1	SW	12	5	6	20	7.7	34
MILWAUKEE	205	989.5	1015.5	0.6	- 7.8	- 3.6	0.6	11.7	12	-23.9	31	0	27	- 7.2	76	67	26	21	13	0	295	178	2.4	26	18.3	SW	13	4	4	23	8.1	34
WYOMING																																
CASPER	1627	833.1	1016.6	- 1.1	-13.3	- 7.3	-4.7	11.1	11	-33.3	30	0	31	-12.2	67	18	6	9	9	0	417	178	5.1	23	19.7	22	28+	6	7	18	7.3	
CHEYENNE	1867	806.3	1014.4	4.4	- 8.9	- 2.2	-0.8	15.6	11+	-25.0	30	0	30	-13.9	43	7	- 4	5	4	0	140	127	4.9	29	29.1	W	3	5	14	12	6.6	47
LANDER	1696	824.2	1017.5	- 1.1	-15.0	- 8.1	-3.1	9.4	11+	-30.0	31	0	31	-14.4	65	18	7	8	4	0	312	254	0.6	23	14.8	NW	11	5	9	17	6.8	49
SHERIDAN	1208	875.7	1018.6	- 2.8	-15.0	- 9.0	-5.8	12.2	11+	-33.3	30	0	31	-12.8	73	25	9	6	14	0	389	152	1.8	29	15.6	NW	11	3	9	19	7.8	44

Data from airport unless otherwise specified. U indicates Urban, R indicates Rural, sites.

Precipitation data in column headed "Greatest in 24 hours" are computed on a 24-hour basis without regard to calendar day - data may include precipitation with a measurable amount from the last day of the previous month or the first day of the following month.

Wind directions under resultant direction are in tens of degrees.

Value entered in column "Fastest Mile" is the highest observed 1-minute wind speed when the direction is in tens of degrees. These stations are not equipped with a recording anemometer from which "Fastest Mile" data can be evaluated.

B Number of days maximum 21.1°C. or above for Alaskan Stations.
Y Peak Gust.
+ And also on an earlier date or dates.
Ø Station pressures apply to elevations shown in the "Elevations - Station Pressure" table of the annual issue of this publication.

Data in this table are obtained by conversion from data in the English Units table.

Z Sun continuously below horizon.

HEATING DEGREE DAYS

(Base 65°F.)

DECEMBER 1968

State and station	Current season		Normals
	This month	Period July through this month	July through this month
ALABAMA			
BIRMINGHAM	723	1306	1017
HUNTSVILLE	806	1403	1228
MOBILE	474	808	592
MONTGOMERY	594	1045	925
ALASKA			
ANCHORAGE	1816	4969	4789
ANNETTE	1038	2906	2981
BARROW	2422	8334	8511
BARTER ISLAND	2425	8326	8260
BETHEL	1986	5718	5667
COLD BAY	1053	4022	4236
FAIRBANKS	2567	6683	6435
JUNEAU	1405	4172	3903
KING SALMON	1908	5438	4952
KOTZEBUE	2171	6526	6654
MC GRATH	2490	6836	6386
NOME	2026	6162	6039
ST. PAUL ISLAND	1079	4663	4778
SHEMYA	973	4299	4255
YAKUTAT	1418	4610	3955
ARIZONA			
FLAGSTAFF	1234	3129	2813
PHOENIX	473	646	671
TUCSON	440	648	662
WINSLOW	1145	2113	1970
YUMA	403	470	467
ARKANSAS			
FORT SMITH	795	1464	1293
LITTLE ROCK	700	1239	1317
CALIFORNIA			
BAKERSFIELD	553	867	821
BISHOP	958	1781	1663
BLUE CANYON	988	2232	1896
EUREKA U	566	1967	2027
FRESNO	665	1137	975
LONG BEACH	335	474	496
LOS ANGELES	328	462	559
LOS ANGELES U	267	347	398
MT SHASTA R	1038	2519	2186
OAKLAND	497	1015	1065
RED BLUFF	661	1116	926
SACRAMENTO	662	1138	1033
SANDBERG R	870	1855	1403
SAN DIEGO	306	419	432
SAN FRANCISCO	525	1209	1130
SAN FRANCISCO U	462	1271	1205
SANTA MARIA	462	916	1095
STOCKTON	707	1173	1029
COLORADO			
ALAMOSA	1509	3765	3567
COLORADO SPRINGS	1096	2634	2479
DENVER	1114	2574	2414
GRAND JUNCTION	1302	2550	2242
PUEBLO	1052	2048	2116
CONNECTICUT			
BRIDGEPORT	1005	1806	1974
HARTFORD	1219	2392	2307
NEW HAVEN	1040	1974	2105
DELAWARE			
WILMINGTON	949	1693	1836
DIST.OF COLUMBIA			
WASH NATL AP	875	1482	1603
FLORIDA			
APALACHICOLA U	405	664	488
DAYTONA BEACH	301	480	286
FORT MYERS	157	232	133
JACKSONVILLE	346	576	466
KEY WEST	28	32	28
LAKELAND U	225	357	221
MIAMI	80	112	65
ORLANDO	237	376	270
PENSACOLA	465	811	567
TALLAHASSEE	462	843	586
TAMPA	264	429	231
WEST PALM BEACH	129	195	71
GEORGIA			
ATHENS	764	1343	1164
ATLANTA	760	1360	1185
AUGUSTA	659	1111	963
COLUMBUS	654	1140	963
MACON	648	1155	870
ROME	816	1517	1360
SAVANNAH	533	915	730
IDAHO			
BOISE	918	2162	2356
LEWISTON	1044	2323	2215
POCATELLO	1240	3175	2731

State and station	Current season		Normals
	This month	Period July through this month	July through this month
ILLINOIS			
CAIRO U	848	1542	1504
CHICAGO O HARE	1146	2326	2483
CHICAGO MIDWAY	1116	2192	2273
MOLINE	1247	2596	2398
PEORIA	1150	2339	2291
ROCKFORD	1224	2557	2587
SPRINGFIELD	1107	2197	2082
INDIANA			
EVANSVILLE	946	1822	1788
FORT WAYNE	1131	2349	2410
INDIANAPOLIS	1057	2133	2180
SOUTH BEND	1171	2374	2391
IOWA			
BURLINGTON	1209	2442	2318
DES MOINES	1351	2732	2539
DUBUQUE	1368	2884	2842
SIOUX CITY	1408	2773	2593
WATERLOO	1430	3041	2802
KANSAS			
CONCORDIA	1217	2306	2061
DODGE CITY	1127	2088	1889
GOODLAND	1249	2475	2351
TOPEKA	1108	2171	1979
WICHITA	1054	1996	1785
KENTUCKY			
COVINGTON	965	1893	2018
LEXINGTON	938	1811	1804
LOUISVILLE	903	1701	1801
LOUISIANA			
ALEXANDRIA	509	886	760
BATON ROUGE	437	811	616
LAKE CHARLES	391	674	570
NEW ORLEANS	435	793	533
SHREVEPORT	560	963	821
MAINE			
CARIBOU	1452	3502	3790
PORTLAND	1228	2608	2790
MARYLAND			
BALTIMORE	934	1636	1802
MASSACHUSETTS			
BLUE HILL OBS R	1172	2345	2286
BOSTON	1050	1983	1971
NANTUCKET	968	1929	1928
WORCESTER	1264	2587	2583
MICHIGAN			
ALPENA	1326	3029	3206
DETROIT	1123	2209	2273
DETROIT M WAYNE CO	1137	2326	2417
FLINT	1191	2648	2550
GRAND RAPIDS	1254	2649	2614
HOUGHTON LAKE	1353	3096	3154
LANSING	1218	2679	2573
MARQUETTE U	1262	2970	3111
MUSKEGON	1184	2542	2410
SAULT STE MARIE	1442	3451	3378
MINNESOTA			
DULUTH	1644	3777	3854
INTERNATIONAL FALLS	1778	4053	4207
MINNEAPOLIS	1486	3040	3215
ROCHESTER	1478	3217	3162
ST CLOUD	1627	3424	3414
MISSISSIPPI			
JACKSON	592	1054	851
MERIDIAN	619	1125	938
MISSOURI			
COLUMBIA	1051	2000	1923
KANSAS CITY	1090	2034	1776
ST JOSEPH	1094	2089	2098
ST LOUIS	1008	1957	1874
SPRINGFIELD	997	2004	1745
MONTANA			
BILLINGS	1394	2786	2726
GLASGOW	1706	3602	3526
GREAT FALLS	1511	3290	2972
HAVRE	1741	3720	3414
HELENA	1493	3482	3252
KALISPELL	1458	3761	3384
MILES CITY	1628	3239	2956
MISSOULA	1333	3385	3384
NEBRASKA			
GRAND ISLAND	1374	2654	2501
LINCOLN U	1263	2389	2174
NORFOLK	1432	2864	2624
NORTH PLATTE	1421	2945	2620
OMAHA	1268	2468	2346
SCOTTSBLUFF	1306	2835	2601
VALENTINE	1497	3062	2858

State and station	Current season		Normals
	This month	Period July through this month	July through this month
NEVADA			
ELKO	1137	2666	2950
ELY	1268	3204	3020
LAS VEGAS	743	1076	1082
RENO	1033	2466	2651
WINNEMUCCA	1087	2644	2747
NEW HAMPSHIRE			
CONCORD	1311	2877	2800
MT WASHINGTON OBS	1782	6002	5889
NEW JERSEY			
ATLANTIC CITY	1031	2037	1719
ATLANTIC CITY U	903	1574	1597
NEWARK	1003	1775	1842
TRENTON U	965	1750	1821
NEW MEXICO			
ALBUQUERQUE	1080	1962	1751
CLAYTON	969	2042	1980
ROSWELL	823	1623	1599
NEW YORK			
ALBANY	1281	2555	2568
BINGHAMTON	1279	2784	2753
BUFFALO	1180	2374	2570
NEW YORK U	944	1668	1705
J.F. KENNEDY	983	1752	1781
NEW YORK LA GUARDIA	969	1722	1665
ROCHESTER	1150	2347	2453
SYRACUSE	1163	2421	2478
NORTH CAROLINA			
ASHEVILLE	884	1767	1821
CAPE HATTERAS R	594	895	872
CHARLOTTE	811	1448	1259
GREENSBORO	848	1505	1516
RALEIGH	805	1352	1351
WILMINGTON	609	1024	886
NORTH DAKOTA			
BISMARCK	1658	3606	3407
FARGO	1736	3614	3534
WILLISTON	1769	3741	3571
OHIO			
AKRON	1067	2136	2282
CINCINNATI OBS	993	1911	1835
CLEVELAND	1080	2319	2262
COLUMBUS	1043	2112	2190
DAYTON	1062	2133	2135
MANSFIELD	1086	2169	2420
TOLEDO	1184	2430	2469
YOUNGSTOWN	1150	2404	2432
OKLAHOMA			
OKLAHOMA CITY	829	1542	1443
TULSA	864	1568	1485
OREGON			
ASTORIA	782	2242	2101
BURNS U	1129	3000	2754
EUGENE	738	1749	1867
MEACHAM	1245	3463	3085
MEDFORD	826	1764	1999
PENDLETON	977	2163	2056
PORTLAND	852	1974	1834
SALEM	860	2092	1840
SEXTON SUMMIT R	1045	2769	2316
PENNSYLVANIA			
ALLENTOWN	1091	2094	2181
ERIE	1063	2168	2295
HARRISBURG	1038	1929	2001
PHILADELPHIA	1008	1832	1936
PITTSBURGH	1152	2348	2278
PITTSBURGH U	1034	1968	2056
READING U	972	1767	1847
SCRANTON	1165	2332	2451
WILLIAMSPORT	1063	2128	2285
RHODE ISLAND			
BLOCK ISLAND	992	1871	1897
PROVIDENCE	1072	2116	2167
SOUTH CAROLINA			
CHARLESTON	564	978	812
CHARLESTON U	502	806	669
COLUMBIA	684	1144	1006
GNVLE-SPARTANBURG	801	1432	1213
SOUTH DAKOTA			
ABERDEEN	1580	3400	3261
HURON	1515	3190	3140
RAPID CITY	1438	2995	2749
SIOUX FALLS	1511	3118	3007
TENNESSEE			
BRISTOL	920	1778	1688
CHATTANOOGA	805	1427	1327
KNOXVILLE	859	1580	1415
MEMPHIS	716	1289	1293
NASHVILLE	825	1533	1415
OAK RIDGE R	878	1631	1534

State and station	Current season		Normals
	This month	Period July through this month	July through this month
TEXAS			
ABILENE	599	1028	1051
AMARILLO	865	1613	1590
AUSTIN	446	747	644
BROWNSVILLE	96	169	215
CORPUS CHRISTI	219	366	340
DALLAS	517	896	907
DEL RIO	419	644	643
EL PASO	728	1203	1146
FORT WORTH	540	935	925
GALVESTON U	283	429	408
HOUSTON	297	501	496
LUBBOCK	770	1496	1449
MIDLAND	665	1181	1060
PORT ARTHUR	343	570	558
SAN ANGELO	542	942	922
SAN ANTONIO	437	724	598
VICTORIA	287	481	426
WACO	484	800	769
WICHITA FALLS	676	1175	1112
UTAH			
MILFORD	1227	2677	2550
SALT LAKE CITY	1174	2585	2431
WENDOVER	1207	2579	2333
VERMONT			
BURLINGTON	1451	3165	3079
VIRGINIA			
LYNCHBURG	953	1718	1636
NORFOLK	726	1211	1242
RICHMOND	864	1428	1529
ROANOKE	963	1732	1654
WALLOPS ISLAND	883	1487	
WASHINGTON			
OLYMPIA	903	2407	2148
QUILLAYUTE	871	2537	2340
SEATTLE TACOMA	871	2106	2054
SPOKANE	1245	3056	2656
STAMPEDE PASS R	1389	4240	3844
WALLA WALLA U	975	2071	1921
YAKIMA	1130	2669	2473
WEST VIRGINIA			
BECKLEY	1078	2318	2158
CHARLESTON	946	1833	1773
ELKINS	1121	2403	2290
HUNTINGTON	960	1819	1761
PARKERSBURG U	958	1818	1835
WISCONSIN			
GREEN BAY	1327	2944	2993
LA CROSSE	1398	2832	2884
MADISON	1305	2897	2973
MILWAUKEE	1214	2552	2863
WYOMING			
CASPER	1426	3292	2849
CHEYENNE	1137	2885	2828
LANDER	1467	3378	3103
SHERIDAN	1519	3400	2962

Data from airport unless otherwise specified.
U indicates Urban, R indicates Rural, sites.

STORM SUMMARY

DECEMBER 1968

STATE	TORNADOES					HAILSTORMS				WINDSTORMS				LIGHTNING				‡ HEAVY SNOWSTORMS AND BLIZZARDS				# ICE STORMS				∅ ALL OTHER			
	NUMBER	DAYS	DEATHS	INJURIES	†DAMAGE	DEATHS	INJURIES	†DAMAGE PROP-ERTY	†DAMAGE CROPS	DEATHS	INJURIES	†DAMAGE PROP-ERTY	†DAMAGE CROPS	DEATHS	INJURIES	†DAMAGE PROP-ERTY	†DAMAGE CROPS	DEATHS	INJURIES	†DAMAGE PROP-ERTY	†DAMAGE CROPS	DEATHS	INJURIES	†DAMAGE PROP-ERTY	†DAMAGE CROPS	DEATHS	INJURIES	†DAMAGE PROP-ERTY	†DAMAGE CROPS
Alabama	1	1	0	2	5	0	0	2	0	0	0	5	0	0	0	4	0												
Alaska *																													
Arizona *																													
Arkansas										0	0	4	0																
California																		1	1	6	0					0	0	0	7
Colorado										0	0	°5	C																
Connecticut										0	0	4	0					0	0	4	0	0	0	4	0	0	0	4	0
Delaware										0	0	4	0																
Florida	1	1	0	0	3					0	0	4	0	1	0	1	0									0	0	W4	0
Georgia	2	2	0	0	4																								
Hawaii																										0	0	5	5
Idaho																		2		4									
Illinois *																													
Indiana										0	0	4	0																
Iowa										0	0	5	0	0	0	4	0	0	0	5	0	0	0	5	0	1	0	0	0
Kansas										0	0	4	0	0	0	4	0	0	0	4	0								
Kentucky *																													
Louisiana	1	1	0	0	4					0	0	5	0																
Maine										0	0	4	0					0	0	4	0	0	0	4	0	0	0	3	0
Maryland										2	0	5	0									0	0	5	0				
Massachusetts										0	0	4	0					0	0	4	0	0	0	6	0	0	0	4	0
Michigan																		0	0	4	0	0	?	6	0				
Minnesota																		2	3	5	?	0	?	5	0				
Mississippi	6	1	1	10	5					0	5	?	0	0	0	4	0									0	0	?	0
Missouri *																													
Montana																										1	?	0	0
Nebraska																		3	?	?	?								
Nevada *																													
New Hampshire										0	0	3	0					0	0	4	0	0	0	5	0	0	0	3	0
New Jersey										1		4																	
New Mexico *																													
New York										2	6	5												4					
North Carolina										0	0	5	0																
North Dakota																		1	1	8	0								
Ohio										0	1	4																	
Oklahoma	3	1	0	0	4					0	4	5	0	0	0	5	0												
Oregon										0	S	5	4					1	S	5	3	0	few	4	0	0	0	4	3
Pacific Area *																													
Pennsylvania										4	6	6	0	0	0	3	0												
Puerto Rico *																													
Rhode Island																						0	0	5	0	1	S	5	0
South Carolina	1	1	0	0	4																								
South Dakota																		1	0	5	0								
Tennessee										0	0	4	0																
Texas	16	4	0	0	6					0	3	5	0	0	0	?	0									0	0	4	0
Utah *																													
Vermont										0	0	3	0					0	0	4	0	0	0	5	0	0	0	3	0
U. S. Virgin Is.*																													
Virginia										0	1	4	0																
Washington												5								5									
West Virginia										0	0	4	0	0	0	5	0												
Wisconisn										0	0	5	0	1	0	0	0	2	0	6	0								
Wyoming *																													

° Includes crop damage
C Crop damage
W Waterspout
S Several

* No occurrence of storms or unusual weather phenomena.
‡ Includes heavy sleet storm.
\# Freezing drizzle and freezing rain, commonly known as glaze.
∅ For breakdown of "All Others", and for detailed listing of other storms, see the Environmental Data Service, ESSA, monthly publication STORM DATA.

† Storm damages are placed in categories varying from 1 to 9 as follows:
1 Less than $50
2 $50 to $500
3 $500 to $5,000
4 $5,000 to $50,000
5 $50,000 to $500,000
6 $500,000 to $5,000,000
7 $5,000,000 to $50,000,000
8 $50,000,000 to $500,000,000
9 $500,000,000 to $5,000,000,000

GENERAL SUMMARY OF RIVER AND FLOOD CONDITIONS
DECEMBER 1968

Elmer R. Nelson, Office of Hydrology

No significant damages resulted from the flooding in the United States during December. Flood heights were generally not excessive and overflows were mostly confined to low areas adjacent to the streams. The first major rise of the season occurred in the Pacific Slope Drainage. The most important flooding was in the coastal and northern Willamette streams in Oregon where the damages were estimated at $89,000.

ST. LAWRENCE DRAINAGE

Lake Erie.--Minor overflows occurred on the St. Marys and Maumee Rivers in Indiana and on the St. Joseph River at Montpelier, Ohio, between the 28th and 31st. No damage was reported from the flooding.

ATLANTIC SLOPE DRAINAGE

Slight overflow occurred on the Susquehanna River at Bainbridge, N. Y., on the 29th and 30th. This overflow was due to an ice jam. Light amounts of shore ice formed on the Susquehanna in Pennsylvania during the month. A moderate rise along the main stem on the 29th and 30th cleared out the major portion of the ice by the end of the month. The average monthly flow at Harrisburg, Pa., was 108% of normal. Snow cover at the end of the month was below normal.

The Lumber River at Lumberton, N. C., exceeded flood stage for the 3d consecutive month. The flooding was minor and no damages were reported. There were two crests, with the highest one (0.3 foot above flood stage) occurring on the 12-13th.

EAST GULF OF MEXICO DRAINAGE

Heavy rain (3 to 4 inches) on the 18th to the 22d caused flooding on the Pearl River at Jackson, Miss., and on the lower portion at Bogalusa and Pearl River, La. Flood heights were not excessive and flooding was confined to the immediate flood plain with only light damage to farms and cattle lands. The highest crest reported was 5.5 feet above flood stage at Jackson, Miss., on the 30th. Rainfall of near 1.5 inches between the 27th and 30th maintained above flood stage heights well into the next month.

MISSISSIPPI SYSTEM

Upper Mississippi Basin.--Heavy snowfall occurred in the Upper Mississippi Basin above Guttenberg, Iowa, during December. The total new snowfall ranged from 20 inches to near 40 inches with water content of 1.5 to 3.7 inches. Using Weather Bureau records dating back to 1890, record to near record December snowfall amounts were observed over most of Minnesota except the northwest. A few of the older records show that December 1968 compares with December 1887.

Navigation on the Mississippi River was closed at Minneapolis-St. Paul, Minn., on the 9th; at LaCrosse, Wis., on the 12th, and at Guttenberg, Iowa, on the 13th.

Moderate to locally heavy rains on the 26-27th produced flooding on the Salt River at New London, Mo., on the 29th, on the Bourbuese River at Union, Mo., on the 30th, and on the Meramec River from Sullivan, Mo., to Valley Park, Mo. The flooding was limited to farmland immediately adjacent to the rivers and no damage was reported.

Missouri Basin.--The Elkhorn River and tributaries were frozen and snow-covered by the end of the month. Precipitation during December was well above normal, ranging from 1 1/2 to 3 1/2 inches. Precipitation was mostly in the form of snow during the latter half of the month. A major winter storm during the weekend of the 21st-23d deposited 7 to 12 inches of snow. Total snow depths over the Elkhorn Basin ranged from 13 to 25 inches.

Substantial rises within a few feet of bankfull occurred in the Kansas River Basin on the Black Vermillion River at Frankfort, Kans., on the 19th and in the Marais des Cygnes River Basin on Pottawatomie Creek at Garnett, Kans., on the 27th. Stages reached about one-half to two-thirds bankfull on the Marais des Cygnes between the 20th and 29th. Variable ice conditions were prevalent during the latter part of the month in northeastern Kansas. Ice coverage of streams increased more rapidly at higher elevations. Reservoirs were ice-covered at the end of the month. Snow depths at the end of December ranged from 10 to 20 inches over much of the Nebraska portion of the Big Blue, Little Blue, and the Republican River drainages below Harlan County Reservoir southward into Jewell, Mitchell, and Smith Counties of north central Kansas. Elsewhere snow cover varied from 1 inch in east central Kansas to between 2 and 6 inches in the northwest and most of north central Kansas. Snow cover accumulated principally from snowfall of 2 to 8 inches on 18-19th, augmented by 5 to 10 inches on the 21st-22d. Snow depths up to 17 inches were reported at Burr Oak and Ionia, Kans., on the 22d. In Nebraska, snow depths of 24 inches at Aurora and 27 inches at David City were reported on the 27th.

Moderate to locally heavy rains on the 26th and 27th produced major rises and flooding in streams in the lower Missouri Basin. The Lamine River at Clifton City, Mo., was out of its banks on the 28th and 29th, cresting on the 28th, 5.4 feet above flood stage. The Blackwater River at Valley City, Mo., rose 5 feet out of its banks on the 27th and receded within its banks on the 28th. The Marmaton River at Nevada, Mo., was in light flood on the 28th-31st. The Little Osage River at Horton, Mo., rose 1 foot out of its banks on the 28th and receded within its banks on the 30th. Big Creek crested 2.5 feet above bankfull stage at Blairstown, Mo., on the 27th. Light flooding occurred on the South Grand River at Urich and Browningtion, Mo., on the 27th to the 30th. The Osage River at Schell City, Mo., crested 2.8 feet above flood stage on the 30th. It continued in flood from the 28th into January. The Gasconade River at Jerome, Mo., exceeded flood stage by 1.1 feet on the 29th and receded within its banks on the 30th. The flooding was limited to farmland adjacent to the rivers and no flood damage was reported.

Ohio Basin.--Moderate to heavy showers and thundershowers on the 27th and 28th caused French Creek at Meadville, Pa., to exceed flood stage by 1.1 feet on the 29th. It receded within its banks on the 30th. No damages were reported. Snowmelt and 1.0 to 2.5 inches of precipitation caused the main stem of the Allegheny to crest from one-half to three-quarters bankfull.

Minor flooding occurred on the Scioto River at Circleville Ohio, on the 29-30th. Farmland adjacent to the river was under water for a short period. There was some minor overflow of one or two secondary roads. This flooding was due to rainfall averaging a little more than 1.5 inches on the 26-27th.

Streams in the Wabash River basin in Indiana remained low during December until the rainfall on the 27-28th

caused rises to above flood stage at numerous points. The Wabash River rose rapidly to 1 to 2 feet above flood stage from Lafayette downstream to Montezuma, Ind. The rises on the White River ranged from barely above flood stage at Anderson, Ind., to 2 to 3 feet above flood stage from Spencer downstream to Edwardsport, Ind. Although bottomland overflowed, damage was insignificant since virtually all crops were harvested.

Generally, heavy rains, averaging over 2 inches, over southeastern Illinois on the 26-28th caused minor overflow on the Saline, Little Wabash, and Skillet Fork Rivers. No damage resulted from the overflow.

White Basin.--Two periods of heavy rains during the last 10 days of the month caused light to moderate flooding on streams in the White Basin. The Black River at Black Rock, Ark., rose above flood stage on the 22d and crested on the 23d nearly 4 feet above flood stage. It receded within its banks on the 25th. The Black River rose above flood stage again on the 27th and crested 9 feet above flood stage on the 29th. It continued in flood into January. The Cache River at Patterson, Ark., rose above flood stage on the 23d for the second time during December. The first crest on the 5th was 1.6 feet above flood stage. It was out of its banks from Nov. 30 to Dec. 16 and again from Dec. 23 into January.

Following 3- to 4-inch rains on the 21st and 22d, the White River at Batesville, Ark., rose 9.5 feet in about 30 hours, cresting 1.5 feet above flood stage on the 23d. Additional rains of 3 to 4 inches on the 27th and 28th brought sharp rises, with flooding beginning in the reach from Batesville to Georgetown, Ark., and Clarendon, Ark., on the 27-30th. The White River at Batesville, Ark., rose 16 feet in 24 hours, cresting 6.4 feet above flood stage on the 28th. The crest at Newport, Ark., on the 30th was 1.7 feet above flood stage. The lower White at Augusta, Ark., and below was still rising at the end of December. Damages were mostly to crops, pastureland, roads, and bridges.

Arkansas Basin.--The Illinois River at Tahlequah, Okla., exceeded flood stage on the 28-30th. The crest on the 29th was 5 feet above flood stage. This was the 6th time during 1968 that the Illinois River had exceeded flood stage.

The Fourche Maline River at Red Oak, Okla., was out of its banks on the 27-28th. It crested on the 28th, 1.7 feet above flood stage. This was the third time during 1968 that the Fourche Maline River had exceeded flood stage.

There were two rises to above flood stage on the Poteau River in Oklahoma and on the Petit Jean and Fourche La Fave Rivers in Arkansas during December. The first overflow was due to heavy showers on the 21st-22d and the second overflow to heavy rain on the 27-28th. The Poteau River at Panama, Okla., crested 3 feet above flood stage on the 23d and 8.6 feet above flood stage on the 28th. This was the 7th rise that exceeded flood stage at Panama during 1968. The Poteau River at Poteau, Okla., crested nearly 4 feet above flood stage on the 28th. This was the 3d time during the year that it had crested above flood stage at Poteau. The Petit Jean River at Danville, Ark., crested 1.6 feet above flood stage on the 23d and 2.6 feet above flood stage on the 28th. This was the 3d time during the year that it had crested above flood stage at Poteau. The Petit Jean River at Danville, Ark., crested 1.6 feet above flood stage on the 23d and 2.6 feet above flood stage on the 28th. The Fourche La Fave River at Houston, Ark., crested 1.1 feet above flood stage on the 23d and 1.7 feet above flood stage on the 29th.

Red Basin.--Minor flooding occurred in the headwaters of the Sulphur River in northeast Texas during the latter part of November and the first part of December. There were three periods of overflow at Hagansport, Tex., namely Nov. 27 to Dec. 4; Dec. 21 to 25 and Dec. 28 to 29. The highest crest was 7.2 feet above flood stage on Dec. 22. At Naples, Tex., the Sulphur exceeded flood stage on Dec 2-10 and on Dec. 25 to Jan. 2. The crests on the 4th and 27th were nearly 3 feet above flood stage.

Lower Mississippi Basin.--Heavy rains (2.75 inches) on the 26-28th caused sharp rises on the St. Francis River to above flood stage at St. Francis, Ark., on the 28th and at Fisk, Mo., on the 30th. The crest at St. Francis, Ark., on the 30th was 1.7 feet above flood stage. The flooding continued into January.

Minor flooding occurred on the Tallahatchie River at Swan Lake, Miss., on the 2d-9th. Heavy rain on Dec. 1 plus high flow from the Coldwater River caused the river to rise above flood stage. Damages from the flooding were light.

Sharp rises to above flood stage occurred on the Big Black River at Pickens, Miss., on the 22d from 1 to 3 inches of rain. The crest on the 23d was 1.7 feet above flood stage. It continued in flood until the 25th. At Bovina, Miss., the river remained just below flood stage until the 31st, when approximately 1 inch of rain occurred and caused light flooding.

WEST GULF OF MEXICO DRAINAGE

The upper Calcasieu River at Hineston, La., was in light flood from Nov. 30 to Dec. 7. It crested on the 3d, 1.9 feet above flood stage. The lower Sabine River at Deweyville, Tex., remained above flood stage from the 12th to the 31st.

The San Jacinto exceeded the spillway elevation at Lake Houston Tex., throughout the entire month. The crest was 45.3 feet, 0.8 foot above the spillway on the 3d. No damage resulted from this overflow.

PACIFIC SLOPE DRAINAGE

The first major rise of the season occurred on the Sacramento River in California about midmonth with overflow at Tisdale and Colusa Weirs. The flooding of the bypass system below Colusa and Tisdale Weirs caused minor inconvenience to agricultural interests.

Heavy rain beginning on the afternoon of the 22d caused the Eel River at Fernbridge, Calif., to rise 3.6 feet above flood stage on the 24th. The precipitation averaged 10 inches in 3 days. Richardson Grove Redwood State Park on the Eel River reported 12 inches. Runoff began almost immediately and streams rose rapidly. Van Duzen River near Bridgeville, Calif., reached but did not exceed flood stage. Lower fields were flooded but farm machinery and cattle worth millions of dollars had been moved to higher ground. There was some deposit of silt but deposit of debris was at a minimum as the river channel had been pretty well cleared by high water early this season. No damage of consequence resulted from the flooding.

There were three periods of flooding on the South Fork Coquille River at Myrtle Point, Oreg., during December. The first and largest rise occurred on the 10th through the 12th. The crest on the 10th was 4.2 feet above flood stage. The second rise on the 16th was minor with flood stage exceeded by 0.2 foot. The third rise on the 24-26th approximated the first rise on the 10-12th. The crest on the 24th was 2 feet above flood stage. A tributary feeding the South Co-

quille River flooded and caused some damage to timber. No significant damage resulted from the flooding.

Columbia Basin.--Heavy precipitation on the 4th and 5th caused flooding on coastal and northern Willamette streams in Oregon on the 4-6th. The total storm precipitation expressed in percent of mean annual amounts was as follows: Coast Range stations, 5% in the north to 8% in the south; Valley locations, 7%; southern Cascade Range stations, 1.5%, and middle and northern Cascade stations, 5%. The Santiam River at Jefferson, Oreg., crested 0.1 foot above flood stage on the 5th and the Luckiamute River at Suver, Oreg., 0.3 foot above flood stage on the same date. The South Yamhill River at Whiteson, Oreg., rose 1.2 feet above flood stage on the 5th and receded within its banks on the 6th. The Pudding River at Aurora, Oreg., crested 2.6 feet above flood stage on the 6th. It was out of its banks from the 5th to the 9th. The Johnson Creek at Sycamore, Oreg., rose 1.1 feet above flood stage on the 4th and receded within its banks on the 5th.

A second storm on the 10-12th caused additional flooding on coastal and northern Willamette streams. Some of the more sluggish Coast Range Willamette tributary streams had barely dropped below flood stage or were still rising slowly as the second storm surge began moving across northwest Oregon. The total storm precipitation expressed in percent of mean annual values were as follows: Coast Range stations, 6% in the north to 8% in the south; Valley locations, 6% at Portland, Oreg., to 10.5% at Eugene, Oreg.; Cascade Range stations, 5% in the north to 1.5% in the south. Since lighter amounts were recorded in the Cascade Range basins and freezing levels were somewhat lower, runoff was lighter and reservoirs controlled tributary flows to below bankfull levels at all locations. All Coast Range tributaries exceeded flood stage and crested 1 to 2 feet higher than during the first rise. Crests on the main stem Willamette were generally 2 to 4 feet below bankfull stage during both of these rises. The Corps of Engineers estimated damages from these two rises at $89,000.

Snohomish Basin.--The Snohomish River at Snohomish, Wash., exceeded flood stage briefly on the 4th. The high water was due to snowmelt and heavy rain averaging about 4 inches in 4 days. Flood damage was negligible.

FLOOD STAGE DATA

(All dates in December unless otherwise specified)

River and station	Flood stage	Above flood stages -dates		Crest *	
		From–	To–	Stage	Date
	Ft.			Ft.	
ST. LAWRENCE DRAINAGE					
Lake Erie					
St. Marys: Decatur, Ind.	15	29	30	15.6	30
St. Joseph: Montpelier, Ohio	10	28	31	13.7	31
Maumee: Fort Wayne, Ind.	15	28	31	17.2	29
ATLANTIC SLOPE DRAINAGE					
Lumber: Lumberton, N. C.	8	7 24	18 25	8.3 8.05	12-13 25
EAST GULF OF MEXICO DRAINAGE					
Pearl: Jackson, Miss.	18	24	1/	23.5	30
Bogalusa, La.	15	23	1/	18.2	25
Pearl River, La.	12	26	30	13.6	27
MISSISSIPPI SYSTEM					
Upper Mississippi Basin					
Salt: New London, Mo.	19	29	29	19.3	29
Bourbuese: Union, Mo.	15	30	30	16.6	30
Meramec: Sullivan, Mo.	15	29	29	16.6	29
Pacific, Mo.	11	29	1/	17.8	31
Eureka, Mo.	16	30	1/		
Valley Park, Mo.	16	30	31	17.0	31
Missouri Basin					
Lamine: Clifton City, Mo.	19	28	29	24.4	28
Blackwater: Valley City, Mo.	22	27	28	27.0	28
Marmaton: Nevada, Mo.	22	28	31	24.5	29
Little Osage: Horton, Mo.	23	28	30	24.0	28
Big Creek: Blairstown, Mo.	20	27	29	22.5	27
South Grand: Urich, Mo.	22	27	28	23.8	28
Brownington, Mo.	19	28	30	20.0	30
Osage: Schell City, Mo.	25	Nov. 18 28	Nov. 19 1/	25.5 27.8	Nov. 18 30
Gasconade: Jerome, Mo.	15	29	30	16.1	29
Ohio Basin					
French Creek: Meadville, Pa.	13	29	30	14.1	29
Scioto: Circleville, Ohio	14	29	30	15.05	30
Muscatatuck: Austin, Ind.	16	28	30	20.0	29
White: Anderson, Ind.	10	29	29	10.6	29
Spencer, Ind.	14	29	1/	16.3	30
Elliston, Ind.	18	29	1/	21.2	31
Edwardsport, Ind.	15	30	1/	16.8	31
Petersburg, Ind.	16	31	1/		
Skillet Fork: Wayne City, Ill.	15	31	31	15.1	31
Little Wabash: Wilcox, Ill.	16	30	31	18.55	30
Wabash: Lafayette, Ind.	11	29	1/	14.3	29
Covington, Ind.	16	29	1/	E16.5	30
Montezuma, Ind.	14	30	1/	#15.1	31
Saline: Harrisburg, Ill.	13	28	31	19.35	29
White Basin					
Black: Pocahontas, Ark.	17	29	1/		
Black Rock, Ark.	14	22 27	25 1/	17.8 23.0	23 29

River and station	Flood stage	Above flood stages -dates		Crest *	
		From–	To–	Stage	Date
MISSISSIPPI SYSTEM	Ft.			Ft.	
Cache: Patterson, Ark.	7	Nov. 30 23	16 1/	8.6	5
White: Batesville, Ark.	23	22 27	22 1/	24.5 29.4	22 28
Newport, Ark.	26	29	1/	27.7	30
Augusta, Ark.	32	30	1/		
Georgetown, Ark.	21	28	1/		
Clarendon, Ark.	26	27	1/		
Arkansas Basin					
Illinois: Tahlequah, Okla.	11	28	30	16.0	29
Fourche Maline: Red Oak, Okla.	15	27	28	16.7	28
Poteau: Panama, Okla.	24	22 27	23 30	26.9 32.6	23 28
Poteau, Okla.	24	27	28	27.85	28
Petit Jean: Danville, Ark.	20	22 28	23 29	21.6 22.6	23 28
Fourche LaFave: Houston, Ark.	25	23 28	24 30	26.1 26.65	23 29
Red Basin					
Sulphur: Hagansport, Tex.	38	Nov. 27 21 28	4 25 29	44.7 45.2 39.8	1 22 28
Naples, Tex.	22	2 25	10 Jan. 2	25.9 25.8	4 27
Lower Mississippi Basin					
St. Francis: St. Francis, Ark.	18	28	1/	19.7	30
Fisk, Mo.	20	30	1/		
Tallahatchie: Swan Lake, Miss.	26	2	9	26.8	4
Big Black: Pickens, Miss.	16	22	25	17.7	23
Bovina, Miss.	28	31	31	28.3	31
WEST GULF OF MEXICO DRAINAGE					
Calcasieu: Hineston, La.	12	Nov. 30	7	13.9	3
Sabine: Deweyville, Tex.	14	12	31	14.4	24,25
San Jacinto: Lake Houston, Tex.	44.5	1	31	45.3	3
PACIFIC SLOPE DRAINAGE					
Eel: Fernbridge, Calif.	17			20.6	24
South Fork Coquille: Myrtle Point, Oreg.	35	10 16 24	12 16 26	39.2 35.2 37.0	10 16 24
Columbia Basin					
Marys: Philomath, Oreg.	20	10	11	20.3	10
Santiam: Jefferson, Oreg.	15	5	5	15.1	5
Luckiamute: Suver, Oreg.	27	5 10	5 12	27.3 27.[illegible]	5 11
South Yamhill: Whiteson, Oreg.	38	5 10	6 13	39.2 41.0	5 12
Pudding: Aurora, Oreg.	20	5 10	9 18	22.8 23.6	6 11
Tualatin: Farmington, Oreg.	29	10	18	31.7	12
Johnson Creek: Sycamore, Oreg.	8	4	5	9.1	4
Snohomish Basin					
Snohomish: Snohomish, Wash.	25	4	4	26.0	4

* Provisional
1/ Continued at end of month
Highest stage observed
E Estimated

RAWINSONDE DATA

Average monthly values

ALBANY, N. Y. — 1005 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	86	-6.1	-10.5	26	2.8
1000	31	119			27	3.2
950	31	518	-6.5	-10.9	27	5.2
900	31	943	-7.4	-11.8	28	8.3
850	31	1,388	-8.0	-13.7	29	10.9
800	31	1,859	-8.7	-15.2	29	12.3
750	31	2,356	-9.8	-17.6	29	12.3
700	31	2,890	-11.3	-19.8	28	14.9
650	31	3,454	-13.4	-21.9	28	17.4
600	31	4,063	-16.3	-25.8	28	18.5
550	31	4,707	-20.6	-29.9	28	20.3
500	31	5,414	-24.8	-32.2	28	22.7
450	31	6,167	-29.5	-37.0	28	23.3
400	31	7,005	-35.3	-40.9	27	25.8
350	31	7,924	-41.2	-43.7	27	27.9
300	31	8,959	-46.2		28	31.0
250	31	10,158	-51.1		28	30.3
200	31	11,597	-54.8		28	29.1
175	31	12,451	-54.8		27	27.3
150	31	13,436	-55.4		27	24.3
125	30	14,593	-56.6		27	19.8
100	28	16,001	-58.6		26	19.6
80	28	17,401	-59.1		27	16.3
70	28	18,235	-59.9		27	11.5
60	28	19,197	-60.1		27	8.7
50	28	20,332	-60.5		28	8.7
40	26	21,719	-59.9		28	7.5
30	26	23,515	-59.3		29	6.6
25	24	24,659	-57.7		29	5.4
20	23	26,069	-56.9		30	5.6
15	19	27,929	-54.8		29	6.7
10	14	30,519	-52.5		29	10.5
7						

ALBUQUERQUE, N. MEX. — 838 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1,619	-4.8	-9.7	04	.5
1000	31	206				
950	31	616				
900	31	1,049				
850	31	1,507				
800	31	1,989	-.7	-16.1	27	3.2
750	31	2,503	-2.2	-17.1	28	7.0
700	31	3,050	-4.4	-19.1	29	10.8
650	31	3,632	-7.0	-21.4	28	14.2
600	31	4,254	-10.0	-24.7	28	15.7
550	31	4,913	-13.8	-28.2	28	18.0
500	31	5,639	-18.7	-32.6	28	21.1
450	31	6,409	-24.1	-37.3	27	22.4
400	31	7,268	-29.9	-43.0	27	23.2
350	31	8,207	-36.7	-47.4	27	23.9
300	31	9,258	-44.2		26	26.1
250	31	10,460	-52.1		26	28.1
200	31	11,883	-58.0		26	28.9
175	30	12,717	-59.6		26	29.5
150	30	13,681	-60.3		27	27.8
125	30	14,810	-63.1		27	25.4
100	30	16,174	-65.6		27	22.9
80	28	17,534	-65.4		27	16.4
70	28	18,346	-65.3		28	11.2
60	28	19,286	-65.2		27	8.8
50	28	20,400	-63.9		26	7.8
40	27	21,773	-61.7		28	7.0
30	26	23,561	-60.2		27	6.5
25	23	24,703	-59.1		28	6.7
20	22	26,106	-57.0		29	6.7
15	17	27,943	-54.4		27	7.9
10	8	30,557	-52.4			
7						

AMARILLO, TEXAS — 890 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1,095	-3.0	-9.6	26	2.1
1000	31	155				
950	31	571				
900	31	1,007				
850	31	1,459	2.7	-9.1	28	5.1
800	31	1,951	3.3	-11.1	28	8.0
750	31	2,471	1.6	-14.3	27	10.5
700	31	3,026	-1.3	-17.1	26	11.8
650	31	3,611	-4.9	-20.5	27	13.9
600	31	4,239	-8.7	-23.6	27	17.3
550	31	4,903	-13.0	-27.3	27	19.8
500	31	5,629	-17.8	-30.4	27	22.2
450	31	6,400	-23.5	-34.2	27	24.3
400	31	7,261	-29.6	-40.0	26	27.6
350	31	8,201	-36.3	-44.6	26	30.4
300	31	9,254	-44.1		26	32.7
250	31	10,455	-52.1		26	36.4
200	31	11,877	-58.6		27	36.0
175	30	12,718	-60.4		27	34.9
150	30	13,677	-61.3		27	31.7
125	30	14,802	-63.7		27	30.2
100	30	16,161	-66.2		27	25.4
80	30	17,512	-66.6		27	20.4
70	30	18,321	-65.7		27	16.3
60	30	19,260	-64.9		27	11.2
50	28	20,375	-63.9		27	8.1
40	28	21,748	-62.1		27	6.4
30	26	23,534	-60.2		27	5.8
25	26	24,674	-58.9		27	8.4
20	24	26,079	-57.3		28	7.7
15	20	27,897	-55.2		28	8.2
10	11	30,484	-52.3			
7						

* ANCHORAGE, ALASKA — 1006 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	45	-14.6	-19.5	01	1.5
1000	31	87			02	2.4
950	31	484	-9.1	-15.9	02	3.8
900	31	901	-7.8	-16.0	04	2.0
850	31	1,346	-7.7	-17.6	05	2.0
800	31	1,816	-9.5	-19.3	01	.6
750	31	2,312	-11.9	-22.3	25	.8
700	31	2,838	-15.1	-25.6	27	1.3
650	31	3,391	-19.0	-28.4	30	2.8
600	31	3,985	-23.1	-31.5	29	3.6
550	31	4,613	-27.5	-35.7	28	4.3
500	31	5,296	-32.4	-38.5	27	5.3
450	31	6,025	-37.8	-40.1	27	5.9
400	31	6,834	-43.3	-44.0	28	7.3
350	31	7,723	-48.3		28	9.1
300	31	8,730	-51.8		29	11.2
250	31	9,906	-53.6		29	11.5
200	31	11,343	-52.6		29	10.9
175	30	12,222	-51.0		29	11.1
150	30	13,227	-50.5		29	11.4
125	30	14,416	-50.4		29	11.1
100	30	15,871	-50.7		28	9.9
80	30	17,324	-50.7		28	9.2
70	30	18,194	-50.4		28	7.9
60	30	19,200	-50.5		28	6.1
50	30	20,387	-50.9		29	5.3
40	30	21,836	-51.7		29	4.5
30	28	23,704	-52.3		31	2.9
25	28	24,883	-51.6		32	2.5
20	27	26,334	-49.7		03	3.1
15	26	28,223	-48.2		04	4.1
10	19	30,902	-47.1		04	6.6
7	7	33,240	-45.9			

* ANNETTE, ALASKA — 1006 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	37	-.9	-5.8	08	1.8
1000	31	78			07	1.9
950	31	481	-3.7	-10.1	10	3.6
900	31	911	-6.3	-12.3	12	4.7
850	31	1,357	-8.9	-14.3	14	4.5
800	31	1,825	-10.9	-16.6	16	3.2
750	31	2,317	-13.4	-20.0	19	2.1
700	31	2,841	-16.3	-23.4	22	2.0
650	31	3,394	-19.8	-27.0	23	2.7
600	31	3,986	-23.4	-31.5	25	3.6
550	31	4,615	-27.3	-36.0	26	5.7
500	31	5,299	-31.6	-40.4	25	8.2
450	31	6,037	-36.5	-43.0	25	11.4
400	31	6,847	-41.5	-46.3	25	12.7
350	31	7,743	-46.4		26	15.7
300	31	8,756	-50.9		27	13.9
250	31	9,937	-52.1		28	14.6
200	30	11,384	-51.0		29	12.0
175	30	12,253	-51.0		29	11.6
150	30	13,254	-51.7		30	11.9
125	30	14,437	-51.6		29	10.0
100	30	15,882	-52.2		30	8.8
80	30	17,324	-52.6		29	8.0
70	30	18,185	-53.4		30	7.2
60	30	19,176	-54.1		31	6.7
50	30	20,344	-54.5		31	3.9
40	30	21,773	-54.5		32	3.5
30	28	23,613	-54.3		02	3.7
25	28	24,782	-54.0		04	6.4
20	27	26,216	-53.5		05	8.8
15	26	28,064	-53.3		06	11.6
10	18	30,676	-52.4		05	15.9
7	10	33,004	-51.2			

ATHENS, GEORGIA — 990 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	246	.8	-3.7	30	1.5
1000	30	168				
950	30	584	3.5	-5.5	28	4.2
900	30	1,022	3.8	-7.9	28	6.8
850	30	1,486	3.7	-10.4	27	10.4
800	30	1,978	2.6	-11.6	27	13.6
750	30	2,496	1.2	-12.4	27	16.3
700	30	3,052	-1.1	-13.5	27	19.3
650	30	3,637	-3.8	-16.5	27	21.4
600	30	4,270	-7.4	-19.6	27	24.0
550	30	4,938	-11.6	-24.1	27	26.3
500	30	5,669	-16.0	-27.8	27	29.8
450	30	6,451	-21.1	-31.6	27	32.5
400	30	7,317	-26.7	-37.8	26	36.1
350	30	8,269	-33.4	-43.2	26	38.3
300	30	9,335	-41.3	-45.7	27	41.3
250	30	10,548	-50.7		26	42.8
200	30	11,974	-58.5		27	44.7
175	29	12,812	-61.1		27	45.1
150	29	13,765	-63.2		27	42.6
125	28	14,873	-65.0		27	38.0
100	28	16,226	-67.4		27	30.4
80	28	17,568	-67.8		27	22.9
70	27	18,374	-67.7		27	17.6
60	27	19,304	-66.2		28	13.1
50	26	20,417	-63.9		27	10.9
40	25	21,795	-61.9		28	9.2
30	25	23,584	-59.3		28	9.9
25	25	24,730	-57.4		28	9.5
20	25	26,146	-55.2		28	9.0
15	24	27,992	-51.8		27	14.0
10	23	30,654	-45.3		27	22.4
7	10	33,064	-40.4			

* BARROW, ALASKA — 1018 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	8	-24.2	-27.0	21	.8
1000	29	135			20	1.6
950	29	519	-19.7	-23.7	24	2.1
900	29	918	-18.3	-23.4	24	3.0
850	29	1,344	-18.7	-23.4	25	3.9
800	29	1,796	-19.6	-24.8	25	4.5
750	29	2,276	-21.2	-25.7	26	5.2
700	29	2,781	-23.2	-28.0	26	5.8
650	29	3,320	-25.6	-31.7	26	7.0
600	29	3,898	-28.9	-34.7	26	7.3
550	29	4,516	-32.6	-37.6	25	8.1
500	29	5,182	-36.8	-39.4	26	9.1
450	29	5,904	-41.4	-40.2	25	9.6
400	29	6,697	-46.3		26	10.3
350	29	7,575	-50.8		27	11.5
300	29	8,571	-54.1		26	13.3
250	29	9,738	-54.6		26	12.7
200	29	11,170	-53.0		26	11.5
175	29	12,033	-52.0		25	11.0
150	29	13,033	-51.3		26	11.4
125	28	14,209	-50.6		26	11.5
100	28	15,662	-50.6		25	11.4
80	27	17,122	-50.7		25	13.0
70	27	17,991	-50.7		25	13.5
60	27	18,994	-50.7		25	13.9
50	25	20,190	-50.9		25	14.9
40	21	21,656	-50.7		25	13.3
30	18	23,531	-50.4		26	13.2
25	12	24,767	-52.1		26	12.6
20	8	26,213	-53.8			
15						
10						
7						

BARTER IS., ALASKA — 1018 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	15	-24.6	-29.6	25	3.3
1000	30	146			27	5.4
950	30	528	-18.7	-23.3	28	5.5
900	30	930	-17.7	-22.6	27	4.8
850	30	1,358	-17.8	-22.4	27	3.8
800	30	1,811	-18.8	-23.8	28	3.7
750	30	2,290	-20.3	-25.7	29	4.2
700	30	2,800	-22.3	-27.6	28	4.4
650	30	3,339	-24.9	-30.3	29	5.1
600	30	3,920	-28.1	-33.7	29	5.9
550	30	4,535	-32.0	-36.2	29	7.3
500	30	5,207	-36.4	-39.6	28	7.4
450	30	5,925	-41.5	-43.5	28	7.6
400	30	6,722	-46.3	-46.8	28	8.8
350	30	7,601	-50.7		28	9.4
300	30	8,597	-54.0		28	9.5
250	30	9,766	-54.0		28	9.5
200	30	11,206	-51.8		28	9.5
175	30	12,073	-51.0		28	9.9
150	30	13,077	-50.3		28	9.4
125	30	14,269	-49.6		27	8.7
100	30	15,730	-49.3		27	9.9
80	30	17,192	-49.3		27	8.1
70	30	18,068	-48.9		28	9.3
60	30	19,080	-48.8		27	9.3
50	30	20,278	-49.1		27	9.7
40	29	21,746	-49.6		27	10.1
30	27	23,629	-49.7		27	9.9
25	26	24,820	-49.5		29	10.9
20	19	26,257	-52.0		30	12.0
15	13	28,129	-50.8			
10	5	30,845	-46.1			
7						

BETHEL, ALASKA — 1010 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	39	-16.9	-19.0	02	2.3
1000	31	114			03	6.0
950	31	509	-10.4	-16.9	04	5.1
900	31	924	-9.7	-17.3	02	2.2
850	31	1,365	-10.3	-19.4	35	1.9
800	31	1,831	-11.6	-22.2	32	2.6
750	31	2,321	-13.9	-24.1	31	3.0
700	31	2,845	-16.3	-26.4	30	5.0
650	31	3,397	-19.3	-28.7	29	5.7
600	31	3,992	-22.8	-31.6	29	6.5
550	31	4,621	-26.7	-34.6	27	7.4
500	31	5,307	-31.1	-37.1	28	6.9
450	31	6,043	-36.0	-39.4	25	8.5
400	31	6,857	-41.3	-42.7	25	10.7
350	31	7,753	-46.6		26	11.9
300	31	8,765	-51.6		27	11.5
250	31	9,937	-55.2		27	12.7
200	30	11,352	-53.9		26	14.6
175	29	12,207	-51.9		26	13.5
150	29	13,208	-51.0		26	13.3
125	29	14,393	-51.4		26	13.3
100	29	15,841	-51.7		25	10.7
80	29	17,288	-51.3		26	8.8
70	29	18,155	-50.9		25	8.8
60	29	19,160	-50.9		24	7.1
50	29	20,345	-51.4		24	7.0
40	29	21,795	-51.7		23	6.1
30	27	23,666	-52.2		22	3.7
25	27	24,849	-51.2		19	1.9
20	26	26,304	-49.9		13	2.5
15	22	28,198	-46.9		09	3.8
10	6	30,882	-48.5			
7						

* BISMARCK, N. DAK. — 957 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	505	-12.2	-16.5	35	2.1
1000	31	165				
950	31	556			34	1.8
900	31	972	-10.9	-15.0	34	2.8
850	31	1,413	-9.5	-15.2	33	2.4
800	31	1,882	-9.1	-15.9	32	4.2
750	31	2,380	-10.5	-16.5	31	5.7
700	31	2,910	-12.5	-18.9	30	6.5
650	31	3,472	-15.2	-22.3	30	8.4
600	31	4,074	-18.8	-24.7	30	9.8
550	31	4,713	-22.7	-30.1	30	10.9
500	31	5,411	-27.2	-33.8	29	12.4
450	31	6,157	-32.7	-37.6	29	14.1
400	31	6,982	-38.4	-41.2	29	16.7
350	31	7,890	-44.2	-44.2	29	19.6
300	31	8,911	-50.0		28	21.6
250	31	10,088	-55.1		28	24.7
200	31	11,509	-55.8		28	24.2
175	31	12,361	-55.1		28	20.9
150	29	13,348	-54.3		28	18.6
125	28	14,508	-55.2		28	16.7
100	28	15,931	-55.6		28	14.9
80	27	17,346	-57.7		28	12.7
70	27	18,186	-58.5		29	11.0
60	27	19,154	-59.0		29	9.4
50	27	20,297	-59.2		30	7.0
40	26	21,700	-58.7		31	4.4
30	26	23,509	-57.9		33	3.7
25	25	24,667	-57.3		01	3.9
20	22	26,074	-57.0		02	4.5
15	18	27,933	-56.2		04	4.3
10	11	30,535	-55.5			
7	7	32,795	-58.2			

BOISE, IDAHO — 916 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	867	.3	-4.3	14	2.6
1000	31	153				
950	31	568				
900	31	1,004	.7	-5.9	14	3.2
850	31	1,463	-1.4	-7.8	20	2.5
800	31	1,944	-4.1	-8.9	25	5.6
750	31	2,451	-7.2	-11.0	27	8.7
700	31	2,986	-10.0	-14.7	27	10.1
650	31	3,555	-13.3	-17.6	27	11.3
600	31	4,160	-17.0	-23.0	27	13.9
550	31	4,807	-21.0	-27.2	27	16.4
500	31	5,507	-25.1	-32.4	27	17.9
450	31	6,262	-30.2	-35.6	27	18.3
400	31	7,095	-36.0	-40.0	27	19.1
350	31	8,010	-42.2	-42.0	27	21.1
300	31	9,038	-48.7		28	23.9
250	31	10,221	-54.2		28	25.1
200	31	11,641	-57.0		28	26.2
175	31	12,488	-56.5		28	23.8
150	31	13,468	-56.1		28	20.5
125	31	14,625	-57.0		28	17.9
100	31	16,031	-59.1		28	15.0
80	28	17,430	-59.1		29	12.0
70	27	18,267	-59.9		29	8.9
60	27	19,227	-60.6		29	7.2
50	26	20,360	-60.7		31	5.4
40	25	21,755	-59.6		32	3.2
30	23	23,555	-58.7		35	3.7
25	23	24,702	-58.1		01	3.6
20	21	26,104	-57.3		02	3.0
15	13	27,931	-56.1		03	2.8
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BOOTHVILLE, LA. — 1020 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1	11.6	9.0	03	.6
1000	31	165	12.8	8.2	09	1.0
950	31	595	10.7	4.0	22	3.2
900	31	1,046	10.0	-.4	25	6.5
850	31	1,520	8.7	-2.9	26	9.0
800	31	2,021	7.8	-5.8	26	11.1
750	31	2,552	5.8	-8.7	26	12.2
700	31	3,113	3.4	-10.6	27	13.3
650	31	3,709	.3	-14.0	26	15.2
600	31	4,348	-3.4	-16.7	26	17.9
550	31	5,026	-7.6	-21.1	26	18.8
500	31	5,767	-12.4	-27.0	26	20.9
450	31	6,559	-17.6	-32.0	26	22.2
400	31	7,435	-23.9	-36.5	26	24.7
350	31	8,396	-31.0	-42.4	26	27.6
300	31	9,473	-38.9	-47.7	26	31.2
250	31	10,698	-48.5		26	33.7
200	31	12,132	-58.4		26	38.3
175	31	12,965	-61.7		26	39.2
150	31	13,911	-65.1		26	36.9
125	30	15,009	-68.3		26	32.2
100	28	16,334	-70.9		27	27.8
80	28	17,650	-72.1		27	21.0
70	27	18,436	-70.9		27	17.0
60	26	19,351	-68.3		27	13.7
50	26	20,453	-64.9		27	10.8
40	26	21,822	-62.1		27	11.8
30	26	23,613	-58.9		28	13.4
25	26	24,759	-57.7		28	14.2
20	26	26,175	-54.7		27	15.4
15	25	28,026	-51.6		27	18.2
10	23	30,695	-45.4		27	27.0
7	10	33,088	-41.4			
5						
4						

* BROWNSVILLE, TEXAS — 1017 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	7	15.6	12.1	13	.3
1000	31	151	17.0	12.4	10	1.6
950	31	586	14.8	10.8	15	4.8
900	31	1,045	12.9	5.7	18	4.6
850	31	1,524	11.5	1.4	21	5.0
800	31	2,031	11.0	-5.1	23	5.3
750	31	2,567	8.6	-6.8	24	6.8
700	31	3,135	5.0	-10.7	25	8.2
650	31	3,735	1.5	-14.3	26	9.3
600	31	4,378	-2.0	-19.1	25	11.3
550	31	5,058	-6.3	-22.9	25	12.0
500	31	5,803	-11.2	-26.9	25	12.9
450	31	6,601	-16.7	-29.6	25	16.1
400	31	7,480	-23.0	-35.0	25	18.4
350	31	8,445	-30.0	-41.5	25	22.0
300	31	9,525	-38.2	-48.9	25	25.7
250	31	10,754	-47.6		26	29.6
200	31	12,193	-57.7		26	34.5
175	31	13,027	-61.7		26	35.1
150	31	13,973	-66.0		26	30.9
125	30	15,068	-69.7		26	26.6
100	30	16,384	-73.2		26	22.6
80	28	17,686	-74.4		26	17.0
70	27	18,467	-72.3		26	12.8
60	25	19,384	-69.3		26	10.0
50	24	20,484	-65.2		26	9.8
40	24	21,856	-61.5		26	10.3
30	23	23,647	-60.1		27	12.3
25	23	24,789	-58.4		27	12.3
20	22	26,205	-55.5		27	13.2
15	22	28,058	-51.3		27	14.3
10	21	30,724	-45.7		27	21.7
7	17	33,136	-38.9		26	28.8
5	14	35,477	-33.4			
4	5	37,127	-31.4			

BUFFALO, N. Y. — 988 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	218	-3.9	-7.3	27	2.6
1000	31	121				
950	31	526	-5.6	-8.7	26	6.6
900	31	949	-7.5	-9.3	26	10.0
850	31	1,393	-8.4	-12.4	27	11.6
800	31	1,863	-9.0	-13.9	27	12.5
750	31	2,364	-10.3	-15.6	27	13.7
700	31	2,892	-12.4	-19.3	27	15.2
650	31	3,457	-14.9	-22.3	27	16.3
600	31	4,058	-17.8	-28.2	27	17.8
550	31	4,703	-21.4	-31.1	27	19.8
500	31	5,401	-25.6	-34.3	27	21.0
450	31	6,156	-30.4	-37.7	27	23.9
400	31	6,987	-35.6	-42.1	27	25.4
350	31	7,906	-41.1	-44.9	28	26.8
300	31	8,940	-47.1		27	29.8
250	31	10,133	-52.3		28	34.2
200	31	11,565	-55.4		27	33.3
175	31	12,414	-56.6		28	33.1
150	30	13,392	-56.3		28	30.4
125	30	14,549	-57.0		28	22.6
100	29	15,958	-58.4		28	19.7
80	27	17,355	-59.5		28	14.7
70	27	18,187	-60.6		27	13.4
60	27	19,145	-61.2		27	10.4
50	26	20,275	-61.6		28	7.5
40	26	21,659	-61.0		28	6.4
30	25	23,451	-59.5		32	3.4
25	25	24,593	-59.0		32	3.2
20	24	25,997	-58.1		32	3.9
15	24	27,816	-56.1		32	4.0
10	13	30,431	-53.0			
7						
5						
4						

CAPE HATTERAS, N. C. — 1018 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	4	6.0	1.9	33	3.2
1000	31	152	6.9	-.6	32	4.1
950	31	572	5.1	-3.2	28	5.8
900	31	1,013	3.7	-6.9	27	8.6
850	31	1,477	2.5	-10.3	26	11.5
800	31	1,966	1.0	-12.5	27	13.3
750	31	2,484	-.7	-14.6	27	16.2
700	31	3,034	-2.6	-16.0	27	18.6
650	31	3,617	-5.3	-18.0	27	20.3
600	31	4,244	-8.7	-21.5	27	21.7
550	31	4,911	-12.7	-24.7	27	24.9
500	31	5,637	-16.5	-29.0	27	28.4
450	31	6,419	-21.6	-32.6	27	32.3
400	31	7,282	-27.1	-36.9	27	35.1
350	31	8,232	-34.1	-43.1	27	37.2
300	31	9,295	-41.6	-46.1	27	38.9
250	31	10,509	-49.9		27	39.1
200	31	11,943	-57.0		27	41.7
175	31	12,785	-59.0		27	39.0
150	31	13,747	-61.0		27	38.7
125	30	14,871	-63.7		27	32.9
100	29	16,231	-65.8		27	27.8
80	27	17,583	-65.7		27	22.7
70	27	18,394	-65.1		27	19.0
60	27	19,334	-64.4		27	14.5
50	26	20,455	-63.2		27	10.4
40	24	21,834	-61.8		28	9.4
30	23	23,622	-59.5		29	9.6
25	22	24,764	-57.9		29	11.7
20	22	26,177	-56.0		28	10.9
15	21	28,017	-53.1		27	16.2
10	16	30,646	-47.4		27	27.9
7	7	33,040	-40.4			
5						
4						

See reference note at end of table

* CARIBOU, MAINE 985 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	191	-8.9	-11.8	27	2.2
1000	31	71				
950	31	472	-9.0	-11.6	29	5.4
900	31	887	-9.7	-11.6	29	7.6
850	31	1,329	-9.8	-12.7	30	8.2
800	31	1,797	-10.4	-14.7	29	7.9
750	31	2,292	-11.8	-17.0	28	8.9
700	31	2,820	-13.5	-19.5	27	10.0
650	31	3,382	-16.2	-22.8	27	10.9
600	31	3,981	-19.3	-26.2	27	11.8
550	31	4,625	-23.1	-29.9	27	12.1
500	31	5,317	-26.9	-34.2	26	14.7
450	31	6,071	-31.8	-38.4	25	17.2
400	31	6,894	-37.5	-42.8	25	18.1
350	31	7,804	-43.3	-44.6	25	19.9
300	31	8,830	-48.1		26	22.2
250	31	10,023	-51.3		27	24.2
200	31	11,464	-53.5		27	22.3
175	30	12,320	-53.4		27	21.8
150	29	13,309	-53.3		26	20.1
125	28	14,475	-54.3		26	18.1
100	28	15,902	-55.4		27	15.7
80	28	17,322	-56.7		27	12.4
70	28	18,165	-57.7		26	9.8
60	28	19,137	-58.8		26	8.0
50	28	20,281	-59.4		27	7.3
40	27	21,678	-59.4		27	5.7
30	26	23,479	-59.0		28	5.0
25	26	24,624	-58.5		29	2.9
20	22	26,020	-58.4		31	2.6
15	18	27,821	-57.9		28	6.4
10	17	30,408	-55.0		28	10.9
7	14	32,694	-52.0		28	14.6

CHARLESTON, S. C. 1019 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	13	4.4	-.2	29	1.4
1000	31	167	7.6	1.0	31	1.4
950	31	590	7.4	-3.3	27	4.2
900	31	1,035	6.6	-6.7	27	7.2
850	31	1,504	5.4	-7.9	27	9.7
800	31	1,998	4.1	-10.2	27	11.4
750	31	2,521	2.6	-11.8	26	13.3
700	31	3,078	.3	-13.8	27	15.9
650	31	3,667	-2.6	-16.5	27	18.5
600	31	4,302	-5.7	-20.7	27	21.8
550	31	4,976	-9.9	-23.0	27	24.6
500	31	5,709	-14.7	-26.5	27	25.5
450	31	6,495	-19.7	-30.6	27	28.7
400	31	7,367	-25.9	-37.2	27	31.4
350	31	8,320	-32.6	-42.6	27	34.1
300	31	9,388	-40.7	-45.2	27	36.8
250	31	10,604	-49.7		27	39.9
200	31	12,034	-57.9		27	42.6
175	31	12,871	-60.5		27	42.9
150	31	13,825	-63.0		27	41.0
125	31	14,939	-65.5		27	36.2
100	31	16,289	-67.4		27	30.1
80	31	17,627	-68.7		27	21.7
70	29	18,424	-67.6		27	17.9
60	28	19,360	-65.9		27	14.5
50	28	20,473	-63.5		27	10.9
40	28	21,849	-61.6		28	10.8
30	27	23,636	-58.7		28	10.6
25	26	24,784	-57.0		28	10.7
20	24	26,211	-54.3		27	13.3
15	23	28,066	-50.8		27	14.9
10	18	30,731	-44.8		27	21.4
7	8	33,154	-38.3			

CHIHUAHUA, MEXICO 858 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	1,428	2.5	-4.4	24	1.9
1000	30	163				
950	30	584				
900	30	1,029				
850	30	1,501	4.4	-5.0	23	1.4
800	30	2,000	8.1	-7.8	24	4.0
750	30	2,526	6.2	-11.4	25	6.3
700	30	3,094	3.8	-15.1	26	8.5
650	30	3,686	.7	-20.7	26	10.2
600	30	4,332	-3.1	-24.8	26	12.1
550	30	5,008	-7.7	-28.3	26	13.2
500	30	5,750	-12.5	-31.8	26	14.2
450	30	6,537	-18.2	-35.1	26	15.4
400	30	7,417	-24.8	-40.0	26	16.6
350	30	8,374	-32.0	-45.3	26	19.7
300	30	9,445	-40.1	-50.7	26	22.1
250	30	10,665	-49.3		26	25.2
200	28	12,096	-58.6		26	27.7
175	28	12,930	-61.2		26	30.5
150	27	13,876	-64.0		26	28.0
125	26	14,986	-67.0		26	26.3
100	24	16,331	-69.8		26	21.8
80	20	17,666	-70.9		27	14.8
70	18	18,461	-70.1		27	12.8
60	18	19,383	-68.3		27	11.6
50	18	20,489	-63.9		27	12.3
40	14	21,865	-61.6		27	13.0
30	13	23,655	-59.8		27	14.6
25	9	24,798	-57.7			
20	8	26,230	-55.0			
15						
10						
7						

* COLD BAY, ALASKA 1011 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	27	30	-.4	-3.6	15	.1
1000	27	118	-.9	-4.0	06	1.5
950	27	524	-2.9	-6.3	34	2.2
900	27	954	-4.5	-8.9	33	2.7
850	27	1,403	-6.3	-12.2	34	3.4
800	27	1,875	-8.1	-15.8	33	4.3
750	26	2,381	-10.4	-20.3	33	5.2
700	26	2,910	-13.1	-22.8	33	4.0
650	26	3,470	-15.9	-25.0	32	4.7
600	26	4,071	-19.3	-28.0	30	3.8
550	26	4,707	-23.1	-31.5	30	4.9
500	26	5,405	-27.5	-35.0	31	5.0
450	26	6,150	-32.3	-38.5	29	4.2
400	26	6,978	-37.4	-42.4	28	4.0
350	26	7,888	-43.4	-43.3	28	5.4
300	26	8,911	-49.8		23	5.8
250	26	10,091	-54.1		24	9.0
200	25	11,523	-54.6		24	10.3
175	25	12,382	-52.9		25	9.5
150	25	13,379	-52.4		25	8.7
125	25	14,557	-53.1		25	7.8
100	24	15,983	-53.9		25	8.2
80	24	17,416	-53.6		26	6.2
70	24	18,274	-53.4		24	3.6
60	24	19,265	-53.4		22	4.1
50	24	20,436	-54.3		19	4.9
40	24	21,866	-54.3		15	3.7
30	24	23,709	-54.4		12	3.5
25	23	24,878	-53.3		11	5.6
20	23	26,319	-52.2		11	7.3
15	21	28,180	-50.1		09	11.9
10	17	30,812	-47.8		09	16.3
7	8	33,189	-45.3			

COLUMBIA, MO. 988 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	238	-4.3	-7.9	23	1.5
1000	31	141				
950	31	545	-2.6	-7.7	25	4.0
900	31	977	-2.7	-8.9	26	7.4
850	31	1,430	-3.4	-10.5	27	9.9
800	31	1,909	-4.2	-13.2	27	11.6
750	31	2,414	-4.9	-15.5	27	14.1
700	31	2,958	-6.6	-17.5	27	16.4
650	31	3,527	-9.8	-20.6	27	18.1
600	31	4,148	-13.3	-24.4	27	20.5
550	31	4,800	-17.0	-28.7	27	22.6
500	31	5,515	-21.8	-32.9	27	24.8
450	31	6,278	-26.6	-37.8	27	28.1
400	31	7,126	-32.2	-42.1	27	31.4
350	31	8,056	-38.7	-46.5	27	34.9
300	31	9,101	-45.1		27	37.7
250	30	10,308	-51.8		27	39.4
200	30	11,733	-58.0		27	40.4
175	30	12,573	-58.4		27	38.6
150	30	13,541	-58.8		27	33.6
125	30	14,683	-60.4		27	28.2
100	28	16,067	-61.5		27	22.8
80	27	17,442	-63.0		27	16.9
70	26	18,262	-63.5		27	13.1
60	26	19,208	-63.3		27	10.6
50	25	20,330	-63.0		28	9.4
40	25	21,706	-62.2		29	6.6
30	23	23,487	-60.4		29	5.2
25	20	24,632	-59.3		30	4.6
20	17	26,034	-58.4		30	4.6
15	17	27,850	-56.3		33	4.4
10	8	30,454	-52.8			
7						

DAYTON, OHIO 981 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	297	-2.3	-5.3	25	2.0
1000	31	144				
950	31	552	-3.3	-7.2	24	5.2
900	31	978	-4.9	-9.5	25	9.4
850	31	1,427	-5.7	-11.4	26	11.4
800	31	1,902	-6.0	-12.7	27	12.5
750	31	2,407	-7.3	-15.4	27	13.7
700	31	2,943	-9.2	-18.6	27	16.1
650	31	3,513	-11.7	-20.9	27	17.6
600	31	4,124	-14.6	-23.9	27	20.8
550	31	4,777	-18.0	-26.2	27	24.1
500	31	5,487	-22.3	-31.1	27	27.1
450	31	6,249	-27.3	-35.1	26	29.2
400	31	7,093	-32.9	-40.4	27	33.7
350	31	8,021	-38.8	-45.1	26	36.7
300	31	9,063	-45.6		27	39.9
250	31	10,261	-51.8		27	40.4
200	31	11,690	-56.5		27	42.4
175	31	12,535	-57.5		27	38.3
150	31	13,507	-58.3		27	36.0
125	31	14,652	-59.6		27	30.2
100	30	16,039	-61.0		27	24.1
80	30	17,420	-62.3		27	18.3
70	29	18,242	-62.6		27	15.2
60	29	19,191	-62.5		27	13.6
50	29	20,314	-63.0		27	9.5
40	28	21,692	-62.3		27	7.6
30	24	23,470	-60.2		29	6.1
25	24	24,611	-59.0		29	5.9
20	22	26,015	-58.0		28	7.7
15	17	27,812	-55.8		27	9.9
10	7	30,468	-51.2			
7						

DEL RIO, TEXAS 981 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	314	6.8	2.2	10	.9
1000	31	158				
950	31	585	9.7	.9	15	3.3
900	31	1,032	10.0	-1.8	19	5.1
850	31	1,507	10.0	-6.4	24	6.0
800	31	2,010	8.7	-9.8	26	7.8
750	31	2,537	6.7	-12.8	26	9.5
700	31	3,106	3.8	-15.5	27	10.5
650	31	3,700	.1	-18.7	26	11.9
600	31	4,341	-4.0	-22.2	26	14.6
550	31	5,014	-8.3	-26.0	26	15.3
500	31	5,755	-13.2	-29.9	26	16.7
450	31	6,541	-18.6	-33.3	26	18.4
400	31	7,418	-24.9	-38.3	26	20.1
350	31	8,376	-31.9	-44.1	26	23.4
300	31	9,447	-40.1	-46.5	26	28.5
250	31	10,667	-49.3		26	31.0
200	30	12,097	-58.5		26	35.1
175	29	12,927	-61.8		26	36.0
150	28	13,878	-64.3		26	33.9
125	28	14,985	-67.2		27	29.2
100	28	16,321	-70.3		27	22.4
80	25	17,646	-71.0		27	18.3
70	25	18,436	-70.6		27	13.9
60	25	19,356	-68.3		27	10.8
50	24	20,457	-64.7		27	10.8
40	23	21,833	-60.8		27	11.3
30	21	23,633	-58.6		27	12.8
25	21	24,781	-57.3		27	11.5
20	19	26,199	-55.2		28	11.6
15	15	28,048	-52.4		28	14.8
10	8	30,686	-49.4			
7						

DENVER, COLO. 833 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	1,611	-5.6	-11.8	21	1.5
1000	30	152				
950	30	560				
900	30	994				
850	30	1,447				
800	30	1,927	-1.1	-13.9	27	3.6
750	30	2,441	-2.7	-16.2	29	5.5
700	30	2,986	-5.9	-18.5	29	9.3
650	30	3,558	-9.8	-21.4	29	12.8
600	30	4,176	-13.9	-23.9	30	15.0
550	30	4,828	-17.8	-28.7	29	16.7
500	30	5,538	-22.5	-32.8	29	17.8
450	30	6,295	-27.9	-36.9	28	19.1
400	30	7,140	-33.9	-41.6	27	22.3
350	30	8,063	-40.6	-44.1	27	24.1
300	30	9,097	-46.9		27	27.5
250	30	10,289	-52.8		27	28.9
200	29	11,706	-57.4		27	31.7
175	29	12,548	-58.7		27	31.1
150	29	13,514	-59.5		27	28.6
125	29	14,653	-59.6		27	24.6
100	29	16,048	-60.4		27	15.9
80	29	17,428	-63.0		27	13.0
70	29	18,249	-62.6		27	10.6
60	29	19,200	-62.7		27	7.3
50	29	20,323	-62.5		28	6.9
40	29	21,704	-61.5		29	5.7
30	27	23,485	-60.4		31	4.3
25	27	24,624	-59.1		29	3.2
20	25	26,023	-57.7		30	3.7
15	22	27,858	-56.5		29	3.6
10	13	30,484	-53.9			
7						

DODGE CITY, KANS. 923 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	791	-5.5	-9.8	27	1.4
1000	31	156				
950	31	562				
900	31	989	-3.0	-10.3	29	2.4
850	31	1,445	-.1	-11.8	29	5.4
800	31	1,931	-.1	-14.2	29	8.7
750	31	2,446	-1.8	-16.2	28	10.7
700	31	2,993	-4.5	-18.8	28	12.1
650	31	3,574	-7.8	-21.7	28	14.0
600	31	4,193	-11.6	-25.2	28	17.5
550	31	4,855	-15.7	-28.5	27	20.4
500	31	5,568	-20.8	-31.7	28	21.8
450	31	6,339	-25.9	-36.4	28	25.4
400	31	7,185	-31.6	-41.9	27	28.8
350	31	8,118	-38.0	-45.0	27	33.3
300	31	9,165	-45.2		27	37.2
250	31	10,365	-52.4		27	40.5
200	31	11,789	-57.7		27	41.4
175	31	12,630	-58.9		27	38.8
150	31	13,596	-59.9		27	35.1
125	31	14,732	-60.7		27	30.1
100	30	16,113	-63.3		27	23.2
80	28	17,471	-63.4		27	14.1
70	28	18,289	-63.7		27	11.2
60	27	19,237	-63.5		27	8.6
50	25	20,358	-62.9		28	6.9
40	23	21,740	-61.5		27	4.9
30	23	23,529	-60.3		28	4.0
25	22	24,671	-59.3		32	3.3
20	22	26,074	-57.5		32	3.6
15	18	27,911	-54.7		31	3.1
10	6	30,531	-54.1			
7						

EL PASO, TEXAS 883 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1,193	.1	-7.7	28	1.8
1000	31	185				
950	31	604				
900	31	1,044				
850	31	1,505	5.2	-9.0	27	3.0
800	31	1,999	4.0	-11.0	27	7.1
750	31	2,521	2.2	-14.7	27	10.0
700	31	3,077	-.3	-17.9	27	11.7
650	31	3,662	-3.1	-21.9	27	14.4
600	31	4,297	-6.0	-24.1	27	15.8
550	31	4,966	-10.4	-26.8	27	18.4
500	31	5,701	-15.3	-31.0	27	20.4
450	31	6,481	-21.0	-35.2	27	22.2
400	31	7,351	-26.9	-39.8	27	22.6
350	31	8,302	-34.0	-44.9	27	26.5
300	31	9,365	-42.2	-49.2	26	25.5
250	31	10,576	-51.1		26	28.3
200	31	12,000	-58.9		27	29.0
175	31	12,832	-61.3		27	30.4
150	31	13,785	-62.8		27	30.4
125	31	14,902	-65.3		27	27.5
100	31	16,251	-68.2		27	20.5
80	30	17,584	-68.9		27	18.9
70	29	18,384	-67.5		27	16.3
60	29	19,315	-66.1		27	12.2
50	29	20,423	-64.8		27	9.4
40	29	21,794	-61.5		27	9.3
30	27	23,582	-60.0		27	9.8
25	26	24,723	-58.9		28	9.7
20	24	26,124	-57.1		27	12.6
15	23	27,958	-53.8		27	14.5
10	18	30,575	-49.6		27	20.4
7	5	32,925	-45.3			

ELY, NEV. 807 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1,908	-8.7	-15.1	20	4.6
1000	31	212				
950	31	616				
900	31	1,048				
850	31	1,499				
800	31	1,974			20	4.7
750	31	2,481	-4.4	-13.4	22	3.2
700	31	3,024	-7.3	-15.2	27	7.0
650	31	3,595	-9.6	-17.9	28	11.6
600	31	4,214	-13.4	-21.8	28	14.1
550	31	4,866	-17.5	-26.9	28	15.8
500	31	5,579	-22.3	-31.7	28	18.1
450	31	6,340	-27.6	-35.7	28	19.9
400	31	7,184	-33.3	-38.8	28	20.7
350	31	8,112	-39.5	-44.5	28	23.2
300	31	9,151	-46.6		28	26.4
250	31	10,343	-53.5		29	27.2
200	31	11,763	-58.0		29	25.5
175	29	12,598	-58.6		29	24.7
150	29	13,568	-58.7		28	22.3
125	29	14,712	-59.7		29	18.4
100	29	16,101	-61.6		29	14.8
80	29	17,480	-62.9		29	10.1
70	29	18,301	-62.7		29	9.0
60	29	19,249	-62.8		30	6.9
50	28	20,372	-62.3		31	4.8
40	28	21,753	-61.3		32	3.6
30	24	23,540	-59.5		32	3.2
25	23	24,687	-58.3		35	2.5
20	21	26,106	-56.9		33	1.4
15	19	27,935	-55.4		02	2.3
10	13	30,545	-53.7			
7	5	32,883	-49.8			

EMPALME, MEXICO 1016 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	12	10.6	1.4	32	1.6
1000	31	145	15.8	.7	33	3.0
950	31	581	17.2	-2.0	35	1.5
900	31	1,042	15.1	-3.9	33	1.3
850	31	1,522	12.4	-5.8	24	1.6
800	31	2,028	10.2	-9.0	22	3.3
750	31	2,558	7.4	-11.9	24	3.9
700	31	3,126	4.2	-15.4	26	5.4
650	31	3,719	.8	-19.3	26	6.7
600	31	4,362	-3.2	-22.7	27	8.4
550	31	5,040	-7.5	-26.0	26	9.7
500	31	5,781	-12.4	-30.2	26	11.8
450	31	6,569	-18.3	-34.6	26	13.1
400	31	7,446	-24.7	-38.8	26	15.0
350	31	8,403	-32.1	-43.6	26	18.8
300	31	9,474	-40.3	-49.8	26	22.1
250	31	10,692	-49.6		26	29.0
200	31	12,120	-58.8		26	31.2
175	31	12,952	-61.9		26	31.6
150	31	13,899	-64.5		26	28.8
125	31	15,005	-67.5		26	25.6
100	31	16,337	-70.8		26	21.8
80	31	17,656	-71.3		27	16.0
70	31	18,447	-70.0		27	13.2
60	31	19,370	-67.7		27	10.8
50	30	20,473	-64.4		26	10.0
40	30	21,847	-61.4		27	10.9
30	29	23,639	-59.4		27	12.0
25	27	24,788	-57.8		27	11.9
20	24	26,207	-55.3		27	12.9
15	18	28,051	-52.4		27	16.7
10	8	30,715	-46.8			
7						

* FAIRBANKS, ALASKA 1001 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	135	-27.6	-28.3	06	.3
1000	29	143			06	1.2
950	29	531	-16.0	-20.8	11	2.0
900	29	930	-15.1	-21.3	12	2.9
850	29	1,364	-13.9	-21.1	14	1.6
800	29	1,825	-14.6	-22.3	21	.9
750	29	2,311	-16.3	-23.5	25	1.8
700	29	2,829	-18.6	-26.6	27	3.3
650	29	3,378	-21.9	-30.0	28	5.3
600	29	3,963	-26.0	-33.5	28	7.0
550	29	4,586	-30.1	-37.3	28	8.5
500	29	5,260	-34.5	-38.6	28	9.8
450	29	5,987	-39.5	-41.3	29	11.8
400	29	6,788	-44.5	-44.9	29	12.9
350	29	7,673	-49.4		29	12.8
300	29	8,674	-53.2		32	12.1
250	29	9,845	-54.6		31	13.5
200	29	11,276	-53.1		31	12.0
175	29	12,140	-51.7		30	10.6
150	29	13,141	-51.2		30	11.6
125	29	14,328	-50.7		29	9.8
100	29	15,783	-50.4		29	9.3
80	29	17,239	-50.2		28	10.5
70	29	18,111	-50.0		28	9.1
60	29	19,118	-50.8		27	8.8
50	29	20,307	-50.9		28	7.7
40	29	21,759	-51.1		28	7.2
30	28	23,625	-51.2		28	5.4
25	27	24,810	-50.7		29	4.4
20	24	26,260	-49.4		30	2.4
15	20	28,150	-47.8		32	5.7
10	11	30,828	-45.5			
7						

FLINT, MICH. 986 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	234	-3.8	-7.5	25	2.5
1000	31	121				
950	31	525	-5.4	-8.7	26	4.6
900	31	949	-7.1	-11.0	27	5.7
850	31	1,394	-7.8	-12.8	27	6.8
800	31	1,865	-8.7	-15.0	28	8.5
750	31	2,361	-10.5	-18.1	28	10.0
700	31	2,893	-12.4	-21.9	28	11.3
650	31	3,453	-14.5	-24.1	28	13.1
600	31	4,061	-17.5	-27.1	28	15.6
550	31	4,705	-21.5	-30.5	27	17.4
500	31	5,405	-25.6	-34.9	27	19.8
450	31	6,156	-30.4	-39.0	27	22.3
400	31	6,990	-35.9	-43.1	27	25.6
350	31	7,908	-41.3	-44.9	27	28.5
300	31	8,942	-46.8		27	32.8
250	31	10,137	-51.7		27	33.9
200	31	11,571	-55.1		27	33.6
175	31	12,423	-55.7		27	31.2
150	31	13,404	-55.8		27	27.3
125	30	14,562	-56.8		27	24.1
100	30	15,972	-58.1		27	19.8
80	30	17,374	-59.5		27	14.6
70	29	18,207	-60.3		27	13.6
60	29	19,167	-61.0		27	11.5
50	27	20,294	-60.7		27	8.2
40	26	21,680	-60.5		28	6.7
30	24	23,480	-58.9		31	4.4
25	23	24,622	-57.6		33	3.9
20	18	26,037	-57.2		35	3.5
15	18	27,661	-55.8		34	4.5
10	12	30,457	-52.4			
7						

FORT WORTH, TEXAS 998 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	180	5.2	.0	25	.5
1000	31	160			35	2.0
950	31	582	6.4	-1.7	22	4.0
900	31	1,023	5.9	-3.9	25	6.5
850	31	1,491	5.2	-6.3	26	8.8
800	31	1,986	4.5	-10.9	26	9.7
750	31	2,510	2.8	-14.4	27	12.1
700	31	3,066	.9	-16.5	26	14.4
650	31	3,657	-1.9	-19.5	27	16.5
600	31	4,291	-5.7	-23.4	27	17.5
550	31	4,961	-10.0	-26.9	27	19.0
500	31	5,696	-14.9	-30.8	27	20.7
450	31	6,481	-20.3	-34.6	26	24.6
400	31	7,346	-26.6	-39.6	27	26.6
350	31	8,297	-33.6	-44.4	26	28.0
300	31	9,362	-41.5	-49.5	26	31.4
250	31	10,573	-51.3		26	36.3
200	31	11,994	-59.5		26	38.3
175	30	12,823	-61.6		26	38.7
150	30	13,774	-63.6		26	37.8
125	30	14,888	-65.6		27	34.4
100	29	16,236	-67.9		27	27.0
80	27	17,575	-68.6		27	20.6
70	26	18,374	-68.4		27	15.0
60	24	19,306	-66.7		27	13.0
50	23	20,417	-63.8		27	9.8
40	22	21,792	-62.5		27	9.2
30	19	23,589	-60.2		28	8.7
25	18	24,733	-58.7		28	8.8
20	16	26,136	-56.9		29	9.4
15	12	27,985	-53.3		29	9.9
10	7	30,636	-48.8			
7						

See reference note at end of table

RAWINSONDE DATA

Average monthly values

DECEMBER 1968

GLASGOW, MONT. 934 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	696	-13.2	-15.9	07	1.7
1000	31	168				
950	31	560				
900	31	976	-10.1	-14.0	28	1.6
850	31	1,418	-9.5	-15.0	29	4.9
800	31	1,886	-9.8	-15.5	30	6.9
750	31	2,385	-11.0	-17.3	29	8.2
700	31	2,912	-13.4	-19.5	29	8.4
650	31	3,472	-16.3	-22.8	29	10.0
600	31	4,071	-19.8	-25.8	29	11.4
550	31	4,707	-23.7	-29.6	28	12.6
500	31	5,402	-28.2	-34.2	28	13.4
450	31	6,141	-33.7	-38.2	28	15.9
400	31	6,966	-39.5	-42.8	28	17.3
350	31	7,869	-45.5		28	20.3
300	31	8,883	-51.3		28	22.7
250	31	10,057	-54.9		28	24.8
200	30	11,477	-55.2		29	22.7
175	30	12,332	-54.2		29	19.7
150	30	13,321	-54.3		28	19.4
125	30	14,488	-54.7		29	16.4
100	30	15,913	-55.7		29	13.1
80	30	17,330	-57.1		29	10.9
70	30	18,173	-57.6		30	9.1
60	30	19,144	-57.9		30	7.0
50	30	20,294	-57.9		31	5.8
40	29	21,702	-57.6		34	4.0
30	29	23,519	-57.3		01	4.8
25	26	24,676	-56.9		03	4.9
20	23	26,093	-56.4		03	5.5
15	16	27,926	-56.2		05	8.1
10	7	30,504	-56.8			
7						

GRAND JUNCTION, COLO. 853 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1,474	-7.8	-11.4	14	1.3
1000	31	220				
950	31	623				
900	31	1,049				
850	31	1,500			13	2.2
800	31	1,978	-4.0	-12.2	17	2.4
750	31	2,484	-5.2	-14.2	20	4.1
700	31	3,027	-7.7	-16.7	25	7.1
650	31	3,598	-10.9	-18.9	27	10.0
600	31	4,212	-14.1	-22.1	28	12.8
550	31	4,865	-18.0	-25.7	28	16.1
500	31	5,575	-22.3	-31.2	28	18.1
450	31	6,336	-27.8	-36.3	28	21.1
400	31	7,178	-33.9	-40.4	28	22.7
350	31	8,102	-40.3	-44.2	28	26.3
300	31	9,138	-47.2		28	28.0
250	31	10,328	-53.0		28	28.3
200	31	11,753	-56.6		28	28.4
175	31	12,597	-57.6		27	27.2
150	31	13,571	-57.5		27	25.6
125	31	14,716	-59.6		27	22.0
100	30	16,099	-62.0		27	16.8
80	29	17,472	-62.7		28	12.8
70	28	18,295	-63.0		28	10.9
60	28	19,247	-62.6		28	8.4
50	27	20,374	-62.3		28	7.3
40	26	21,757	-61.4		29	4.7
30	23	23,550	-59.7		30	4.5
25	21	24,702	-58.4		31	3.4
20	19	26,108	-57.0		32	2.[illegible]
15	11	27,952	-55.7		26	[illegible].7

* GREAT FALLS, MONT. 884 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1,123	-10.5	-15.6	24	3.0
1000	31	161				
950	31	563				
900	31	988				
850	31	1,426	-8.3	-16.9	24	6.4
800	31	1,895	-9.9	-17.6	25	7.7
750	31	2,396	-10.4	-17.5	26	8.8
700	31	2,923	-12.6	-19.7	26	11.4
650	31	3,485	-16.0	-23.3	27	12.4
600	31	4,085	-19.4	-26.2	27	12.8
550	31	4,728	-23.6	-30.3	28	13.4
500	31	5,419	-28.0	-34.0	27	15.0
450	31	6,162	-33.2	-39.2	28	18.2
400	31	6,987	-38.4	-41.8	28	21.0
350	31	7,893	-44.7	-43.4	28	24.1
300	31	8,910	-50.8		28	26.8
250	31	10,086	-54.7		28	27.4
200	31	11,509	-55.5		28	22.9
175	31	12,362	-54.8		28	19.3
150	31	13,348	-54.8		28	17.7
125	31	14,513	-54.8		28	16.3
100	31	15,937	-56.0		28	13.9
80	31	17,351	-57.6		29	11.[illegible]
70	30	18,191	-58.0		29	[illegible]
60	30	19,160	-58.9		30	8.3
50	30	20,305	-58.6		31	5.0
40	26	21,721	-58.0		35	3.9
30	25	23,533	-57.5		01	3.7
25	25	24,687	-56.7		02	4.3
20	22	26,099	-56.6		04	4.5
15	17	27,955	-56.1		04	[illegible].8
10	13	30,530	-55.4		07	7.[illegible]
7	7	32,820	-55.6			

GREEN BAY, WIS. 989 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	210	-7.3	-9.9	30	2.2
1000	31	121				
950	31	522	-7.3	-10.1	30	2.0
900	31	942	-8.6	-12.7	30	2.2
850	31	1,386	-9.0	-14.5	29	2.6
800	31	1,855	-9.6	-15.3	28	4.2
750	31	2,350	-10.9	-17.0	28	[illegible].7
700	31	2,881	-12.9	-19.2	28	7.5
650	31	3,441	-15.1	-22.7	28	9.9
600	31	4,046	-18.5	-25.7	28	11.6
550	31	4,684	-22.6	-30.4	28	13.1
500	31	5,384	-27.0	-34.5	28	14.7
450	31	6,130	-31.7	-39.1	28	16.6
400	31	6,961	-37.3	-43.1	28	18.1
350	31	7,872	-43.5	-44.1	28	20.6
300	31	8,898	-48.6		27	23.3
250	31	10,087	-52.5		27	26.3
200	31	11,520	-54.8		27	26.9
175	30	12,380	-54.7		27	25.1
150	30	13,365	-54.9		27	22.3
125	30	14,529	-55.5		27	19.6
100	30	15,945	-57.5		28	17.2
80	30	17,350	-58.5		27	15.0
70	30	18,186	-59.7		27	12.8
60	29	19,149	-60.1		28	11.7
50	29	20,284	-61.1		28	9.6
40	28	21,669	-60.2		28	6.9
30	24	23,473	-59.1		30	4.5
25	23	24,614	-58.5		32	3.7
20	18	26,009	-57.8		32	5.6
15	15	27,813	-56.8		34	[illegible].3
10	7	30,402	-55.3			

GREENSBORO, N. C. 987 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	273	-.6	-5.6	25	1.2
1000	31	163				
950	31	577	1.4	-7.0	27	4.8
900	31	1,010	.6	-8.3	27	8.3
850	31	1,469	.3	-9.7	27	11.5
800	31	1,955	.0	-13.4	27	13.0
750	31	2,473	-1.4	-15.1	27	15.6
700	31	3,019	-3.1	-16.9	28	18.3
650	31	3,603	-5.7	-18.7	27	19.7
600	31	4,228	-9.0	-20.8	27	21.6
550	31	4,896	-13.3	-24.9	27	24.2
500	31	5,615	-18.0	-28.6	27	27.7
450	31	6,395	-22.8	-32.6	28	29.9
400	31	7,251	-28.6	-37.3	27	33.3
350	31	8,195	-35.2	-41.9	28	36.2
300	31	9,252	-42.9	-45.2	28	39.7
250	31	10,459	-51.4		28	41.5
200	31	11,884	-58.2		28	40.4
175	31	12,721	-59.7		27	37.2
150	31	13,682	-61.0		27	36.4
125	30	14,805	-62.8		27	30.1
100	30	16,171	-65.0		27	25.3
80	29	17,526	-65.6		27	17.0
70	29	18,338	-64.7		27	15.2
60	28	19,281	-64.2		28	11.1
50	28	20,399	-63.1		28	7.7
40	28	21,776	-61.9		28	9.3
30	27	23,562	-60.1		28	8.2
25	25	24,701	-58.6		29	7.3
20	24	26,106	-56.8		29	8.0
15	22	27,938	-53.6		28	8.7
10	19	30,557	-47.9		27	22.6
7	11	32,900	-41.7			

* GUAM, MARIANA IS. 998 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	111	24.8	22.4	07	4.6
1000	31	97				
950	31	547	22.1	20.1	07	10.8
900	31	1,016	19.4	16.2	07	10.5
850	31	1,507	16.8	11.9	08	8.1
800	31	2,023	15.4	6.5	08	5.9
750	31	2,568	13.4	-1.8	08	6.2
700	31	3,147	10.6	-6.6	08	5.0
650	31	3,759	7.3	-11.1	07	5.4
600	31	4,415	3.6	-15.6	07	5.5
550	31	5,113	-.5	-19.7	07	4.2
500	31	5,871	-5.2	-22.8	08	4.5
450	31	6,689	-10.1	-28.0	07	4.7
400	31	7,590	-15.9	-33.7	05	4.1
350	31	8,583	-22.5	-39.8	05	2.4
300	31	9,695	-30.9	-46.8	01	1.6
250	31	10,962	-40.9	-53.3	28	1.6
200	31	12,440	-52.9		26	2.0
175	31	13,287	-59.8		24	1.6
150	31	14,233	-67.4		22	1.5
125	31	15,307	-76.0		15	2.1
100	31	16,567	-84.1		11	5.8
80	29	17,794	-84.2		10	9.6
70	29	18,540	-79.7		09	9.6
60	29	19,431	-73.2		10	8.3
50	[illegible]	20,518	-67.6		10	9.0
40	28	21,877	-62.7		09	12.8
30	27	23,673	-58.7		09	13.7
25	27	24,822	-57.2		09	8.7
20	25	26,247	-53.3		29	1.5
15	25	28,122	-48.4		28	13.0
10	25	30,819	-43.4		27	19.3
7	23	33,236	-38.8		26	20.8
5	17	35,575	-37.3		24	9.0
4	6	37,127	-35.3			

HILO, HAWAII 1012 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	11	20.6	18.4	23	2.1
1000	31	118	21.3	18.1	23	2.1
950	31	560	19.2	15.8	14	1.7
900	31	1,026	16.3	13.3	14	2.8
850	31	1,512	13.8	10.7	15	2.6
800	31	2,022	11.9	5.8	17	2.1
750	31	2,562	9.7	-.4	22	2.3
700	31	3,132	7.0	-4.3	23	2.2
650	31	3,738	4.0	-10.3	25	2.8
600	31	4,386	.5	-15.4	26	4.6
550	31	5,076	-3.2	-19.8	26	5.6
500	31	5,829	-8.0	-24.0	25	7.1
450	31	6,637	-13.2	-28.1	26	9.[illegible]
400	31	7,528	-19.2	-32.8	26	12.2
350	31	8,508	-26.2	-38.6	26	14.4
300	31	9,604	-34.7	-45.9	27	17.1
250	31	10,851	-44.5		27	20.[illegible]
200	31	12,309	-55.7		27	22.5
175	31	13,149	-61.0		27	22.[illegible]
150	31	14,095	-66.0		28	19.3
125	31	15,186	-71.5		28	15.4
100	28	16,489	-76.9		29	9.2
80	25	17,769	-77.7		30	3.4
70	25	18,536	-75.9		04	2.[illegible]
60	25	19,434	-71.3		06	1.7
50	25	20,530	-64.3		30	1.3
40	25	21,908	-60.8		29	1.4
30	24	23,713	-57.9		25	2.2
25	24	24,866	-56.3		27	2.[illegible]
20	23	26,289	-53.6		28	[illegible].7
15	19	28,136	-50.7		27	10.6
10	11	30,808	-45.0		26	17.3
7	6	33,199	-39.4			

HUNTINGTON W. VA. 989 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	246	-.9	-5.6	22	1.7
1000	31	154				
950	31	565	-.8	-5.9	23	4.4
900	31	995	-2.1	-7.8	25	[illegible]
850	31	1,448	-3.0	-8.8	26	12.1
800	31	1,927	-4.3	-11.0	26	14.1
750	31	2,435	-5.6	-14.4	27	16.1
700	31	2,975	-7.5	-16.4	27	17.8
650	31	3,547	-9.6	-18.2	27	19.7
600	31	4,165	-12.8	-21.2	27	23.[illegible]
550	31	4,822	-16.4	-25.3	27	26.2
500	31	5,536	-20.8	-29.3	27	28.7
450	31	6,304	-25.8	-34.9	26	30.6
400	31	7,153	-31.0	-38.6	26	34.4
350	31	8,088	-37.2	-43.4	26	36.[illegible]
300	31	9,139	-43.7	-47.4	26	40.4
250	31	10,345	-51.1		27	42.5
200	31	11,777	-56.8		27	42.7
175	30	12,622	-58.7		27	41.3
150	29	13,591	-59.5		27	37.7
125	28	14,731	-60.9		27	30.9
100	28	16,112	-62.4		27	25.3
80	27	17,490	-63.4		26	17.1
70	27	18,309	-63.5		27	14.2
60	25	19,259	-62.7		27	10.5
50	25	20,385	-62.0		28	8.5
40	25	21,767	-61.2		28	7.2
30	24	23,567	-58.7		31	5.1
25	23	24,716	-57.6		31	3.8
20	22	26,130	-55.9		32	3.0
15	19	27,968	-53.5		30	4.8
10	14	30,601	-49.9		28	13.9

* INTERNATIONAL FALLS, MINN. 973 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	360	-14.5	-17.0	01	1.3
1000	30	154				
950	30	541	-13.6	-16.1	03	2.[illegible]
900	30	955	-13.2	-15.7	05	2.5
850	30	1,391	-12.8	-15.[illegible]	05	2.7
800	30	1,853	-12.9	-16.8	02	2.7
750	30	2,340	-13.8	-18.7	36	[illegible].6
700	30	2,867	-15.9	-21.2	34	[illegible].2
650	30	3,417	-18.1	-24.6	33	5.4
600	30	4,018	-21.2	-27.[illegible]	32	[illegible]
550	30	4,650	-25.0	-31.7	32	7.7
500	30	5,343	-29.4	-35.2	31	8.6
450	30	6,083	-34.5	-39.7	30	9.8
400	30	6,902	-40.2	-43.3	29	12.2
350	30	7,802	-46.2		29	15.1
300	30	8,814	-51.6		28	16.4
250	30	9,987	-54.8		28	19.[illegible]
200	30	11,413	-54.4		28	18.6
175	30	12,269	-53.9		28	17.7
150	30	13,260	-54.0		28	16.8
125	30	14,428	-54.6		28	15.9
100	30	15,854	-55.3		28	13.5
80	30	17,273	-57.0		28	10.8
70	30	18,116	-57.8		28	9.9
60	30	19,087	-58.7		29	8.3
50	30	20,231	-59.2		30	6.4
40	30	21,629	-58.9		31	5.0
30	30	23,437	-58.2		34	3.9
25	30	24,585	-57.9		35	3.7
20	29	25,994	-57.9		35	4.9
15	25	27,832	-58.1		36	[illegible].7
10	20	30,395	-58.0		35	7.5
7	10	32,734	-55.6			

JACKSONVILLE, FLA. 1021 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	5	6.7	4.1	31	1.7
1000	30	174	10.0	4.3	33	1.8
950	30	598	9.5	.1	25	2.8
900	30	1,049	8.5	-3.4	25	5.8
850	30	1,522	7.7	-4.8	26	7.7
800	30	2,021	6.5	-6.1	26	10.3
750	30	2,543	4.5	-8.6	27	11.7
700	30	3,109	1.9	-12.7	27	13.7
650	30	3,697	-.9	-16.0	27	15.7
600	30	4,340	-4.1	-19.9	27	18.3
550	30	5,017	-8.0	-24.0	27	21.3
500	30	5,757	-12.7	-28.[illegible]	27	23.6
450	30	6,541	-18.4	-33.[illegible]	27	25.6
400	30	7,423	-24.7	-38.7	27	27.2
350	30	8,381	-31.7	-43.9	27	30.9
300	30	9,452	-39.9	-49.2	27	34.2
250	30	10,673	-49.0		27	36.3
200	30	12,107	-57.7		27	41.0
175	30	12,942	-61.1		27	40.9
150	30	13,893	-64.3		27	39.6
125	30	14,999	-67.0		27	36.7
100	29	16,337	-69.9		27	30.6
80	28	17,658	-71.2		27	20.7
70	28	18,451	-70.4		27	15.8
60	28	19,368	-67.7		27	14.1
50	28	20,473	-64.4		27	11.1
40	26	21,847	-61.8		28	12.3
30	26	23,643	-58.4		28	11.8
25	25	24,792	-56.8		28	13.1
20	23	26,212	-54.1		27	15.2
15	22	28,073	-49.4		27	17.9
10	17	30,761	-43.7		27	26.3
7	5	33,111	-40.4			

JOHN F. KENNEDY INT. AP NY 1016 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	5	-.2	-6.5	29	4.7
1000	29	134	-1.2	-7.5	29	5.2
950	29	545	-2.7	-8.4	29	8.3
900	29	971	-3.6	-10.4	29	10.4
850	29	1,423	-4.2	-11.9	29	11.2
800	29	1,901	-4.9	-13.5	28	14.5
750	29	2,406	-6.4	-16.5	27	15.5
700	29	2,946	-8.7	-18.9	27	17.3
650	29	3,513	-11.1	-21.7	27	20.2
600	29	4,130	-14.4	-25.4	27	23.1
550	29	4,780	-18.2	-28.6	27	24.6
500	29	5,490	-22.9	-32.7	27	27.0
450	29	6,249	-28.0	-35.1	27	30.6
400	29	7,091	-33.1	-40.1	27	33.8
350	29	8,018	-39.0	-43.8	27	38.9
300	29	9,063	-44.6		27	42.4
250	29	10,267	-50.4		28	43.0
200	29	11,706	-55.5		27	37.0
175	28	12,561	-57.2		27	38.4
150	28	13,534	-57.8		27	35.1
125	27	14,676	-59.2		27	30.2
100	27	16,070	-60.1		28	22.6
80	23	17,461	-61.0		28	15.8
70	23	18,288	-61.9		28	14.5
60	23	19,242	-61.6		28	11.8
50	23	20,372	-61.5		28	8.8
40	20	21,750	-60.7		29	5.2
30	19	23,541	-59.5		30	3.0
25	19	24,685	-58.3		29	4.0
20	17	26,085	-57.1		30	3.9
15	15	27,932	-54.5		29	4.0
10	10	30,557	-49.9			
7						
5						
4						

JOHNSTON IS., PACIFIC AREA 1011 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	3	25.7	21.0	08	4.6
1000	30	97	25.0	20.5	08	4.[illegible]
950	30	542	21.4	18.2	09	[illegible].5
900	30	1,014	18.2	14.8	10	5.1
850	30	1,503	15.6	10.2	11	3.8
800	30	2,016	13.6	3.5	12	3.7
750	30	2,556	11.5	-.6	14	2.1
700	30	3,134	8.7	-5.5	19	.[illegible]
650	30	3,737	5.5	-11.3	24	.9
600	30	4,395	1.9	-16.2	30	1.6
550	30	5,080	-2.3	-21.4	28	2.6
500	30	5,842	-6.8	-26.1	28	3.8
450	30	6,652	-11.9	-30.7	29	6.6
400	30	7,550	-17.8	-34.9	28	9.8
350	30	8,536	-24.5	-40.4	28	12.2
300	30	9,641	-32.4	-47.2	28	14.7
250	30	10,902	-41.9		28	16.9
200	30	12,376	-53.3		28	18.[illegible]
175	30	13,224	-59.8		28	19.3
150	29	14,172	-66.3		29	17.7
125	29	15,259	-73.2		29	14.0
100	26	16,546	-79.6		29	10.[illegible]
80	21	17,801	-80.4		32	3.[illegible]
70	20	18,558	-77.5		06	3.6
60	20	19,451	-72.4		09	4.0
50	19	20,543	-66.2		09	4.2
40	19	21,911	-61.2		09	6.[illegible]
30	18	23,712	-57.7		08	4.7
25	18	24,868	-55.5		08	2.5
20	18	26,300	-52.4		30	2.6
15	18	28,170	-49.6		27	8.9
10	11	30,854	-43.5		26	15.9
7	5	33,215	-42.4			

KEY WEST, FLA. 1018 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	25	3	19.6	15.9	06	2.1
1000	25	157	18.8	15.3	07	3.7
950	25	594	16.4	12.5	10	4.1
900	25	1,057	14.1	8.5	12	3.2
850	25	1,539	12.5	1.1	13	1.4
800	25	2,047	11.7	-5.3	32	.8
750	25	2,585	9.6	-9.2	30	2.8
700	25	3,155	7.0	-11.9	28	3.6
650	25	3,757	3.7	-16.1	27	4.8
600	25	4,406	-.1	-20.9	27	5.8
550	25	5,091	-4.5	-23.7	28	9.0
500	25	5,842	-9.4	-27.8	28	11.[illegible]
450	25	6,641	-15.2	-31.9	27	13.8
400	25	7,529	-21.5	-37.0	27	16.3
350	25	8,499	-28.7	-42.5	27	19.[illegible]
300	25	9,584	-37.0	-49.3	27	23.3
250	25	10,820	-46.7		27	27.2
200	25	12,264	-57.3		27	31.[illegible]
175	25	13,098	-62.5		27	31.5
150	25	14,039	-66.5		27	30.0
125	25	15,132	-70.7		27	27.0
100	25	16,442	-74.0		27	22.7
80	25	17,734	-76.0		27	15.5
70	25	18,508	-73.7		27	10.2
60	25	19,416	-69.6		27	7.3
50	25	20,517	-64.6		27	6.9
40	25	21,898	-59.8		28	11.1
30	25	23,707	-57.3		28	13.7
25	25	24,862	-56.3		28	13.6
20	25	26,287	-53.9		28	15.5
15	25	28,151	-50.0		27	15.2
10	22	30,845	-42.3		27	24.6
7	17	33,289	-37.9		27	30.3
5	11	35,624	-35.1			
4	[illegible]	37,199	-34.5			

KING SALMON, ALASKA 1011 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	15	-16.5	-20.9	01	1.4
1000	30	96			01	[illegible].6
950	30	490	-9.5	-16.3	01	3.6
900	30	909	-9.2	-18.2	35	2.9
850	30	1,353	-8.0	-18.4	33	[illegible].8
800	30	1,823	-9.1	-21.[illegible]	30	3.1
750	30	2,315	-11.6	-23.4	31	2.9
700	30	2,847	-14.5	-26.2	31	3.6
650	30	3,400	-17.9	-28.[illegible]	30	5.2
600	30	4,000	-21.8	-32.1	29	5.7
550	30	4,631	-25.7	-35.1	29	6.7
500	30	5,322	-30.1	-36.8	29	7.9
450	30	6,058	-35.2	-37.6	29	8.[illegible]
400	30	6,878	-40.5	-42.5	28	9.2
350	30	7,778	-45.3		31	[illegible].7
300	30	8,796	-50.0		30	11.7
250	30	9,978	-53.1		30	11.7
200	30	11,415	-53.0		29	12.6
175	30	12,279	-51.1		29	11.8
150	30	13,283	-50.4		28	11.[illegible]
125	30	14,470	-51.4		28	10.2
100	30	15,918	-51.6		27	9.7
80	30	17,364	-51.7		26	8.5
70	30	18,230	-51.2		26	7.4
60	29	19,240	-51.3		26	6.1
50	28	20,421	-51.6		25	4.5
40	28	21,867	-52.3		24	1.7
30	27	23,717	-52.3		12	.5
25	26	24,901	-50.7		10	2.6
20	22	26,351	-49.2		09	5.4
15	16	28,249	-44.9		09	8.2

+ KOROR, CAROLINE IS. 1007 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	30	27.4	24.4	07	3.6
1000	31	89	26.9	23.8	07	4.5
950	31	539	23.5	19.9	07	9.0
900	31	1,014	20.8	15.7	07	9.5
850	31	1,507	18.4	12.[illegible]	08	8.6
800	31	2,026	16.0	7.4	08	7.8
750	31	2,568	13.4	2.9	08	8.1
700	31	3,151	10.6	.2	08	8.1
650	31	3,765	7.2	-4.[illegible]	09	7.4
600	31	4,420	3.5	-7.7	09	7.7
550	31	5,118	-.4	-12.9	09	7.9
500	31	5,878	-4.8	-18.1	09	8.6
450	31	6,698	-9.2	-23.3	10	9.0
400	30	7,604	-14.7	-29.7	09	8.7
350	30	8,602	-21.5	-36.4	09	8.2
300	30	9,719	-29.9	-44.2	09	7.8
250	30	10,990	-40.3	-53.5	09	8.0
200	30	12,469	-52.9		10	9.0
175	30	13,317	-60.1		10	9.4
150	30	14,261	-67.8		11	9.6
125	30	15,335	-75.8		10	10.8
100	30	16,599	-83.6		10	13.2
80	30	17,839	-81.6		10	11.0
70	30	18,597	-76.7		09	8.3
60	30	19,495	-70.9		09	9.8
50	30	20,588	-66.4		09	16.4
40	30	21,955	-61.4		09	22.9
30	30	23,775	-53.6		10	15.9
25	29	24,957	-50.5		15	2.4
20	28	26,417	-48.5		26	13.6
15	27	28,323	-46.0		27	23.1
10	23	31,040	-42.2		27	25.9
7	14	33,471	-37.8			

See reference note at end of table

NOTE: Data for Jackson, Miss. with Delayed Data

RAWINSONDE DATA

Average monthly values

DECEMBER 1968

KOTZEBUE, ALASKA — 1018 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	5	-20.4	-25.5	09	3.0
1000	31	140	-18.6	-23.4	08	3.1
950	31	527	-15.6	-21.6	12	2.7
900	31	934	-15.1	-22.4	17	1.3
850	31	1,366	-15.3	-24.1	22	1.5
800	31	1,822	-16.7	-26.0	24	2.5
750	31	2,302	-18.4	-28.2	25	3.3
700	31	2,818	-20.9	-29.9	26	4.2
650	31	3,360	-23.9	-32.0	25	5.1
600	31	3,943	-27.1	-33.9	26	6.4
550	31	4,563	-30.5	-36.1	25	10.1
500	31	5,237	-34.8	-38.5	24	13.2
450	31	5,963	-39.4	-42.3	24	13.8
400	31	6,764	-44.4	-43.6	24	15.2
350	31	7,648	-49.4		24	18.0
300	31	8,647	-53.8		24	19.2
250	31	9,812	-55.3		25	17.8
200	31	11,236	-54.3		25	16.4
175	31	12,096	-52.2		25	15.6
150	31	13,094	-51.3		25	16.2
125	31	14,280	-50.9		25	15.3
100	31	15,731	-50.6		25	14.9
80	31	17,187	-50.3		24	13.3
70	31	18,058	-50.1		25	14.4
60	31	19,066	-49.8		25	12.8
50	31	20,259	-49.6		25	12.8
40	31	21,720	-49.6		24	10.8
30	31	23,600	-49.7		25	10.8
25	30	24,792	-49.3		25	8.8
20	25	26,266	-46.3		24	9.5
15	20	28,172	-42.8		26	11.6
10						
7						
5						
4						

KWAJALEIN, MARSHALL IS. — 1008 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	4	26.9	23.5	08	5.0
1000	31	77	26.3	22.8	08	5.2
950	31	529	23.0	19.9	08	6.0
900	31	1,000	20.1	16.7	08	5.9
850	31	1,492	17.9	12.8	08	4.7
800	31	2,010	15.7	8.8	08	3.4
750	31	2,557	13.2	6.2	09	3.1
700	31	3,135	10.4	2.1	09	2.7
650	31	3,750	7.0	-3.3	09	3.3
600	31	4,404	3.4	-11.1	10	4.3
550	31	5,105	-.4	-15.8	09	4.8
500	31	5,862	-4.5	-19.8	09	6.1
450	31	6,684	-9.5	-25.2	08	6.1
400	31	7,584	-15.2	-30.4	06	5.1
350	31	8,580	-21.9	-36.8	06	3.4
300	31	9,696	-30.3	-43.6	02	.4
250	31	10,966	-40.6	-51.1	23	1.6
200	31	12,444	-53.0	-60.0	22	2.6
175	31	13,292	-60.1		24	2.9
150	31	14,236	-67.7		27	2.3
125	30	15,309	-75.9		05	2.5
100	28	16,576	-83.3		08	5.6
80	24	17,806	-83.9		09	9.3
70	24	18,552	-80.0		09	8.0
60	24	19,440	-72.9		09	10.1
50	22	20,524	-68.0		09	15.4
40	22	21,883	-62.6		09	21.1
30	22	23,685	-55.8		09	17.9
25	21	24,851	-52.6		08	2.2
20	20	26,304	-50.6		28	6.7
15	20	28,194	-46.7		27	15.5
10	19	30,910	-43.4		28	24.3
7	17	33,337	-41.1		27	15.2
5	6	35,693	-38.3			

LAKE CHARLES, LA. — 1019 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	5	7.8	4.0	04	1.3
1000	31	164	9.4	2.9	07	1.6
950	31	590	9.4	.0	25	2.7
900	31	1,039	8.7	-2.3	26	6.0
850	31	1,511	7.2	-3.6	27	8.2
800	31	2,009	5.9	-7.2	27	10.3
750	31	2,538	4.6	-11.2	26	11.8
700	31	3,098	2.7	-15.3	26	13.6
650	31	3,694	-.4	-17.4	26	15.0
600	31	4,331	-3.9	-20.3	26	15.7
550	31	5,007	-8.1	-25.0	26	17.9
500	31	5,748	-13.2	-29.1	26	19.7
450	31	6,541	-18.7	-33.3	26	21.8
400	31	7,412	-24.7	-37.6	26	23.6
350	31	8,369	-32.1	-42.8	26	26.8
300	31	9,441	-40.2	-46.3	26	28.6
250	31	10,660	-49.7		26	32.9
200	31	12,090	-58.9		26	40.2
175	31	12,922	-61.7		26	40.4
150	31	13,869	-64.6		26	37.8
125	29	14,976	-67.6		26	33.1
100	28	16,310	-70.4		26	27.4
80	24	17,635	-71.8		26	22.0
70	24	18,423	-70.9		26	19.4
60	21	19,346	-67.8		26	14.8
50	19	20,457	-64.4		26	10.7
40	18	21,830	-62.4		27	14.2
30	17	23,621	-60.2		27	14.1
25	17	24,762	-58.9		27	16.0
20	16	26,170	-56.0		27	15.1
15	14	28,012	-52.0		27	17.2
10	12	30,683	-43.8		27	23.7
7	8	33,083	-38.4			

LANDER, WYO. — 824 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1,696	-10.7	-15.8	20	.5
1000	31	184				
950	31	583				
900	31	1,010				
850	31	1,458				
800	31	1,928	-5.7	-13.7	27	.3
750	31	2,433	-6.1	-15.4	28	3.1
700	31	2,971	-9.0	-18.3	28	7.2
650	31	3,535	-12.6	-21.4	29	11.1
600	31	4,149	-15.9	-24.5	29	14.3
550	31	4,793	-20.2	-28.3	29	15.5
500	31	5,503	-24.8	-31.8	29	18.3
450	31	6,250	-30.0	-37.4	29	19.3
400	31	7,088	-36.1	-40.5	29	21.8
350	31	8,003	-42.4	-44.5	29	25.0
300	31	9,031	-48.6		29	27.0
250	31	10,214	-54.3		28	27.0
200	31	11,632	-57.4		28	26.7
175	31	12,477	-56.9		28	25.2
150	31	13,453	-56.8		28	22.9
125	31	14,606	-57.6		27	19.0
100	31	16,012	-58.8		27	13.8
80	30	17,408	-60.2		27	10.7
70	30	18,238	-60.7		28	8.9
60	30	19,198	-61.1		29	7.3
50	30	20,329	-61.7		28	5.6
40	30	21,716	-60.5		30	3.6
30	28	23,507	-59.4		34	2.9
25	27	24,646	-58.5		02	2.8
20	25	26,055	-57.2		03	2.7
15	19	27,889	-56.8		02	3.2
10	8	30,494	-54.0			

* LIHUE KAUAI, HAWAII — 1010 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	36	20.1	17.2	33	.9
1000	31	118	21.2	17.0	36	1.3
950	31	559	19.3	15.4	05	3.0
900	31	1,027	16.0	12.6	07	1.6
850	31	1,511	13.1	9.4	12	1.0
800	31	2,021	11.4	2.2	22	2.2
750	31	2,558	9.9	-4.8	24	4.3
700	30	3,130	7.3	-11.2	25	4.7
650	30	3,736	4.1	-14.1	27	5.7
600	30	4,383	.1	-18.1	27	7.3
550	30	5,072	-3.8	-21.7	26	8.4
500	30	5,823	-8.5	-25.9	26	10.2
450	30	6,633	-13.9	-30.9	26	12.0
400	30	7,519	-20.1	-35.8	26	14.0
350	30	8,496	-26.8	-41.2	26	17.8
300	30	9,590	-35.0	-48.5	26	19.9
250	30	10,837	-44.5		27	23.5
200	29	12,298	-54.8		27	27.1
175	29	13,143	-59.6		27	27.4
150	29	14,095	-64.4		28	23.2
125	29	15,196	-69.8		27	19.2
100	29	16,505	-75.3		28	13.7
80	27	17,793	-76.7		28	6.5
70	24	18,559	-75.3		29	1.2
60	23	19,459	-71.6		06	2.4
50	23	20,551	-66.1		04	.5
40	23	21,918	-62.4		27	3.5
30	23	23,710	-58.8		27	6.6
25	23	24,859	-57.3		28	7.6
20	21	26,280	-55.5		28	8.0
15	21	28,122	-53.3		27	9.5
10	20	30,769	-47.6		26	18.1
7	16	33,155	-39.7		26	29.8
5	12	35,471	-35.9		26	35.9
4	7	37,033	-35.6			

LITTLE ROCK, ARK. — 1010 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	79	2.9	-1.6	29	1.1
1000	31	157	2.6	-4.0	32	1.5
950	31	572	2.5	-5.4	27	3.8
900	31	1,012	2.5	-6.6	26	7.4
850	31	1,475	2.4	-7.0	27	11.2
800	31	1,964	1.2	-9.4	27	13.2
750	31	2,478	.0	-12.9	27	14.4
700	31	3,034	-2.3	-16.0	27	16.1
650	31	3,613	-4.8	-18.0	27	17.9
600	31	4,246	-8.2	-22.0	27	21.4
550	31	4,912	-11.8	-26.2	27	24.5
500	31	5,642	-16.4	-30.3	27	26.9
450	31	6,419	-22.0	-34.8	27	29.1
400	31	7,284	-28.0	-40.3	27	32.4
350	31	8,230	-34.8	-45.5	27	35.3
300	31	9,291	-42.2	-49.2	27	40.3
250	31	10,503	-50.7		27	43.4
200	31	11,928	-58.7		27	47.8
175	31	12,763	-60.2		27	45.9
150	31	13,721	-61.8		27	40.5
125	31	14,846	-63.3		27	34.4
100	30	16,206	-65.4		27	26.5
80	28	17,560	-66.3		27	20.1
70	27	18,371	-66.1		27	16.9
60	24	19,318	-65.2		27	11.8
50	24	20,434	-63.0		28	8.9
40	22	21,815	-61.5		28	7.4
30	21	23,608	-59.6		28	8.5
25	19	24,731	-58.7		28	8.6
20	19	26,137	-57.0		29	8.7
15	16	27,964	-54.3		28	9.2
10	5	30,548	-48.2			
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MCGRATH, ALASKA — 1003 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	9	103	-22.8	-27.7		
1000	9	122				
950	9	509	-18.7	-23.6		
900	8	908	-17.9	-21.7		
850	8	1,335	-18.0	-20.9		
800	9	1,788	-18.4	-21.7		
750	9	2,264	-19.7	-23.3		
700	8	2,781	-21.2	-26.9		
650	8	3,321	-23.1	-29.0		
600	9	3,910	-25.8	-31.3		
550	9	4,530	-29.4	-35.0		
500	9	5,210	-34.1	-37.7		
450	9	5,937	-39.6			
400	9	6,734	-45.3			
350	9	7,617	-49.3			
300	8	8,618	-52.3			
250	9	9,797	-52.5			
200	8	11,190	-49.7			
175	8	12,065	-49.2			
150	8	13,076	-48.8			
125	8	14,275	-48.0			
100	8	15,752	-47.1			
80	7	17,197	-46.5			
70	7	18,083	-45.8			
60	7	19,110	-46.7			
50	7	20,316	-47.2			
40	7	21,792	-47.8			
30	7	23,686	-48.0			
25	7	24,892	-46.4			
20	7	26,376	-45.7			
15	7	28,295	-44.9			

\+ MAJURO, MARSHALL IS. — 1009 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	3	28.6	25.0	06	3.8
1000	31	83	27.4	22.7	06	4.2
950	31	529	23.6	18.8	08	5.5
900	31	1,008	20.9	15.2	09	5.0
850	31	1,502	18.4	11.7	10	4.2
800	31	2,021	15.9	8.1	10	3.7
750	31	2,566	13.2	5.1	09	3.9
700	31	3,147	10.2	1.2	09	3.7
650	31	3,760	6.8	-3.7	10	4.3
600	31	4,415	3.3	-7.5	10	4.7
550	31	5,113	-.4	-12.6	09	5.0
500	31	5,874	-4.5	-18.4	09	5.9
450	31	6,695	-9.0	-23.9	08	6.7
400	31	7,601	-14.7	-29.4	08	5.8
350	31	8,600	-21.3	-36.0	08	4.0
300	31	9,720	-29.2	-43.6	06	1.5
250	31	10,996	-39.3	-51.8	14	.8
200	31	12,485	-51.5		24	2.0
175	31	13,338	-58.6		25	2.5
150	31	14,290	-66.0		28	2.3
125	31	15,375	-73.7		01	2.4
100	31	16,653	-81.5		07	6.7
80	31	17,896	-82.4		08	9.6
70	31	18,652	-76.9		09	9.0
60	30	19,554	-70.5		09	11.7
50	30	20,650	-65.9		10	16.9
40	30	22,024	-60.3		09	23.0
30	29	23,852	-52.0		09	14.4
25	28	25,044	-48.9		11	.5
20	28	26,517	-46.5		26	10.8
15	26	28,432	-43.9		27	19.0
10	23	31,181	-38.9		28	22.9
7	13	33,647	-35.7			

* MEDFORD, OREG. — 970 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	401	2.2	-.9	15	1.3
1000	31	150				
950	31	565	2.0	-1.3	15	1.8
900	31	1,002	1.5	-2.7	18	4.1
850	31	1,462	-.6	-5.3	21	5.4
800	31	1,945	-3.0	-9.0	24	9.3
750	31	2,452	-5.2	-11.9	25	12.5
700	31	2,995	-7.6	-17.0	26	14.0
650	31	3,565	-10.9	-19.7	26	14.6
600	31	4,180	-14.5	-23.8	27	15.9
550	31	4,830	-18.4	-26.5	28	17.8
500	31	5,542	-23.1	-30.8	28	19.6
450	31	6,299	-28.5	-36.3	28	21.7
400	31	7,142	-34.0	-39.9	28	24.2
350	31	8,066	-40.2	-43.8	28	24.8
300	31	9,105	-46.5		28	27.2
250	31	10,298	-53.3		28	30.4
200	31	11,719	-57.4		28	28.0
175	30	12,564	-57.4		28	26.5
150	30	13,539	-57.1		28	24.1
125	29	14,686	-58.7		28	21.3
100	26	16,080	-60.0		28	18.2
80	26	17,473	-60.1		28	12.5
70	25	18,303	-60.8		29	9.1
60	25	19,261	-60.9		30	6.1
50	24	20,393	-61.6		32	4.9
40	24	21,779	-60.8		34	4.0
30	23	23,574	-59.3		01	3.9
25	23	24,717	-58.7		03	4.7
20	21	26,132	-57.7		05	4.3
15	16	27,969	-55.5		04	4.7
10	13	30,544	-54.4		05	4.0

MERIDA, MEXICO — 1017 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	11	18.0	16.1	08	2.4
1000	31	158	20.5	17.2	09	4.7
950	31	600	18.6	15.1	11	6.0
900	31	1,064	16.3	11.8	11	4.5
850	31	1,550	14.8	6.0	12	2.0
800	31	2,062	12.7	1.2	16	1.0
750	31	2,598	10.3	-2.1	18	1.2
700	31	3,173	7.6	-8.5	24	1.6
650	31	3,778	4.3	-13.6	24	2.1
600	31	4,428	.9	-17.7	24	3.0
550	31	5,116	-3.4	-20.4	24	4.1
500	31	5,870	-7.9	-26.6	23	5.6
450	31	6,677	-13.2	-31.1	25	8.4
400	30	7,568	-19.5	-36.0	25	11.2
350	30	8,547	-26.3	-41.9	25	13.9
300	30	9,642	-34.9	-48.9	25	16.4
250	30	10,888	-44.8		25	19.6
200	30	12,342	-56.2		25	21.0
175	30	13,177	-61.7		25	19.2
150	30	14,121	-66.2		25	18.7
125	29	15,212	-71.3		25	19.4
100	29	16,517	-75.8		25	13.3
80	28	17,800	-77.5		24	6.7
70	28	18,566	-75.8		25	6.2
60	28	19,471	-70.5		25	2.4
50	28	20,573	-63.1		27	2.8
40	28	21,959	-60.1		29	3.7
30	28	23,767	-57.2		28	3.6
25	27	24,926	-55.2		27	5.7
20	23	26,353	-51.6		27	9.0
15	22	28,245	-46.5		27	10.0
10	11	30,954	-40.9			

MIAMI, FLA. — 1019 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	4	15.8	12.4	35	1.0
1000	31	166	17.5	12.3	03	1.9
950	31	603	15.3	10.1	10	2.7
900	31	1,061	13.2	6.0	12	1.3
850	31	1,542	11.7	1.8	25	1.5
800	31	2,048	10.3	-4.0	29	3.1
750	31	2,585	9.0	-8.5	29	4.8
700	31	3,155	6.7	-12.2	28	6.1
650	31	3,756	3.5	-15.2	28	7.6
600	31	4,405	-.3	-18.7	28	9.9
550	31	5,087	-4.8	-22.4	27	10.6
500	31	5,840	-9.8	-26.7	28	13.2
450	31	6,641	-15.3	-31.7	27	15.6
400	31	7,526	-21.3	-36.7	27	18.5
350	31	8,496	-28.8	-41.4	27	21.7
300	31	9,583	-36.7	-48.3	27	26.1
250	31	10,821	-46.1		27	30.5
200	31	12,271	-56.4		27	33.3
175	31	13,109	-61.3		27	34.8
150	31	14,056	-65.5		27	31.4
125	31	15,154	-69.5		27	28.7
100	31	16,473	-73.2		27	23.1
80	31	17,773	-74.4		27	16.8
70	31	18,552	-73.1		27	12.0
60	31	19,459	-70.1		27	8.7
50	31	20,556	-65.5		27	7.7
40	31	21,929	-60.1		28	10.3
30	31	23,739	-56.9		28	13.6
25	31	24,896	-55.8		28	13.6
20	31	26,324	-52.8		27	13.5
15	29	28,198	-48.3		27	16.3
10	26	30,899	-41.4		27	20.8
7	9	33,357	-35.4			

MIDLAND, TEXAS — 917 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	874	-.1	-3.8	24	1.7
1000	31	169				
950	31	584				
900	31	1,022	5.3	-4.2	24	3.2
850	31	1,491	8.5	-9.4	27	8.0
800	31	1,990	6.9	-11.7	27	9.5
750	31	2,517	4.7	-15.0	27	11.2
700	31	3,078	1.5	-18.0	27	12.4
650	31	3,669	-2.3	-20.5	26	13.5
600	31	4,304	-5.6	-24.2	27	15.4
550	31	4,974	-9.6	-27.2	27	18.6
500	31	5,710	-14.4	-31.1	27	19.9
450	31	6,493	-20.4	-35.9	26	22.9
400	31	7,361	-26.6	-40.5	26	24.4
350	31	8,312	-33.9	-45.8	26	26.4
300	31	9,375	-42.2		27	27.4
250	31	10,585	-51.3		27	29.3
200	31	12,007	-59.5		27	30.1
175	31	12,837	-61.8		27	30.4
150	31	13,789	-63.2		27	30.1
125	31	14,902	-66.2		27	29.0
100	30	16,246	-68.6		28	23.2
80	29	17,582	-69.6		27	18.0
70	27	18,378	-68.4		27	14.7
60	26	19,306	-67.0		26	12.1
50	25	20,412	-64.3		26	9.5
40	25	21,785	-62.2		27	7.8
30	21	23,569	-59.8		28	7.9
25	21	24,711	-58.7		27	8.0
20	21	26,119	-56.5		28	8.6
15	15	27,956	-53.0		27	14.4
10	7	30,602	-49.7			

MONTERREY, MEXICO — 971 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	423	9.8	4.8	32	1.8
1000	31	175				
950	31	607	11.9	5.5	34	1.4
900	31	1,057	12.2	3.1	34	.7
850	31	1,536	12.2	-1.6	20	1.3
800	31	2,044	10.7	-3.2	24	3.8
750	31	2,580	8.9	-7.2	25	6.3
700	31	3,149	5.1	-10.8	25	7.8
650	31	3,750	1.3	-14.5	25	9.8
600	31	4,390	-2.4	-17.7	25	11.4
550	31	5,072	-6.5	-21.7	25	11.5
500	31	5,815	-11.3	-25.6	25	13.0
450	31	6,615	-16.8	-30.0	25	14.2
400	31	7,491	-22.8	-35.1	25	16.3
350	31	8,456	-30.2	-42.4	26	20.5
300	31	9,536	-38.6	-48.8	26	24.4
250	31	10,765	-48.3		26	28.1
200	31	12,202	-58.2		26	34.3
175	31	13,034	-62.5		26	31.7
150	31	13,976	-66.3		26	28.8
125	30	15,068	-69.9		26	24.1
100	29	16,385	-72.6		27	19.1
80	29	17,693	-73.3		27	13.7
70	28	18,476	-72.9		27	11.6
60	27	19,391	-68.3		26	7.9
50	25	20,497	-63.9		26	8.0
40	24	21,876	-61.3		26	10.8
30	23	23,672	-59.6		26	11.1
25	22	24,819	-57.5		27	10.3
20	20	26,237	-54.3		27	12.2
15	16	28,094	-50.2		27	15.4
10	11	30,793	-41.4			

MONTGOMERY, ALA. — 1014 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	61	3.4	-.2	30	.5
1000	31	173	5.0	-1.2	34	.6
950	31	596	5.9	-3.5	26	3.9
900	31	1,037	5.8	-6.0	26	7.3
850	31	1,504	5.1	-7.8	27	9.7
800	31	1,999	4.1	-8.9	26	12.1
750	31	2,524	2.8	-10.7	27	14.7
700	31	3,080	.6	-12.6	26	17.0
650	31	3,671	-2.5	-16.0	26	19.4
600	31	4,303	-5.9	-19.1	26	22.7
550	30	4,978	-9.9	-22.9	27	24.9
500	29	5,709	-14.6	-26.4	27	26.8
450	29	6,500	-19.9	-32.3	26	28.9
400	29	7,365	-25.8	-36.6	26	30.6
350	28	8,321	-32.6	-42.3	26	33.4
300	28	9,390	-40.4	-46.6	26	36.0
250	28	10,609	-49.6		26	38.3
200	28	12,039	-58.5		27	41.4
175	28	12,873	-61.5		27	42.3
150	28	13,823	-63.7		26	40.7
125	28	14,934	-66.3		26	36.6
100	27	16,275	-68.2		27	30.3
80	25	17,604	-69.5		27	22.6
70	25	18,400	-68.9		27	17.8
60	25	19,330	-66.5		27	14.4
50	25	20,439	-64.5		27	11.8
40	25	21,814	-61.1		27	11.0
30	25	23,612	-58.7		27	12.3
25	25	24,762	-56.8		28	13.4
20	22	26,184	-55.1		27	13.8
15	22	28,038	-50.8		27	16.2
10	17	30,696	-45.6		27	22.5
7	10	33,114	-39.8			

* NANTUCKET, MASS. — 1013 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	14	-.1	-3.3	29	3.7
1000	31	116			29	4.4
950	31	525	-2.3	-6.5	27	8.3
900	31	954	-4.0	-9.3	27	9.8
850	31	1,404	-5.4	-12.3	28	11.4
800	31	1,879	-6.4	-14.6	27	13.7
750	31	2,382	-7.8	-16.6	27	15.5
700	31	2,918	-9.6	-19.3	27	17.2
650	31	3,485	-12.3	-22.8	27	19.0
600	31	4,096	-15.3	-26.1	27	23.4
550	31	4,745	-18.8	-29.7	27	24.3
500	31	5,453	-23.2	-34.5	27	25.1
450	31	6,211	-28.5	-37.1	27	26.4
400	31	7,051	-34.1	-41.9	27	27.9
350	31	7,974	-40.1	-45.1	27	30.6
300	31	9,013	-45.5		27	33.2
250	31	10,216	-50.4		27	34.6
200	31	11,655	-54.9		27	33.5
175	31	12,506	-56.0		27	30.3
150	31	13,485	-57.2		27	27.4
125	31	14,634	-58.4		27	25.2
100	31	16,031	-59.8		27	20.5
80	30	17,420	-61.6		27	15.1
70	30	18,247	-61.5		27	13.0
60	30	19,202	-61.7		27	12.3
50	29	20,331	-61.8		27	11.9
40	28	21,713	-61.4		28	10.1
30	27	23,496	-60.4		29	7.3
25	27	24,635	-59.4		29	5.1
20	27	26,036	-57.9		28	6.2
15	26	27,867	-55.7		28	5.0
10	17	30,474	-52.0		27	12.8
7	8	32,825	-47.0			

See reference note at end of table

RAWINSONDE DATA

Average monthly values

NASHVILLE, TENN. — 998 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	180	1.5	-3.4	21	1.4
1000	31	163			28	.4
950	31	575	.6	-6.1	23	4.8
900	31	1,010	.1	-7.4	25	8.2
850	31	1,468	-.4	-8.7	26	10.6
800	31	1,953	-.9	-11.1	26	13.4
750	31	2,468	-2.6	-12.7	26	15.2
700	31	3,013	-4.7	-14.7	26	17.2
650	31	3,591	-7.0	-18.2	27	20.5
600	31	4,215	-10.3	-21.9	27	24.6
550	31	4,880	-14.2	-25.9	27	26.9
500	31	5,599	-18.6	-30.8	27	28.9
450	31	6,375	-23.8	-35.3	27	33.0
400	31	7,229	-29.6	-39.8	27	35.9
350	31	8,171	-35.9	-42.6	27	37.8
300	31	9,226	-43.0	-47.4	27	40.2
250	31	10,436	-50.4		27	45.3
200	31	11,866	-57.8		27	46.3
175	31	12,704	-59.3		27	43.4
150	29	13,670	-60.4		27	37.4
125	29	14,801	-62.6		27	33.6
100	28	16,170	-64.5		27	26.0
80	26	17,532	-65.4		27	18.6
70	26	18,344	-64.9		27	16.0
60	26	19,282	-64.4		27	13.0
50	26	20,401	-62.7		27	8.2
40	25	21,778	-61.5		27	7.0
30	24	23,565	-59.8		28	8.1
25	24	24,709	-58.1		28	7.9
20	24	26,118	-56.6		28	7.6
15	23	27,957	-53.4		27	11.4
10	18	30,593	-49.1		28	20.4
7	12	32,960	-43.0			

* NOME, ALASKA — 1016 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	25	5	-18.6	-23.4	06	2.1
1000	25	124			07	2.3
950	25	512	-14.9	-21.7	09	1.5
900	25	921	-14.6	-22.4	02	.6
850	25	1,354	-15.3	-23.7	33	1.2
800	25	1,812	-16.9	-25.4	31	1.6
750	25	2,296	-19.1	-27.1	31	3.1
700	24	2,803	-21.5	-29.8	30	3.4
650	24	3,346	-24.3	-32.6	30	4.8
600	24	3,927	-27.5	-34.4	29	5.6
550	24	4,544	-31.2	-36.7	28	6.4
500	24	5,220	-35.3	-39.2	27	7.2
450	24	5,944	-40.2	-42.3	27	8.4
400	24	6,744	-45.5		27	9.0
350	24	7,626	-50.0		27	10.6
300	24	8,626	-53.6		27	11.8
250	24	9,794	-54.8		28	11.1
200	24	11,226	-52.6		27	11.7
175	24	12,091	-51.6		27	11.6
150	24	13,092	-51.0		26	11.9
125	24	14,280	-50.7		26	11.9
100	24	15,734	-50.8		26	12.0
80	24	17,190	-49.8		25	12.0
70	23	18,055	-50.0		25	11.3
60	22	19,068	-49.8		25	11.4
50	22	20,264	-49.0		24	11.2
40	22	21,729	-49.0		24	10.5
30	22	23,617	-49.0		24	7.9
25	22	24,816	-48.2		23	7.5
20	21	26,290	-45.9		23	6.5
15	18	28,222	-43.2		23	4.3
10	15	30,935	-41.4		24	2.7
7	10	33,359	-40.0		33	1.9

NORTH PLATTE, NEBR. — 915 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	848	-10.9	-13.5	33	2.1
1000	31	159				
950	31	559				
900	31	979	-8.5	-13.7	31	3.8
850	31	1,427	-4.6	-11.8	32	[illegible]
800	31	1,904	-4.3	-12.8	32	9.8
750	31	2,413	-5.6	-14.8	31	10.8
700	31	2,951	-8.1	-17.6	31	12.5
650	31	3,519	-11.3	-20.3	30	13.9
600	31	4,134	-14.6	-23.3	29	[illegible]
550	31	4,785	-18.5	-26.8	29	18.0
500	31	5,493	-23.2	-30.7	29	[illegible]
450	31	6,250	-28.4	-35.9	29	20.5
400	31	7,091	-34.5	-40.6	29	[illegible]
350	31	8,012	-41.0	-45.0	29	26.2
300	31	9,045	-47.5		28	26.6
250	31	10,235	-53.1		28	31.6
200	30	11,658	-57.0		28	32.5
175	30	12,502	-57.7		28	30.0
150	30	13,475	-57.7		28	[illegible]
125	30	14,624	-58.4		28	23.5
100	30	16,024	-59.6		28	18.0
80	30	17,414	-61.0		28	14.7
70	30	18,241	-62.1		28	11.4
60	29	19,193	-62.1		28	8.3
50	28	20,315	-62.3		29	7.1
40	26	21,699	-61.7		29	5.4
30	24	23,483	-60.5		30	4.4
25	20	24,617	-59.1		31	4.5
20	17	26,006	-58.2		32	4.3
15	17	27,823	-57.0		31	4.4
10	11	30,439	-54.0			
7						

OAKLAND, CALIF. — 1019 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	6	6.9	4.1	14	1.4
1000	31	162	7.8	3.6	13	1.7
950	31	583	6.8	1.1	19	1.5
900	31	1,028	5.2	-2.5	24	3.6
850	31	1,494	3.4	-7.0	26	5.9
800	31	1,984	1.3	-9.9	27	7.2
750	31	2,500	-1.1	-14.2	28	9.5
700	31	3,049	-3.9	-18.4	28	10.8
650	31	3,627	-7.1	-22.4	28	[illegible]
600	31	4,252	-10.6	-26.2	28	15.1
550	31	4,914	-14.8	-27.1	29	17.2
500	31	5,633	-19.6	-30.2	29	19.9
450	31	6,404	-24.6	-34.4	29	23.1
400	31	7,257	-30.2	-39.3	28	25.6
350	31	8,194	-37.0	-43.5	28	27.0
300	31	9,244	-44.6		29	30.0
250	31	10,442	-52.7		30	[illegible]
200	31	11,859	-59.7		30	32.5
175	30	12,686	-59.9		30	30.5
150	30	13,650	-59.8		30	27.7
125	30	14,786	-60.9		30	24.4
100	30	16,166	-63.2		29	18.8
80	29	17,535	-64.4		29	14.7
70	28	18,351	-64.5		30	11.5
60	25	19,294	-64.0		31	8.4
50	25	20,412	-63.3		31	6.2
40	24	21,785	-62.3		34	3.2
30	23	23,567	-60.6		33	2.4
25	23	24,705	-59.3		32	2.9
20	23	26,109	-57.4		31	3.0
15	18	27,921	-55.2		29	4.8
10	6	30,551	-51.4			
7						

OMAHA, NEBR. — 967 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	403	-7.3	-11.3	30	.8
1000	31	136				
950	31	535	-7.7	-12.1	30	2.1
900	31	960	-5.7	-11.0	28	5.1
850	31	1,409	-5.4	-12.8	29	7.6
800	31	1,884	-6.0	-13.9	29	9.9
750	31	2,385	-6.9	-16.2	29	12.4
700	31	2,926	-9.0	-19.4	29	13.6
650	31	3,494	-11.8	-22.1	29	15.1
600	31	4,107	-15.4	-26.2	28	16.4
550	31	4,755	-19.5	-29.6	28	19.5
500	31	5,462	-24.0	-34.5	28	23.0
450	31	6,216	-28.9	-38.9	28	25.9
400	31	7,059	-34.6	-42.5	28	29.8
350	31	7,981	-40.4	-46.4	28	34.4
300	31	9,019	-46.8		27	36.3
250	31	10,210	-53.1		27	38.1
200	31	11,636	-56.5		27	41.4
175	31	12,482	-57.0		27	35.0
150	31	13,457	-57.4		27	33.1
125	30	14,609	-58.3		27	27.8
100	30	16,009	-59.4		27	21.0
80	30	17,400	-61.1		27	14.1
70	30	18,227	-62.1		27	10.8
60	30	19,178	-62.3		27	8.4
50	29	20,300	-62.1		27	8.5
40	27	21,686	-61.2		26	2.4
30	26	23,473	-59.8		31	2.4
25	20	24,642	-58.7		09	3.2
20	16	26,067	-57.1		07	3.8
15	15	27,896	-56.0		07	4.0
10	5	30,479	-53.6			
7						

+ PAGO PAGO, AMERICAN SAMOA — 1010 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	5	29.9	25.4	09	3.4
1000	31	89	28.4	23.1	09	3.9
950	31	539	23.9	18.2	09	5.0
900	31	1,014	20.8	14.7	08	4.7
850	31	1,508	18.1	10.8	07	4.7
800	31	2,026	15.7	6.5	06	4.6
750	31	2,569	13.3	2.5	06	3.7
700	31	3,151	10.3	-1.9	05	3.3
650	31	3,762	7.0	-5.3	04	2.8
600	31	4,419	3.0	-10.6	03	1.9
550	31	5,114	-.8	-15.7	36	.9
500	31	5,877	-4.9	-20.0	31	.7
450	31	6,695	-9.7	-25.3	21	1.1
400	31	7,602	-15.4	-31.3	23	2.0
350	31	8,597	-22.3	-38.5	23	2.9
300	30	9,711	-31.0	-46.3	23	5.2
250	30	10,977	-41.4		22	7.9
200	30	12,454	-53.3		22	11.1
175	30	13,301	-59.9		23	11.7
150	30	14,249	-66.5		24	10.1
125	30	15,334	-73.6		24	7.7
100	30	16,618	-79.6		24	4.0
80	30	17,877	-79.8		13	1.5
70	30	18,640	-75.0		09	5.7
60	30	19,547	-70.0		09	11.8
50	30	20,647	-64.5		09	16.6
40	30	22,029	-59.6		09	21.7
30	30	23,848	-55.0		09	22.0
25	29	25,020	-52.2		09	20.2
20	25	26,477	-48.7		08	16.5
15	22	28,391	-44.6		08	10.7
10	16	31,132	-39.7		08	10.8
7						
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■ PEORIA, ILL. — 992 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	200	-3.8	-7.2	25	1.6
1000	31	135			32	1.7
950	31	540	-4.7	-8.8	25	4.0
900	31	965	-5.0	-10.6	26	6.9
850	31	1,414	-5.5	-12.5	27	8.6
800	31	1,889	-6.6	-13.8	28	10.1
750	31	2,395	-7.6	-15.6	28	11.7
700	31	2,928	-9.4	-18.1	28	13.8
650	31	3,499	-11.9	-21.8	28	15.3
600	31	4,108	-15.2	-25.3	28	17.4
550	31	4,759	-19.0	-29.0	28	20.4
500	31	5,465	-23.5	-32.4	28	23.2
450	31	6,223	-28.8	-37.6	27	24.6
400	31	7,061	-34.4	-42.9	27	28.7
350	31	7,983	-40.5	-44.1	27	32.4
300	31	9,021	-46.5		27	38.2
250	31	10,217	-51.9		27	40.0
200	31	11,649	-56.2		27	40.0
175	31	12,496	-57.2		27	37.2
150	31	13,470	-57.8		27	32.6
125	31	14,618	-58.5		27	28.3
100	31	16,013	-60.3		27	21.3
80	30	17,401	-61.4		27	16.3
70	29	18,222	-62.0		28	13.3
60	29	19,174	-62.5		27	11.3
50	29	20,298	-62.7		28	9.2
40	28	21,674	-61.8		28	7.4
30	28	23,462	-60.0		29	6.0
25	28	24,603	-58.7		31	4.0
20	26	26,005	-57.7		31	3.5
15	24	27,836	-55.5		31	4.0
10	24	30,437	-52.5		29	8.3
7	23	32,755	-48.5		28	17.0
5	16	35,006	-43.7		27	20.4

* PITTSBURGH, PA. — 973 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	359	-2.7	-6.5	25	2.8
1000	31	137				
950	31	546	-2.3	-6.8	24	5.1
900	31	973	-4.3	-8.0	25	[illegible]
850	31	1,423	-5.4	-10.6	26	11.7
800	31	1,897	-7.1	-12.3	27	[illegible]
750	31	2,401	-8.6	-15.5	27	15.2
700	31	2,933	-9.6	-18.5	27	17.7
650	31	3,500	-11.8	-21.2	27	[illegible]
600	31	4,113	-14.6	-24.0	27	[illegible]
550	31	4,768	-18.3	-27.7	27	24.3
500	31	5,473	-22.7	-32.5	27	26.5
450	31	6,233	-27.1	-36.4	27	30.9
400	31	7,080	-32.7	-41.5	27	31.2
350	31	8,009	-38.8	-43.4	27	34.8
300	31	9,052	-45.2		27	[illegible]
250	31	10,252	-51.6		27	[illegible]
200	31	11,686	-55.5		27	38.5
175	31	12,534	-57.1		27	[illegible]
150	31	13,506	-58.2		27	35.1
125	31	14,651	-59.4		27	28.1
100	30	16,038	-59.6		27	[illegible]
80	30	17,431	-60.6		27	17.5
70	30	18,260	-61.7		27	[illegible]
60	28	19,214	-61.7		28	[illegible]
50	27	20,342	-61.9		28	[illegible]
40	26	21,724	-61.5		28	7.4
30	26	23,518	-59.4		29	7.8
25	26	24,661	-58.6		28	[illegible]
20	26	26,068	-57.1		29	8.2
15	26	27,895	-55.4		29	[illegible]
10	23	30,502	-52.2		28	[illegible]
7	20	32,849	-47.5		27	16.7
5	[illegible]	35,028	-41.7			

+ PONAPE, CAROLINE IS. — 1004 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	39	28.4	24.3	06	2.8
1000	31	69	28.0	23.7	07	3.4
950	31	515	24.0	19.2	07	[illegible]
900	31	995	20.7	16.1	08	[illegible]
850	31	1,488	18.2	12.3	08	5.4
800	31	2,007	16.0	8.0	08	[illegible]
750	31	2,554	13.4	3.6	09	4.9
700	31	3,132	10.5	-.1	08	5.4
650	31	3,747	7.0	-3.9	08	6.2
600	31	4,401	3.4	-8.3	08	6.7
550	31	5,100	-.4	-13.1	08	6.8
500	30	5,860	-4.6	-18.5	09	5.8
450	30	6,683	-9.0	-25.8	08	6.8
400	30	7,588	-14.5	-31.9	08	[illegible]
350	30	8,587	-21.3	-38.1	07	4.5
300	30	9,706	-29.6	-45.9	09	[illegible]
250	30	10,980	-39.9	-53.5	11	3.7
200	30	12,464	-52.3		11	3.1
175	30	13,314	-59.3		10	3.0
150	30	14,263	-66.9		10	3.1
125	30	15,342	-74.9		09	[illegible]
100	30	16,612	-82.6		09	10.5
80	30	17,848	-82.7		09	11.3
70	30	18,600	-77.3		09	8.7
60	30	19,495	-71.9		09	10.5
50	30	20,582	-67.6		09	16.0
40	30	21,944	-62.1		09	23.0
30	30	23,757	-53.7		09	17.1
25	30	24,937	-50.5		12	[illegible]
20	30	26,399	-49.1		27	10.9
15	28	28,297	-45.7		27	20.7
10	26	31,019	-41.3		27	23.8
7	18	33,437	-40.2		27	16.3
5						

PORTLAND, MAINE — 1010 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	30	-6.1	-10.7	29	1.7
1000	31	97			28	2.1
950	31	498	-5.7	-11.0	28	4.7
900	31	922	-6.7	-11.9	28	5.5
850	31	1,368	-7.9	-12.5	28	6.8
800	31	1,839	-8.6	-14.3	28	9.4
750	31	2,338	-9.8	-16.2	27	10.8
700	31	2,869	-12.0	-19.1	27	13.1
650	31	3,428	-14.6	-22.6	27	16.3
600	31	4,037	-17.8	-26.3	27	18.4
550	31	4,676	-21.7	-30.3	27	21.4
500	31	5,379	-25.7	-33.6	27	22.7
450	31	6,127	-30.8	-37.8	27	24.4
400	31	6,963	-36.2	-42.2	27	26.3
350	31	7,879	-41.6	-44.5	27	29.3
300	31	8,912	-46.4		26	27.8
250	31	10,111	-50.7		27	29.5
200	31	11,553	-53.7		27	29.0
175	30	12,402	-54.3		27	24.3
150	30	13,389	-54.2		27	22.3
125	30	14,554	-56.1		26	21.0
100	30	15,967	-57.3		27	16.4
80	30	17,371	-58.9		27	12.8
70	30	18,207	-59.3		27	11.2
60	30	19,172	-60.1		27	9.2
50	30	20,309	-60.3		[illegible]	7.5
40	30	21,701	-60.0		28	6.1
30	28	23,503	-59.1		30	3.2
25	27	24,646	-58.4		31	3.5
20	23	26,055	-57.3		31	4.1
15	21	27,880	-56.0		29	4.5
10	16	30,477	-52.5		27	11.8
7	9	32,776	-46.9			
5	5	35,050	-43.3			

■ QUILLAYUTE, WASH. — 1005 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	58	2.2	1.1	10	1.3
1000	31	91			[illegible]	1.6
950	31	505	1.4	-2.3	17	4.3
900	31	939	-1.3	-4.7	20	6.7
850	31	1,393	-4.1	-6.7	22	8.1
800	31	1,869	-6.7	-11.7	23	8.8
750	31	2,373	-9.3	-16.1	25	9.7
700	31	2,902	-11.6	-19.8	25	10.5
650	31	3,469	-14.7	-23.0	26	12.2
600	31	4,070	-17.9	-25.6	27	14.6
550	31	4,714	-21.9	-28.4	27	15.4
500	31	5,410	-26.7	-33.3	27	17.3
450	31	6,161	-31.9	-36.6	27	20.4
400	31	6,987	-36.8	-41.0	27	21.2
350	31	7,900	-42.9	-42.4	28	24.2
300	31	8,925	-49.2		28	27.0
250	31	10,105	-54.5		28	28.3
200	31	11,531	-54.7		29	24.5
175	30	12,384	-54.7		29	21.3
150	30	13,369	-55.0		29	20.0
125	29	14,530	-55.2		29	15.9
100	29	15,952	-55.9		29	12.4
80	28	17,363	-57.1		29	9.1
70	28	18,205	-58.1		31	8.0
60	28	19,174	-58.4		30	6.4
50	25	20,321	-57.9		32	5.7
40	25	21,727	-58.0		33	3.7
30	20	23,535	-57.6		02	5.1
25	19	24,688	-57.2		04	5.7
20	17	26,094	-56.8		05	6.5
15	16	27,915	-56.0		05	9.0
10	14	30,477	-55.2		05	11.4
7	5	32,709	-54.1			
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RAPID CITY, S. DAK. — 902 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	966	-9.4	-14.3	34	2.2
1000	30	164				
950	30	565				
900	30	984			32	2.4
850	30	1,431	-6.0	-12.7	31	7.3
800	30	1,906	-6.7	-14.0	31	9.1
750	30	2,406	-8.0	-15.6	31	10.1
700	30	2,943	-10.3	-18.7	30	10.4
650	30	3,506	-13.2	-21.6	29	10.7
600	30	4,116	-16.9	-24.3	29	12.3
550	30	4,761	-21.1	-28.1	29	15.2
500	30	5,461	-25.9	-31.9	29	16.1
450	30	6,211	-30.9	-35.8	28	17.7
400	30	7,042	-36.9	-39.6	28	19.5
350	30	7,954	-43.3	-42.0	28	22.2
300	30	8,977	-49.7		28	23.9
250	30	10,157	-54.5		28	26.3
200	30	11,577	-56.8		28	26.5
175	30	12,424	-56.1		28	25.0
150	30	13,402	-56.5		28	23.2
125	30	14,557	-56.9		28	19.4
100	30	15,967	-58.1		28	16.9
80	30	17,367	-59.7		28	13.2
70	29	18,201	-60.7		28	11.1
60	29	19,159	-61.1		29	10.1
50	29	20,290	-61.1		29	7.8
40	28	21,683	-60.1		30	5.7
30	27	23,482	-59.2		32	2.7
25	24	24,629	-58.5		33	3.6
20	22	26,025	-58.2		34	3.9
15	17	27,843	-57.7		35	2.5
10	[illegible]	30,353	-55.9			
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ST CLOUD, MINN. — 977 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	316	-11.5	-14.9	01	[illegible]
1000	31	136				
950	31	534	-10.6	-12.4	01	1.9
900	31	947	-9.8	-13.3	35	2.3
850	31	1,389	-9.0	-14.0	34	2.6
800	31	1,858	-9.4	-16.3	32	[illegible]
750	31	2,358	-10.5	-18.4	32	4.6
700	31	2,886	-12.5	-21.0	31	6.7
650	31	3,448	-14.9	-23.7	31	[illegible]
600	31	4,051	-18.3	-26.0	30	[illegible]
550	31	4,691	-22.4	-29.7	30	11.8
500	31	5,389	-26.7	-32.9	30	14.0
450	31	6,135	-32.1	-37.5	29	[illegible]
400	31	6,964	-37.7	-42.7	29	18.3
350	31	7,873	-43.7		28	20.4
300	31	8,895	-49.6		28	[illegible]
250	31	10,076	-54.1		28	25.4
200	31	11,503	-54.9		28	25.5
175	31	12,356	-55.0		28	23.4
150	31	13,342	-54.7		28	21.3
125	31	14,509	-55.2		28	17.7
100	31	15,928	-56.4		28	16.2
80	31	17,339	-58.1		28	13.3
70	31	18,177	-58.9		28	10.7
60	31	19,143	-60.1		28	9.2
50	29	20,286	-59.7		29	7.5
40	29	21,680	-59.4		31	4.9
30	29	23,487	-58.4		33	3.1
25	28	24,631	-58.0		35	3.0
20	22	26,037	-57.2		35	[illegible]
15	19	27,862	-57.5		36	4.2
10						
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* ST PAUL IS., ALASKA — 1012 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	10	-.8	-3.1	36	.9
1000	31	106			06	2.8
950	31	512	-3.9	-6.2	12	.8
900	31	939	-6.0	-9.2	22	.9
850	31	1,386	-7.6	-13.4	22	[illegible]
800	31	1,856	-9.4	-16.8	22	[illegible]
750	31	2,353	-12.0	-20.4	22	2.7
700	31	2,879	-14.9	-23.4	24	3.4
650	31	3,434	-17.8	-26.9	25	4.4
600	31	4,031	-21.2	-29.4	24	[illegible]
550	31	4,665	-24.8	-33.5	25	6.4
500	31	5,357	-29.2	-37.4	25	7.9
450	31	6,100	-34.0	-40.3	25	9.9
400	31	6,918	-39.5	-42.1	24	11.0
350	31	7,820	-45.6		23	10.9
300	31	8,835	-51.0		21	13.4
250	30	10,004	-55.6		22	15.6
200	30	11,427	-53.7		23	15.1
175	30	12,288	-52.3		23	11.0
150	30	13,287	-51.7		23	13.2
125	30	14,469	-52.2		23	12.2
100	30	15,912	-52.5		23	11.1
80	30	17,355	-52.5		23	7.8
70	30	18,216	-52.2		23	9.4
60	30	19,212	-52.3		23	7.8
50	30	20,391	-52.2		22	6.6
40	30	21,834	-52.6		19	7.8
30	30	23,690	-52.6		16	[illegible]
25	29	24,875	-51.5		14	5.4
20	28	26,330	-49.8		12	[illegible]
15	26	28,225	-46.6		11	[illegible]
10	24	30,920	-44.8		09	12.3
7	17	33,312	-42.9		09	14.6
5	[illegible]	35,734	-41.9			

SALEM, OREG. — 1007 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	61	2.0	.8	19	2.8
1000	31	119			19	3.8
950	31	533	2.5	-.5	21	6.7
900	31	970	.9	-2.3	22	8.9
850	31	1,428	-1.9	-5.4	23	10.5
800	31	1,908	-4.7	-8.7	23	12.4
750	31	2,412	-7.0	-13.9	24	13.5
700	31	2,950	-9.2	-17.6	25	14.4
650	31	3,517	-12.4	-20.8	26	15.8
600	31	4,128	-15.8	-24.6	26	17.2
550	31	4,775	-20.0	-28.7	27	18.9
500	31	5,479	-24.8	-32.0	27	20.2
450	31	6,230	-30.1	-36.0	27	21.8
400	31	7,066	-35.8	-39.3	28	24.5
350	31	7,983	-41.8	-44.5	28	26.3
300	31	9,012	-48.0		29	26.0
250	31	10,197	-53.9		29	27.5
200	31	11,619	-55.6		29	25.3
175	30	12,463	-56.2		29	22.7
150	28	13,432	-56.3		29	20.3
125	28	14,588	-57.0		29	18.1
100	28	15,998	-57.1		29	16.3
80	25	17,412	-56.3		30	7.9
70	25	18,247	-59.7		30	8.5
60	25	19,210	-59.5		32	6.5
50	24	20,351	-59.9		33	4.3
40	23	21,748	-59.6		36	3.8
30	21	23,547	-59.0		03	4.8
25	20	24,691	-58.7		05	6.3
20	19	26,091	-57.7		06	6.9
15	17	27,904	-57.0		05	7.6
10	12	30,495	-55.7		05	8.7
7						
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See reference note at end of table

RAWINSONDE DATA

Average monthly values

DECEMBER 1968

SALT LAKE CITY, UTAH 871 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1,288	-3.5	-7.7	17	1.4
1000	31	185				
950	31	596				
900	31	1,032				
850	31	1,483	-1.3	-8.6	19	3.1
800	31	1,966	-2.1	-10.5	19	3.6
750	31	2,479	-5.4	-12.8	22	[illegible]
700	31	3,015	-8.6	-15.5	27	7.6
650	31	3,589	-11.7	-18.0	27	10.0
600	31	4,196	-15.1	-22.9	28	13.2
550	31	4,850	-19.1	-27.4	28	15.9
500	30	5,557	-23.6	-30.4	28	17.7
450	30	6,320	-28.9	-35.1	28	19.5
400	30	7,153	-34.9	-40.0	28	21.6
350	30	8,072	-41.2	-44.1	28	23.4
300	30	9,104	-48.1		28	26.4
250	30	10,289	-54.3		28	28.7
200	30	11,707	-57.3		28	29.4
175	30	12,551	-57.5		28	26.8
150	30	13,524	-57.7		27	24.9
125	30	14,669	-59.9		28	22.0
100	30	16,057	-61.2		28	17.5
80	30	17,442	-61.7		28	12.5
70	29	18,265	-61.5		28	8.7
60	29	19,217	-62.5		28	8.1
50	27	20,341	-62.0		29	6.2
40	26	21,724	-61.0		31	3.9
30	25	23,519	-59.5		32	3.6
25	22	24,659	-58.8		34	2.6
20	21	26,073	-57.5		02	1.2
15	17	27,898	-55.9		34	2.1
10	13	30,464	-54.5		28	6.7
7						
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SAN DIEGO, CALIF. 1003 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	124	6.7	3.0	09	1.2
1000	31	151	8.4	3.5	09	1.4
950	31	580	11.7	-2.0	21	.9
900	31	1,030	9.7	-5.3	25	2.1
850	31	1,503	8.1	-8.7	27	4.0
800	31	2,002	6.3	-11.8	29	5.5
750	31	2,529	4.0	-14.3	29	6.7
700	31	3,087	.9	-17.5	29	8.2
650	31	3,677	-2.4	-20.1	28	10.9
600	31	4,311	-6.2	-24.0	29	13.3
550	31	4,979	-10.3	-26.8	28	15.9
500	31	5,715	-14.9	-29.9	28	17.3
450	31	6,499	-20.6	-33.4	28	19.1
400	31	7,367	-26.8	-38.7	28	20.3
350	31	8,316	-34.4	-44.5	28	22.4
300	31	9,376	-42.7		28	24.5
250	31	10,582	-52.0		29	27.0
200	31	11,999	-60.1		29	27.9
175	31	12,827	-62.1		28	29.3
150	30	13,787	-62.6		28	27.9
125	30	14,906	-64.5		28	25.2
100	29	16,271	-66.6		28	19.3
80	29	17,614	-68.1		28	15.5
70	28	18,412	-67.5		28	13.3
60	28	19,343	-66.2		28	8.7
50	27	20,453	-64.4		29	6.5
40	26	21,827	-62.1		28	6.0
30	23	23,615	-59.5		28	7.7
25	22	24,759	-58.1		27	8.8
20	19	26,176	-56.2		28	8.4
15	18	28,010	-53.5		28	11.1
10	12	30,637	-50.0			
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SAN JUAN, P. R. 1015 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	6	23.3	20.1	11	1.3
1000	31	135	23.5	19.6	10	3.8
950	31	583	20.8	17.4	07	5.9
900	31	1,050	17.5	14.1	07	5.7
850	31	1,537	14.9	9.5	07	5.1
800	31	2,048	12.8	3.5	07	4.6
750	31	2,590	11.1	-3.3	08	3.1
700	31	3,163	8.4	-8.3	08	2.4
650	31	3,766	4.9	-11.5	06	1.8
600	31	4,420	1.1	-16.6	02	1.3
550	31	5,110	-2.7	-21.5	32	1.6
500	31	5,866	-6.7	-26.6	31	3.0
450	31	6,677	-11.6	-31.6	31	4.4
400	31	7,574	-17.8	-36.6	30	7.4
350	31	8,559	-25.1	-42.5	30	8.8
300	31	9,659	-33.8	-49.6	30	11.4
250	31	10,911	-43.5		29	14.4
200	31	12,375	-54.5		28	18.0
175	31	13,218	-60.6		28	18.9
150	31	14,163	-66.9		28	18.3
125	31	15,250	-71.7		29	15.3
100	31	16,551	-76.4		30	12.4
80	31	17,827	-78.3		32	6.9
70	31	18,592	-75.6		32	3.5
60	31	19,495	-69.5		31	1.9
50	31	20,600	-63.2		31	1.0
40	31	21,987	-58.7		08	2.7
30	28	23,810	-54.7		08	5.2
25	28	24,983	-52.2		07	3.6
20	26	26,437	-49.2		21	2.1
15	22	28,336	-45.4		26	8.0
10	18	31,063	-41.2		27	9.5
7	6	33,494	-38.9			
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SAN NICOLAS, CALIF. 998 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	174	10.7	6.5	32	2.8
1000	30	155				
950	30	584	11.6	-2.2	32	2.6
900	30	1,035	10.4	-7.2	30	3.4
850	30	1,509	8.9	-8.4	30	4.9
800	30	2,009	6.6	-11.9	29	6.0
750	30	2,535	3.9	-16.3	29	6.9
700	30	3,092	.8	-20.2	29	8.2
650	30	3,683	-2.7	-23.9	29	10.0
600	30	4,313	-6.5	-25.5	28	12.4
550	30	4,987	-10.8	-27.0	29	14.7
500	30	5,714	-15.6	-30.9	29	16.6
450	30	6,500	-21.1	-35.5	29	18.0
400	30	7,359	-27.8	-39.6	28	19.6
350	30	8,304	-35.3	-45.7	28	21.0
300	30	9,358	-43.8	-53.6	29	24.3
250	30	10,557	-53.4	-62.3	29	26.0
200	30	11,966	-60.9	-67.0	28	27.4
175	30	12,794	-61.7	-67.4	28	27.5
150	30	13,746	-62.8		28	26.3
125	30	14,864	-64.8		28	21.3
100	30	16,217	-67.3		28	18.6
80	30	17,561	-67.6		28	15.4
70	30	18,365	-67.0		29	9.7
60	30	19,298	-66.2		29	8.5
50	29	20,411	-63.7		28	6.1
40	29	21,786	-61.8		29	4.8
30	28	23,576	-59.2		27	6.3
25	27	24,725	-57.8		27	7.2
20	27	26,139	-55.9		27	6.3
15	26	27,977	-54.0		28	11.7
10	25	30,601	-50.5		27	16.1
7	19	32,969	-45.0		27	20.6
5	12	35,228	-40.7			

* SAULT STE MARIE, MICH. 987 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	221	-7.6	-10.9	05	1.7
1000	31	118				
950	31	518	-7.8	-11.1	04	1.2
900	31	937	-8.9	-12.6	32	1.3
850	31	1,379	-10.1	-14.3	31	4.0
800	31	1,845	-11.1	-16.7	30	5.8
750	31	2,342	-12.4	-18.7	30	6.7
700	31	2,865	-14.6	-20.8	29	7.5
650	31	3,422	-17.0	-23.4	29	8.6
600	31	4,022	-20.0	-26.3	29	9.5
550	31	4,659	-23.8	-30.4	29	11.4
500	31	5,353	-27.9	-35.2	29	13.0
450	31	6,100	-32.6	-39.3	29	14.1
400	31	6,923	-38.1	-42.7	28	17.2
350	30	7,827	-44.3		27	17.7
300	30	8,847	-49.6		27	20.8
250	30	10,031	-52.9		27	25.4
200	30	11,465	-53.9		27	25.1
175	29	12,320	-53.7		27	23.7
150	29	13,311	-53.9		27	20.7
125	29	14,480	-54.6		27	17.9
100	29	15,905	-55.6		27	14.9
80	29	17,321	-57.4		27	13.5
70	29	18,162	-58.2		28	12.0
60	29	19,132	-59.0		28	9.5
50	29	20,274	-59.4		28	8.5
40	29	21,673	-59.1		29	5.6
30	27	23,486	-58.0		30	4.2
25	27	24,636	-57.6		32	4.0
20	26	26,054	-56.8		33	5.0
15	25	27,878	-56.2		33	4.6
10	25	30,461	-55.0		31	7.4
7	22	32,753	-52.4		29	13.3
5	9	34,991	-47.8			

■ SHEMYA, ALASKA 1007 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	38	.9	-2.5	22	4.0
1000	31	94			25	2.7
950	31	497	-2.6	-5.4	23	2.3
900	31	930	-4.6	-9.0	22	3.4
850	31	1,378	-6.8	-13.0	21	4.1
800	31	1,849	-9.1	-16.9	22	5.2
750	31	2,344	-11.3	-20.8	24	6.4
700	31	2,873	-13.8	-24.2	24	7.9
650	31	3,430	-16.8	-26.6	24	8.8
600	31	4,030	-20.6	-30.6	25	10.6
550	31	4,662	-24.8	-34.5	25	11.9
500	31	5,355	-29.3	-38.8	24	14.8
450	31	6,097	-34.1	-43.0	24	13.7
400	31	6,916	-40.0	-46.3	24	15.1
350	31	7,816	-46.0		24	16.5
300	31	8,827	-51.7		25	17.4
250	31	9,996	-56.1		24	13.7
200	31	11,411	-55.7		23	13.5
175	31	12,263	-34.9		23	13.3
150	31	13,252	-53.5		23	13.3
125	31	14,427	-52.9		23	13.8
100	30	15,864	-53.3		22	12.5
80	30	17,300	-53.4		22	12.1
70	29	18,155	-53.7		22	10.1
60	29	19,146	-53.7		21	9.8
50	29	20,316	-54.2		21	8.6
40	26	21,747	-54.0		21	8.2
30	26	23,595	-53.4		17	6.4
25	26	24,771	-52.4		16	6.3
20	23	26,230	-50.5		14	7.4
15	22	28,111	-48.0		12	10.4
10	18	30,790	-44.5		10	16.5
7	15	33,184	-42.5		10	18.9
5	12	35,468	-42.2			

■ SHREVEPORT, LA. 1010 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	79	4.6	1.0	18	.8
1000	31	162	5.0	-.6	22	.9
950	31	588	6.8	-2.0	25	4.0
900	31	1,027	6.7	-3.9	27	7.0
850	31	1,497	5.6	-5.9	27	9.5
800	31	1,992	3.8	-7.8	27	10.4
750	31	2,516	2.9	-12.0	27	11.6
700	31	3,073	1.1	-15.9	27	13.2
650	31	3,667	-1.8	-19.4	27	15.8
600	31	4,300	-5.0	-22.2	27	18.6
550	31	4,975	-9.1	-26.4	26	21.0
500	31	5,711	-14.2	-30.4	27	22.0
450	31	6,497	-19.9	-34.4	27	24.3
400	31	7,367	-26.2	-39.1	27	26.0
350	31	8,320	-32.9	-44.5	27	28.9
300	31	9,388	-40.9	-46.4	26	30.5
250	31	10,603	-50.4		26	33.1
200	31	12,029	-58.9		27	36.2
175	31	12,862	-61.5		27	38.5
150	31	13,814	-63.2		27	39.1
125	29	14,925	-65.2		27	32.5
100	29	16,275	-67.8		27	27.3
80	29	17,616	-68.1		27	20.2
70	28	18,416	-68.0		27	13.9
60	28	19,345	-65.8		27	10.3
50	28	20,457	-64.1		26	10.6
40	27	21,826	-62.2		27	10.2
30	27	23,614	-60.0		28	9.6
25	26	24,759	-58.1		27	10.4
20	26	26,170	-56.7		28	9.2
15	25	28,003	-53.1		28	12.1
10	23	30,655	-46.8		27	19.6
7	18	33,042	-40.5		27	27.7
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SPOKANE, WASH. 929 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	717	-4.5	-7.2	18	.7
1000	31	133				
950	31	539				
900	31	967	-4.3	-7.4	19	3.7
850	31	1,417	-5.4	-10.1	22	6.7
800	31	1,892	-7.5	-12.5	24	8.4
750	31	2,391	-10.1	-15.0	25	8.8
700	31	2,922	-12.8	-17.2	25	8.9
650	31	3,480	-16.1	-21.2	26	10.9
600	31	4,084	-19.3	-25.5	26	12.8
550	31	4,722	-22.9	-28.8	26	16.0
500	31	5,420	-27.2	-33.2	27	17.9
450	31	6,165	-32.3	-37.6	27	19.9
400	31	6,993	-37.7	-40.0	27	22.9
350	31	7,902	-44.1	-42.6	27	26.1
300	31	8,923	-50.0		28	29.0
250	31	10,103	-54.2		28	30.9
200	30	11,527	-54.5		28	26.7
175	30	12,382	-54.4		28	23.7
150	30	13,371	-54.2		28	19.8
125	29	14,542	-55.2		28	17.3
100	29	15,964	-56.4		29	14.5
80	29	17,380	-56.7		29	11.8
70	29	18,224	-57.3		30	10.1
60	29	19,195	-58.1		30	7.7
50	29	20,343	-58.2		32	6.1
40	28	21,750	-57.6		35	4.9
30	28	23,566	-57.7		02	4.4
25	27	24,712	-57.8		03	6.2
20	25	26,122	-57.1		05	6.4
15	19	27,931	-56.5		06	7.8
10	10	30,518	-54.7			
7						
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* SWAN ISLAND, W. I. 1014 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	10	25.2	21.5	06	4.3
1000	31	128	24.5	21.0	06	6.2
950	31	574	21.2	18.4	07	7.7
900	31	1,043	18.0	14.4	08	6.9
850	31	1,532	15.0	11.0	08	6.3
800	31	2,044	12.8	4.9	09	5.7
750	31	2,585	11.0	.4	09	4.0
700	31	3,159	8.5	-4.1	09	3.7
650	31	3,766	5.2	-7.7	09	3.2
600	31	4,417	1.2	-11.1	09	2.0
550	31	5,107	-2.4	-16.8	08	2.1
500	31	5,863	-6.9	-22.2	15	1.3
450	31	6,674	-12.0	-28.6	23	1.2
400	31	7,569	-18.4	-33.6	24	4.8
350	31	8,552	-25.3	-39.5	24	6.7
300	31	9,650	-34.0	-46.8	25	8.7
250	31	10,900	-43.9		25	10.3
200	31	12,360	-55.4		25	12.2
175	30	13,199	-61.3		25	14.3
150	30	14,142	-67.1		25	14.2
125	30	15,228	-71.9		26	12.2
100	30	16,528	-76.3		26	8.0
80	30	17,808	-77.9		23	2.7
70	30	18,574	-76.2		19	.9
60	30	19,473	-71.3		12	.4
50	30	20,569	-64.8		05	1.8
40	30	21,946	-60.2		09	4.4
30	28	23,761	-56.5		09	6.0
25	28	24,923	-54.3		10	3.5
20	27	26,365	-51.1		27	3.2
15	26	28,253	-46.7		27	8.2
10	25	30,973	-42.1		27	13.8
7	13	33,406	-39.4			
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TAMPA, FLA. 1020 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	8	11.0	7.8	07	1.5
1000	31	172	13.1	6.7	08	2.4
950	31	604	12.6	4.2	22	1.8
900	31	1,058	11.6	1.0	25	4.0
850	31	1,535	10.3	-1.5	25	5.7
800	31	2,039	8.9	-5.4	26	7.4
750	31	2,575	7.2	-9.9	27	8.9
700	31	3,137	4.9	-12.7	27	10.5
650	31	3,738	2.0	-17.9	27	12.6
600	31	4,381	-1.7	-19.9	27	14.2
550	31	5,065	-6.0	-23.5	27	16.0
500	31	5,808	-11.1	-26.9	27	18.4
450	31	6,604	-16.7	-31.3	27	20.7
400	31	7,485	-22.8	-37.5	27	22.0
350	31	8,450	-30.1	-43.8	27	25.3
300	31	9,530	-38.2	-49.0	27	28.7
250	31	10,761	-47.2		27	33.4
200	31	12,205	-57.2		27	38.9
175	31	13,040	-61.3		27	38.1
150	31	13,987	-65.4		27	35.4
125	31	15,087	-68.7		27	32.9
100	30	16,414	-71.7		27	26.8
80	29	17,726	-72.8		27	19.9
70	29	18,510	-71.5		27	16.5
60	28	19,424	-69.5		27	13.3
50	28	20,523	-65.0		27	9.0
40	27	21,894	-61.4		28	10.9
30	25	23,694	-58.2		28	13.7
25	21	24,840	-56.5		28	13.8
20	18	26,262	-53.8		27	15.7
15	14	28,143	-48.4		27	18.1
10	10	30,819	-42.4			
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TOPEKA, KANS. 985 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	269	-4.2	-8.0	28	1.4
1000	31	147				
950	31	553	-3.8	-9.3	27	3.0
900	31	980	-2.6	-9.5	28	5.5
850	31	1,433	-3.3	-11.4	28	8.0
800	31	1,913	-3.8	-12.9	28	10.3
750	31	2,421	-4.5	-16.4	28	13.3
700	31	2,964	-7.0	-18.8	28	15.6
650	31	3,534	-10.2	-21.9	28	18.1
600	31	4,153	-13.6	-25.7	28	19.7
550	31	4,805	-17.4	-29.1	28	20.8
500	31	5,519	-21.5	-33.5	28	21.8
450	31	6,281	-26.5	-37.7	28	24.6
400	31	7,131	-32.0	-42.5	28	27.3
350	31	8,062	-38.7	-45.6	28	31.1
300	31	9,107	-45.1		27	34.7
250	31	10,306	-52.4		27	35.7
200	31	11,728	-57.5		28	36.1
175	31	12,570	-58.4		28	32.8
150	30	13,543	-59.0		28	30.1
125	30	14,685	-60.2		28	25.6
100	30	16,071	-61.6		27	22.0
80	30	17,449	-62.6		27	14.4
70	29	18,274	-62.6		27	10.6
60	27	19,223	-62.9		27	9.4
50	24	20,346	-62.9		28	7.2
40	23	21,722	-61.5		28	5.8
30	19	23,511	-60.4		28	5.8
25	17	24,646	-59.6		28	4.4
20	15	26,062	-57.7		32	2.8
15	12	27,893	-55.7		30	4.5
10						
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+ TRUK, CAROLINE IS. 1009 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	2	28.6	24.5	05	3.4
1000	31	79	27.8	23.2	05	4.3
950	31	526	23.9	19.2	07	7.0
900	31	1,005	21.0	15.6	08	7.4
850	31	1,500	18.7	11.4	08	6.4
800	31	2,019	16.2	7.2	09	5.9
750	31	2,568	13.7	3.1	08	5.2
700	31	3,145	10.8	-2.1	09	5.3
650	31	3,759	7.3	-6.8	09	5.7
600	31	4,416	3.7	-10.3	09	6.4
550	31	5,112	-.2	-15.8	09	7.0
500	31	5,877	-4.0	-19.6	09	7.0
450	31	6,697	-8.6	-24.9	08	8.0
400	31	7,608	-14.2	-30.7	08	7.1
350	31	8,609	-21.0	-37.4	08	6.3
300	31	9,730	-29.3	-44.5	08	4.6
250	31	11,006	-39.6	-53.0	09	3.9
200	31	12,493	-52.0		09	3.9
175	31	13,344	-59.2		10	4.1
150	31	14,293	-66.9		08	5.4
125	31	15,373	-74.8		08	7.2
100	31	16,644	-82.8		09	11.7
80	31	17,883	-81.9		09	10.4
70	31	18,638	-77.2		09	9.1
60	31	19,537	-70.6		09	10.8
50	31	20,630	-66.4		09	16.2
40	31	21,999	-61.1		09	23.2
30	29	23,816	-53.3		09	15.8
25	29	24,999	-50.2		15	2.3
20	28	26,462	-48.4		26	8.7
15	28	28,366	-45.5		27	20.8
10	26	31,090	-41.2		27	24.8
7	20	33,518	-38.0		28	19.5
5	9	35,770	-38.6			

■ TUCSON, ARIZ. 927 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	789	4.6	-5.5	14	3.1
1000	31	164				
950	31	585				
900	31	1,032	9.5	-7.2	16	3.4
850	31	1,505	8.2	-9.6	22	2.8
800	31	2,003	5.6	-12.0	25	4.3
750	31	2,526	3.0	-15.1	26	6.1
700	31	3,084	.2	-16.8	27	7.9
650	31	3,670	-2.7	-21.2	28	10.4
600	31	4,306	-6.3	-24.2	28	13.4
550	31	4,974	-10.5	-27.2	27	16.0
500	31	5,709	-15.4	-31.5	27	18.3
450	31	6,491	-20.8	-35.7	27	21.1
400	31	7,358	-27.1	-40.4	27	23.0
350	31	8,307	-34.4	-45.2	27	24.7
300	31	9,366	-42.5	-46.0	27	26.2
250	31	10,574	-51.4		27	29.1
200	31	11,997	-59.0		27	31.4
175	31	12,830	-61.0		27	31.2
150	31	13,787	-61.7		27	30.0
125	31	14,911	-63.8		27	26.4
100	31	16,267	-67.2		27	21.6
80	31	17,610	-68.0		27	14.9
70	31	18,412	-67.5		27	12.4
60	31	19,342	-66.6		28	10.3
50	31	20,452	-64.1		27	7.9
40	30	21,827	-61.7		27	8.6
30	29	23,625	-58.8		27	8.4
25	29	24,773	-57.9		28	9.1
20	29	26,186	-56.0		27	10.2
15	27	28,025	-53.3		28	14.1
10	23	30,661	-49.9		28	16.1
7	8	33,009	-46.4			
5						

* VANDENBERG AFB, CALIF. 1007 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	100	6.7	3.0	09	.9
1000	31	161	9.1	3.0	07	1.3
950	31	590	10.2	-2.7	35	1.6
900	31	1,036	8.4	-5.9	32	2.7
850	31	1,506	6.7	-9.1	31	4.8
800	31	2,002	4.7	-12.8	30	5.3
750	31	2,523	2.4	-17.7	29	7.6
700	31	3,081	-.4	-20.5	29	9.5
650	31	3,667	-3.5	-22.3	28	11.6
600	31	4,299	-7.2	-25.8	28	14.5
550	31	4,966	-11.6	-27.4	28	16.0
500	31	5,696	-16.7	-29.2	29	18.6
450	31	6,473	-22.2	-34.6	28	19.8
400	31	7,336	-28.4	-39.5	29	21.8
350	31	8,279	-35.7	-45.6	29	24.9
300	31	9,332	-44.1		29	24.3
250	31	10,529	-53.6		29	25.0
200	31	11,937	-60.9		29	27.4
175	31	12,765	-61.7		29	27.0
150	31	13,719	-62.3		28	25.0
125	31	14,842	-63.6		28	22.7
100	31	16,204	-66.0		28	18.5
80	31	17,554	-66.9		28	16.5
70	31	18,360	-66.5		29	13.1
60	31	19,292	-66.3		29	10.2
50	29	20,399	-64.7		30	8.0
40	28	21,769	-62.8		29	7.6
30	27	23,554	-60.6		29	5.8
25	27	24,692	-59.2		28	6.3
20	27	26,095	-57.7		28	6.6
15	26	27,917	-55.2		27	7.1
10	23	30,520	-52.1		28	13.4
7	19	32,853	-48.2		27	20.2
5	10	35,122	-43.2			

VICTORIA, TEXAS 1015 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	33	9.5	6.3	04	1.5
1000	31	157	11.7	5.2	07	2.7
950	31	585	12.0	3.1	18	3.1
900	31	1,040	10.6	1.0	23	5.6
850	31	1,516	9.1	-2.3	24	7.0
800	31	2,018	8.3	-6.7	25	8.4
750	31	2,546	6.6	-10.7	26	9.9
700	31	3,113	4.1	-14.0	26	11.6
650	31	3,706	.7	-17.6	26	12.5
600	31	4,351	-3.2	-21.1	26	13.0
550	31	5,025	-7.6	-24.4	26	15.4
500	31	5,769	-12.6	-27.7	26	17.7
450	31	6,560	-18.0	-31.5	26	20.0
400	31	7,437	-24.0	-35.3	26	20.7
350	31	8,397	-31.5	-41.4	26	23.6
300	31	9,470	-39.8	-46.6	26	27.0
250	31	10,692	-48.9		26	31.5
200	31	12,124	-58.6		26	37.9
175	31	12,956	-62.1		26	39.9
150	31	13,902	-65.0		26	36.0
125	31	15,006	-68.2		26	31.3
100	30	16,335	-71.5		26	25.7
80	30	17,650	-72.0		26	20.1
70	29	18,437	-70.6		26	16.0
60	28	19,353	-68.6		27	13.2
50	25	20,451	-64.9		26	10.9
40	22	21,832	-61.3		27	12.4
30	22	23,625	-59.3		27	14.3
25	22	24,770	-58.2		27	14.4
20	21	26,179	-55.9		27	14.4
15	16	28,034	-52.9		27	16.1
10	14	30,680	-47.1		27	21.3
7	6	33,063	-39.6			
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See reference note at end of table

RAWINSONDE DATA

Average monthly values

* WAKE IS., PACIFIC AREA 1012 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	5	25.0	20.5	06	5.2
1000	31	109	24.2	19.8	06	5.6
950	31	553	20.6	17.2	07	5.3
900	31	1,023	17.0	14.0	07	4.5
850	31	1,510	14.1	9.5	06	2.8
800	31	2,021	12.9	.2	05	1.9
750	31	2,561	12.3	-7.9	02	1.4
700	31	3,139	10.3	-13.4	33	2.3
650	31	3,748	6.9	-16.5	31	3.7
600	31	4,405	3.1	-20.3	30	5.5
550	31	5,097	-1.3	-24.1	28	6.8
500	31	5,857	-6.2	-26.8	28	8.6
450	31	6,669	-11.9	-31.2	28	10.2
400	31	7,566	-17.9	-36.5	28	13.6
350	31	8,553	-23.8	-42.5	28	16.7
300	31	9,660	-31.6	-48.7	28	19.5
250	30	10,926	-41.3		28	19.8
200	30	12,404	-52.5		28	20.5
175	30	13,254	-59.0		28	20.2
150	30	14,205	-65.9		28	18.2
125	30	15,292	-73.2		28	15.8
100	30	16,575	-79.5		28	10.4
80	29	17,833	-81.4		26	2.2
70	29	18,587	-78.2		12	2.2
60	28	19,478	-72.2		10	4.0
50	28	20,569	-66.2		11	3.4
40	27	21,936	-61.4		14	.6
30	26	23,733	-58.1		33	1.9
25	26	24,885	-56.6		01	2.4
20	26	26,306	-54.6		32	1.3
15	26	28,163	-50.9		26	6.1
10	21	30,825	-45.7		26	16.2
7	20	33,239	-38.3		26	25.5
5	14	35,569	-35.8		26	32.3

* WALLOPS IS., VA. NASA 1017 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	3	.9	-3.0	30	2.7
1000	31	140	1.7	-4.8	30	4.3
950	31	553	1.1	-6.9	27	8.4
900	31	988	-.4	-9.2	27	10.2
850	31	1,444	-1.4	-12.0	27	11.1
800	31	1,927	-2.3	-14.5	27	12.5
750	31	2,437	-3.8	-16.9	27	14.5
700	31	2,981	-6.0	-18.3	27	16.1
650	31	3,555	-8.8	-20.0	27	19.5
600	31	4,176	-11.9	-23.9	27	22.5
550	31	4,832	-15.9	-27.6	27	25.1
500	31	5,549	-20.3	-30.8	28	26.6
450	31	6,317	-25.3	-35.0	28	30.4
400	31	7,170	-30.4	-38.6	28	34.6
350	31	8,108	-36.5	-43.4	28	39.4
300	30	9,153	-43.5	-45.4	28	41.0
250	30	10,360	-50.8		28	40.3
200	30	11,793	-56.0		28	41.0
175	28	12,637	-57.9		28	40.4
150	27	13,603	-59.4		28	33.5
125	27	14,738	-61.4		27	27.0
100	26	16,118	-62.9		27	22.1
80	25	17,490	-63.7		27	17.7
70	25	18,308	-63.7		27	13.4
60	25	19,254	-62.9		28	10.8
50	25	20,378	-62.5		27	10.8
40	25	21,758	-61.5		28	9.4
30	25	23,546	-60.3		29	7.7
25	25	24,686	-58.8		29	6.4
20	24	26,093	-56.8		30	6.7
15	22	27,943	-54.3		29	7.7
10	18	30,560	-49.5		28	16.5
7	6	32,886	-43.8			
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WASHINGTON DULLES INT. AP 1008 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	85	-2.7	-6.9	28	2.1
1000	31	143			29	2.5
950	31	554	-1.7	-8.5	27	6.9
900	31	982	-2.6	-9.8	27	10.2
850	31	1,435	-3.0	-13.0	28	11.7
800	31	1,914	-4.0	-17.1	28	13.6
750	31	2,426	-4.9	-18.5	27	14.9
700	31	2,964	-6.9	-18.6	27	16.6
650	31	3,540	-9.3	-21.5	27	18.9
600	31	4,156	-13.0	-25.4	27	21.2
550	31	4,814	-16.7	-29.0	27	24.3
500	31	5,526	-20.8	-33.7	27	26.9
450	31	6,293	-26.0	-36.9	27	30.1
400	31	7,141	-31.7	-41.9	27	34.3
350	31	8,074	-37.5	-44.4	27	37.9
300	31	9,122	-44.6	-48.4	27	41.4
250	31	10,323	-51.7		27	42.9
200	31	11,751	-56.6		27	43.2
175	31	12,594	-58.3		27	42.1
150	30	13,570	-59.0		27	34.6
125	30	14,711	-60.1		27	26.6
100	30	16,095	-62.3		27	22.6
80	30	17,468	-62.8		27	17.4
70	29	18,290	-62.9		27	13.0
60	27	19,239	-62.9		27	9.7
50	27	20,362	-62.5		27	8.7
40	26	21,737	-61.3		28	7.5
30	24	23,531	-59.4		28	5.8
25	20	24,674	-58.4		29	6.0
20	19	26,079	-57.5		28	5.4
15	16	27,895	-55.0		28	7.7
10	15	30,527	-49.8		28	13.4
7	9	32,890	-42.6			
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WINNEMUCCA, NEV. 868 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1,312	-3.3	-6.9	18	1.5
1000	31	181				
950	31	595				
900	31	1,030				
850	31	1,482	-1.0	-8.5	20	3.1
800	31	1,964	-2.7	-11.3	23	6.1
750	31	2,473	-5.4	-13.8	25	8.6
700	31	3,013	-8.2	-16.9	27	11.5
650	31	3,583	-11.4	-20.6	28	12.8
600	31	4,195	-15.2	-24.3	28	14.7
550	31	4,845	-19.1	-28.3	28	16.6
500	31	5,551	-23.5	-31.3	28	18.5
450	30	6,311	-28.7	-33.9	28	18.3
400	30	7,152	-34.4	-39.3	28	20.6
350	30	8,074	-40.4	-42.5	28	23.8
300	30	9,111	-46.8		28	27.3
250	30	10,302	-53.3		28	29.2
200	30	11,720	-58.4		28	28.9
175	29	12,554	-58.1		28	26.6
150	29	13,524	-58.2		28	25.0
125	29	14,670	-59.2		28	22.1
100	26	16,056	-60.3		28	16.8
80	26	17,443	-61.3		29	12.4
70	26	18,270	-61.9		29	8.8
60	26	19,222	-62.2		29	6.2
50	25	20,350	-61.9		30	4.5
40	24	21,736	-60.7		33	3.2
30	21	23,531	-59.4		01	2.1
25	17	24,680	-58.3		04	1.8
20	17	26,090	-56.6		06	2.6
15	13	27,965	-54.2		03	1.8
10	7	30,604	-55.3			
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WINSLOW, ARIZ. 852 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1,492	-6.7	-13.6	18	1.0
1000	31	217				
950	31	625				
900	31	1,055				
850	31	1,506			15	1.1
800	31	1,989	.3	-11.2	24	3.6
750	31	2,507	-.4	-13.5	26	7.8
700	31	3,056	-2.9	-16.5	27	8.8
650	31	3,639	-5.9	-18.6	28	10.6
600	31	4,263	-9.5	-22.2	28	12.4
550	31	4,926	-13.7	-26.4	28	15.3
500	31	5,649	-18.5	-30.2	28	18.3
450	31	6,420	-23.7	-35.3	27	20.3
400	31	7,278	-29.7	-40.5	28	24.1
350	31	8,217	-36.8	-45.7	28	24.8
300	31	9,267	-44.4		28	27.4
250	31	10,467	-52.6		28	28.6
200	31	11,885	-58.7		27	31.2
175	31	12,722	-59.5		27	31.3
150	30	13,691	-60.7		27	28.5
125	30	14,819	-63.0		27	24.6
100	30	16,184	-65.3		27	20.7
80	29	17,538	-67.1		28	16.1
70	29	18,343	-66.6		28	13.4
60	29	19,278	-65.3		28	9.2
50	26	20,385	-64.5		28	6.4
40	25	21,753	-62.3		28	5.5
30	23	23,539	-60.1		28	5.4
25	23	24,680	-58.9		28	6.1
20	21	26,085	-57.8		27	8.9
15	17	27,904	-55.5		28	10.6
10	8	30,503	-51.9			
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YAKUTAT, ALASKA 1006 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	12	-6.4	-10.4	08	3.1
1000	30	60			09	3.3
950	30	467	-2.1	-9.0	10	6.5
900	30	896	-4.5	-9.8	12	6.8
850	30	1,344	-7.2	-11.2	14	6.5
800	30	1,815	-10.2	-14.0	15	5.5
750	30	2,308	-13.0	-18.0	15	3.6
700	30	2,833	-15.9	-22.2	15	2.7
650	30	3,387	-19.2	-25.6	14	.5
600	30	3,980	-22.9	-29.5	35	1.4
550	30	4,611	-27.2	-34.4	33	3.3
500	30	5,293	-32.2	-38.4	33	4.1
450	30	6,024	-37.6	-40.4	32	5.5
400	30	6,832	-43.5	-45.7	31	6.9
350	30	7,719	-48.4		31	10.4
300	30	8,726	-51.6		31	12.8
250	30	9,905	-52.9		31	12.8
200	30	11,348	-51.1		30	12.1
175	30	12,218	-50.1		30	11.9
150	30	13,226	-49.9		29	12.0
125	30	14,417	-50.1		30	10.5
100	30	15,873	-50.3		29	9.6
80	30	17,331	-49.9		29	8.6
70	30	18,201	-50.7		30	6.7
60	30	19,205	-51.0		30	5.4
50	30	20,389	-51.8		32	4.6
40	30	21,834	-52.2		35	3.8
30	30	23,692	-52.4		02	4.0
25	30	24,872	-51.6		04	4.7
20	29	26,323	-51.1		04	5.3
15	23	28,194	-49.9		05	8.0
10	17	30,853	-50.2		06	13.7
7	7	33,306	-47.0			

\+ YAP, CAROLINE IS. 1008 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	14	27.6	23.9	07	4.4
1000	31	86	26.8	22.8	07	5.7
950	31	535	23.2	18.5	07	10.7
900	31	1,009	20.3	14.3	07	10.4
850	31	1,502	17.8	10.0	08	5.6
800	31	2,019	15.8	5.5	08	5.5
750	31	2,559	13.5	.8	08	5.2
700	31	3,143	10.6	-3.5	09	7.9
650	31	3,754	7.5	-8.3	09	5.7
600	31	4,412	3.5	-11.3	09	5.6
550	31	5,110	-.4	-14.5	09	5.8
500	31	5,870	-4.7	-19.6	09	8.1
450	31	6,689	-9.2	-25.7	09	8.6
400	31	7,595	-14.7	-31.7	09	8.2
350	31	8,593	-21.7	-37.7	09	7.4
300	31	9,710	-29.9	-45.2	09	5.3
250	31	10,983	-40.2	-53.9	10	4.7
200	31	12,465	-52.6		11	5.0
175	31	13,314	-59.8		11	5.2
150	31	14,259	-67.5		11	6.0
125	31	15,335	-75.6		10	9.4
100	31	16,599	-83.7		10	12.0
80	31	17,835	-83.0		10	11.5
70	31	18,586	-78.5		10	5.6
60	31	19,483	-71.7		08	5.8
50	30	20,573	-66.5		09	14.1
40	30	21,942	-61.1		09	20.8
30	29	23,754	-55.5		10	18.1
25	29	24,925	-52.3		12	5.4
20	29	26,379	-49.1		26	7.4
15	25	28,273	-46.8		26	17.5
10	23	30,988	-42.4		27	21.4
7	17	33,437	-36.2		26	16.0

YUCCA FLAT, NEV. 883 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1,198	-5.8	-13.4	31	.5
1000	31	203				
950	31	609				
900	31	1,045				
850	31	1,498	1.2	-11.6	31	1.0
800	31	1,985	-.1	-13.5	23	1.9
750	31	2,501	-1.7	-14.7	26	4.7
700	31	3,047	-4.1	-17.9	27	7.5
650	31	3,627	-7.4	-20.8	28	9.3
600	31	4,248	-11.2	-23.6	29	12.5
550	31	4,909	-15.2	-26.9	28	15.0
500	31	5,625	-20.1	-31.2	28	17.8
450	31	6,395	-25.1	-35.8	28	20.4
400	31	7,245	-31.2	-40.0	28	22.7
350	31	8,179	-37.9	-44.0	28	25.7
300	31	9,225	-45.1		28	27.6
250	31	10,422	-52.7		28	29.1
200	31	11,839	-59.3		28	30.0
175	31	12,674	-59.7		28	28.5
150	30	13,641	-59.6		27	26.9
125	30	14,776	-59.8		28	23.4
100	30	16,153	-63.6		28	19.5
80	30	17,520	-64.5		27	14.4
70	29	18,334	-64.6		28	10.0
60	29	19,275	-64.0		29	6.8
50	27	20,393	-63.0		29	5.6
40	26	21,769	-61.9		30	3.5
30	26	23,557	-60.2		29	4.7
25	20	24,703	-58.7		30	4.9
20	15	26,115	-57.6		30	4.7
15						
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YUMA, ARIZ. 1002 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	21	131	4.9	-6.3	03	.9
1000	21	148			02	1.4
950	21	575	11.9	-6.4	35	3.1
900	21	1,026	10.0	-8.0	35	3.4
850	21	1,499	8.1	-10.6	31	2.9
800	21	1,997	5.9	-13.7	29	4.2
750	21	2,515	3.5	-16.0	30	5.1
700	21	3,081	1.0	-19.7	30	6.8
650	21	3,663	-2.2	-22.4	30	8.7
600	21	4,305	-6.0	-25.1	29	11.6
550	21	4,970	-9.9	-27.9	29	13.9
500	20	5,712	-15.2	-30.8	29	15.2
450	20	6,489	-21.1	-36.4	29	16.2
400	19	7,356	-27.4	-41.9	29	20.9
350	18	8,296	-35.3	-46.6	29	21.6
300	18	9,351	-44.1		29	21.9
250	18	10,549	-53.9		29	25.4
200	10	11,982	-60.8			
175	5	12,828	-63.1			
150	5	13,780	-62.1			
125	5	14,890	-64.7			
100						
80						
70						
60						
50						
40						
30						
25						
20						
15						
10						
7						

Note: All observations scheduled at 1200, G.C.T. Pressures shown under station names are the average monthly station pressures for the month of record, corrected to the height of the floors of the instrument shelters used for rawinsonde purposes. "Number of observations" refers to those of dynamic height only. Although the number of temperature observations at any given pressure surface is usually the same as for height, it is possible for temperature to be missing for one or more pressure surfaces of some observations. Dew Point averages are limited to those observations with temperatures warmer than -40°C. Observations of wind speed and direction are sometimes lost due to limiting angles, i.e., elevation angles less than 6° above the horizon, or any obstruction above the horizon.

The temperature and wind values are based on 15 or more observations at the surface or 5 observations at a standard pressure level for temperature and 10 for wind. Dew Point data are not published for standard pressure surfaces for which less than 5 observations are available. Dew Point data are computed and expressed on the basis of vapor pressure over water. Unless otherwise indicated, they are obtained from carbon hygristors.

These average values for standard pressure surfaces were obtained by rawinsondes; dynamic height (geopotential) in units of .98 dynamic meter, temperature and dew point in degrees Celsius, and resultant winds in tens of degrees and meters per second.

* Rawinsondes at this station were equipped with hypsometers to permit more accurate evaluations of pressure, and consequently height, at pressures lower than 50 mb. These rawinsondes were carried aloft by special high altitude balloons, in an effort to consistently reach higher altitudes.

\+ Observations for these stations are scheduled at 0000 G.C.T.

† Dew Point temperatures are based on a minimum of 5 observations. Therefore, due to the lesser number of Dew Point observations at the higher levels comparison with dry-bulb temperatures should be made with care. Dew Point temperatures replaced Relative Humidity January 1967.

SOLAR RADIATION DATA

Solar radiation intensities, tabulated in langleys per minute on a surface normal to the direction of the sun. DECEMBER 1968

Date	Sun's zenith distance								
	A. M.				*	P. M.			
	78.7°	75.7°	70.7°	60.0°		60.0°	70.7°	75.7°	78.7°
BLUE HILL OBS., MASS.									
	Air mass								
	4.89	3.92	2.94	1.96	*	1.96	2.94	3.92	4.89
Dec.									
1	0.99	1.08	1.18	----	1.25	----	1.18	----	----
3	.88	.96	1.05	----	----	----	----	----	----
6	.82	.90	1.08	----	1.18	----	1.07	0.96	0.84
7	.91	1.01	1.15	----	1.24	----	1.10	.91	.79
9	1.00	1.10	1.21	----	1.30	----	1.23	1.11	1.00
10	.93	1.05	1.20	----	1.35	----	1.25	1.11	1.04
17	----	----	----	----	1.20	----	1.08	.96	.87
18	.96	1.06	1.13	----	1.23	----	----	----	----
19	.95	1.06	1.18	----	----	----	----	----	----
24	.86	.96	1.08	----	1.17	----	----	----	----
25	.96	1.07	1.22	----	1.30	----	1.21	1.10	1.00
26	1.05	1.15	1.27	----	1.35	----	1.25	1.15	1.06
27	----	1.01	1.12	----	1.21	----	----	----	----
30	1.00	1.11	1.24	----	1.33	----	1.23	1.11	.99
Averages	0.94	1.04	1.16	----	1.26	----	1.18	1.05	0.95
TUCSON, ARIZ.									
	Air mass								
	4.56	3.65	2.74	1.83	*	1.83	2.74	3.65	4.56
Dec.									
1	0.86	0.97	1.11	----	----	----	----	0.93	0.84
2	----	----	----	1.26	1.40	1.20	1.14	1.04	.95
3	.99	1.12	1.21	1.35	1.44	1.38	1.24	1.11	1.00
4	1.02	1.14	1.24	1.38	1.45	1.39	1.22	1.11	.99
5	.99	1.09	1.19	1.34	1.40	1.35	1.21	1.06	.94
6	.95	1.10	1.22	1.36	1.39	1.35	1.14	1.03	.89
7	.88	1.00	1.15	1.26	1.29	1.30	1.06	----	----
9	.88	.99	1.10	1.26	1.30	1.23	----	1.02	----
11	.88	----	----	----	----	----	----	----	----
12	.75	.88	1.03	1.25	1.27	1.33	1.19	1.03	.91
13	.92	.98	1.14	1.32	1.38	1.33	----	----	----
14	----	----	----	----	----	1.32	----	----	.94
16	----	----	1.10	1.29	1.34	1.29	----	----	----
17	----	----	----	1.29	1.32	1.28	1.11	.98	.88
19	----	----	1.20	1.35	1.38	1.34	1.21	1.08	.98
28	----	1.09	1.22	1.36	----	1.37	1.25	1.13	1.02
29	----	1.10	1.22	1.36	1.40	1.37	1.22	1.13	1.03
30	1.00	1.12	1.22	1.39	1.44	1.40	1.24	1.08	.97
31	1.00	1.12	1.20	1.37	1.43	1.40	1.24	1.12	1.01
Averages	0.93	1.05	1.17	1.32	1.38	1.33	1.19	1.06	0.95

* Values corresponding to true solar noon

Date	Sun's zenith distance								
	A. M.				*	P. M.			
	78.7°	75.7°	70.7°	60.0°		60.0°	70.7°	75.7°	78.7°
ALBUQUERQUE, N. MEX.									
	Air mass								
	4.19	3.35	2.51	1.67	*	1.67	2.51	3.35	4.19
Dec.									
3	----	----	1.30	1.42	1.45	1.39	----	----	----
4	----	----	----	----	----	1.43	1.37	1.16	1.07
5	1.09	1.19	1.30	1.45	1.46	1.44	1.25	----	----
6	1.12	1.21	1.32	1.42	1.45	1.41	----	----	----
7	----	----	----	----	1.41	1.40	1.23	1.11	.99
8	----	----	----	----	----	----	----	1.13	----
9	1.05	1.16	1.29	1.43	1.44	1.43	1.25	1.14	----
11	.92	----	----	----	----	----	----	1.04	.92
12	1.10	1.18	1.30	1.44	1.47	1.45	1.32	1.22	1.11
13	1.08	1.18	1.28	1.44	1.44	1.42	1.28	1.15	1.04
16	----	----	----	----	----	----	1.24	1.14	1.00
17	.99	1.13	1.25	1.39	1.41	----	1.21	1.08	----
18	----	----	1.23	1.42	1.46	1.45	1.31	----	----
19	1.02	1.12	1.26	----	----	----	1.28	1.18	----
20	1.08	----	1.30	----	----	----	----	----	----
21	----	----	----	----	----	----	----	1.08	.96
22	1.03	1.14	1.26	1.43	1.45	1.43	1.30	1.19	1.09
23	1.12	1.20	1.32	1.45	1.46	1.45	1.27	1.15	1.07
24	1.09	1.18	1.28	1.42	1.43	1.41	1.30	1.16	1.08
27	----	----	----	----	----	----	----	1.19	1.08
28	----	----	----	1.40	----	----	1.27	----	1.08
29	----	----	----	----	----	----	1.21	----	.92
30	1.08	1.16	1.26	1.44	1.43	1.43	1.26	1.16	1.06
31	1.08	1.18	1.30	1.43	----	----	1.25	1.12	1.03
Averages	1.06	1.17	1.28	1.43	1.44	1.43	1.27	1.14	1.03
MADISON, WIS.									
	Air mass								
	4.69	3.75	2.81	1.88	*	1.88	2.81	3.75	4.69
	No record; defective pyrheliometer								
GUAM, M. I.									
	Air mass								
	4.92	3.93	2.95	1.97	*	1.97	2.95	3.93	4.92
	Recorder inoperative								

Langley is the unit used to denote one gram calorie per square centimeter. An explanation of the formula used in computing the air mass values for each station listed above appears in the February 1957 issue, Vol. 8, No. 2, page 63, of this publication.

SOLAR RADIATION DATA

Daily totals and monthly averages of solar radiation (direct and diffuse) received on a horizontal surface, tabulated in langleys. DECEMBER 1968

Station	Day of month																														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
ALBUQUERQUE N.M.	110	112	319	304	310	305	290	259	300	273	223	306	302	215	178	254	269	306	270	268	---	304	298	289	245	50	203	294	234	301	299	256
AMES IOWA	28	49	62	156	203	148	192	---	---	---	153	79	72	203	73	191	79	10	62	174	43	44	184	131	65	22	20	106	99	96	211	106
ANNETTE ALASKA	---	---	---	---	---	29	52	19	56	36	37	6	35	10	67	8	34	86	82	65	9	61	64	41	64	67	69	71	71	70	73	49
APALACHICOLA FLORIDA	111	75	58	380	355	---	178	365	374	335	361	220	260	366	374	373	317	289	285	230	197	228	179	365	354	353	275	352	364	294	32	277
ARGONNE NAT. LAB.	42	45	103	168	222	213	220	249	123	129	193	34	101	127	121	165	150	44	18	57	75	33	137	150	176	59	23	48	215	62	243	121
ASTORIA OREGON	---	---	---	38	89	144	63	131	---	---	---	---	---	---	---	54	36	79	163	143	36	10	10	39	33	61	28	34	119	40	---	---
ATLANTA GEORGIA	24	143	30	154	293	281	227	307	278	182	268	186	73	234	293	302	198	271	66	232	76	20	285	297	291	257	97	241	295	223	33	199
BETHEL ALASKA	26	41	30	41	29	47	24	28	13	4	11	6	8	13	6	19	---	---	1	6	---	19	12	2	5	43	11	19	11	14	33	18
BISMARCK N.DAK.	76	92	167	132	167	106	176	99	131	42	42	63	175	157	164	134	78	71	111	130	115	100	135	127	57	100	125	143	133	154	184	119
BLUE HILL MASS.	207	36	162	9	127	199	200	110	214	214	185	182	169	24	31	175	189	179	140	22	71	105	30	160	210	207	137	17	117	208	68	132
BOISE IDAHO	65	148	102	60	87	177	141	145	34	28	67	160	83	75	54	121	147	48	80	177	175	114	61	37	116	91	16	121	74	104	92	97
BROWNSVILLE TEXAS	392	105	378	401	378	333	142	237	182	148	159	267	319	373	262	227	171	255	124	225	197	118	231	350	245	330	362	366	325	214	91	255
BURLINGTON VERMONT	108	35	32	21	47	61	168	45	72	181	212	73	61	13	28	119	117	138	170	53	70	73	38	67	170	184	170	35	45	189	54	92
CAPE HATTERAS N.C.	248	64	109	53	302	303	165	294	314	233	298	283	205	42	235	308	289	284	109	111	280	79	59	302	305	285	268	79	268	266	81	210
CARIBOU MAINE	220	85	94	63	51	134	165	67	105	135	162	62	86	45	35	62	100	129	117	78	145	101	35	114	124	175	183	83	78	202	136	109
CHARLESTON S.C.	50	73	23	311	326	319	126	336	341	200	329	318	136	198	329	335	254	299	216	137	261	61	102	335	318	243	271	187	314	310	57	230
CLEVELAND OHIO	53	62	49	50	72	97	91	74	147	161	---	61	89	85	129	185	158	59	59	16	39	61	37	121	144	45	18	64	98	153	162	85
COLUMBIA MISSOURI	64	202	80	196	229	256	268	281	239	242	136	39	120	264	226	235	36	72	54	136	24	71	225	198	119	63	21	119	198	28	272	152
DAVIS CALIFORNIA	270	272	271	273	214	142	65	65	109	50	234	204	100	88	63	262	260*	258*	252	264	264	63	51	59	118	203	81	69	227	229	209	171*
DODGE CITY KANSAS	265	236	278	244	234	271	276	205	258	205	197	70	258	231	142	203	230	62	272	191	41	314	271	269	217	106	60	231	164	263	286	211
E. LANSING MICHIGAN	36	53	99	90	98	73	---	183	193	177	---	44	36	66	190	172	216	104	21	26	81	18	74	102	143	45	9	11	85	76	134	92
EL CENTRO CALIF. NPF	311	334	316	316	316	326	279	279	279	231	275	310	264	264	262	251	308	258	276	172	310	438	438	176	176	176	176	321	300	300	308	282
EL PASO TEXAS	362	350	368	354	355	351	347	346	320	313	288	355*	359	337	323	297	333	331	250	294	274	359	342	334	293	94	216	335	344	335	362	320*
ELY NEVADA	230	299	265	293	288	257	177	224	202	153	185	301	227	93	162	179	242	257	129	233	290	280	239	152	152	186	212	189	299	184	258	221
EPPLEY NEWPORT R.I.	219	66	164	6	116	201	197	126	208	206	184	187	178	35	34	155	191	188	66	23	106	97	6	147	204	193	82	11	100	206	79	128
FAIRBANKS ALASKA	7	6	4	9	6	6	17	6	7	12	5	3	7	2	3	5	3	1	2	4	11	12	10	4	16	7	5	8	14	5	4	7
FORT WORTH TEXAS	344	331	344	324	330	335	335	336	197	187	70	250	317	323*	323	106	92*	201	304	165	45	320	331	326	284	224*	149	304	317	279	322	262*
FRESNO CALIFORNIA	85	141	249	138	123	154	170	196	189	33	247	244	132	37	178	246	75	181	157	107	225	158	121	49	104	132	121	89	165	157	206	149
GAINESVILLE FLORIDA	255	240	288	380	394	299	320	382	314	310	315	245	103	293	358	326	356	351	191	213	352	301	138	363	352	344	315	191	357	312	100	292
GLASGOW MONTANA	72	163	70	121	30	157	130	66	166	130	---	---	---	---	---	---	---	---	---	128	119	134	105	91	103	96	111	88	117	143	152	113
GRAND JUNCTION COLO.	148	277	264	287	243	282	277	208	290	276	---	280	260	203	172	187	102	268	119	100	149	281	214	131	105	204	200	208	238	286	261	217
GREAT FALLS MONTANA	135	166	34	118	170	160	68	150	98	60	34	84	139	104	123	75	75	127	75	139	140	118	115	51	120	76	45	85	155	99	59	103
GREENSBORO N.C.	72	97	53	89	275	275	70	234	275	217	268	255	136	140	262	259	264	217	80	145	258	27	189	266	166	162	218	217	260	188	23	182
INDIANAPOLIS INDIANA	22	54	121	62	249	228	201	243	200	98	215	62	196	95	249	159	203	40	80	60	47	23	127	195	137	36	14	31	100	48	217	123
ITHACA NEW YORK	85	15	71	7	91	123	104	56	139	192	188	129	109	24	40	65	178	197	29	26	63	43	27	126	144	171	28	22	37	120	25	86
LAKE CHARLES LA.	71	205	373	392	374	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
LAKELAND FLORIDA	456	387	448	466	446	---	---	---	---	334	355	334	162	192	396	379	258	282	162	215	339	254	106	373	370	340	415	117	363	325	267	316
LANDER WYOMING	180	213	111	223	226	209	165	214	124	178	205	209	215	183	134	172	156	192	140	104	225	228	175	211	182	147	240	129	149	168	271	183
LARAMIE WYOMING	184	148	145	84	146	157	196	204	214	157	187	180	211	168	168	158	153	195	135	123	119	196	63	88	147	123	189	155	148	96	153	154
LAS VEGAS NEVADA	300	321	315	315	309	304	275	211	254	274	289	302	250	227	280	259	305	252	183	136	307	296	277	137	77	126	262	287	295	285	291	258
LITTLE ROCK ARKANSAS	72	154	150	260	292	276	299	303	226	260	89	41	307	323	324	273	50	151	323	306	31	188	355	338	114	59	37	294	346	94	352	216
LOS ANGELES CALIF.	311	311	291	311	282	253	251	245	204	191	277	284	221	119	113	262	301	263	206	148	280	277	298	110	35	295	228	244	251	283	299	240
LOS ANGELES CALIF. U	299	309	284	313	---	277	279	188	224	188	298	283	293	108	108	237	283	239	189	223	224	282	285	77	77	234	264	222	223	295	301	237
MADISON WISCONSIN	40	40	55	116	217	220	170	221	108	146	176	23	82	145	174	192	122	30	36	155	114	38	181	120	162	50	---	94*	218*	78	220	125*
MATANUSKA ALASKA	---	---	34	17	41	32	12	40	37	26	11	15	9	7	5	17	32	5	10	8	24	27	19	27	21	30	12	17	40	7	32	21
MEDFORD OREGON	107	112	37	63	157	100	97	204	131	130	163	175	79	203	152	86	110	39	115	57	66	39	32	109	92	112	39	61	200	104	53	104
MIAMI FLORIDA	274	386	356	228	443	412	403	388	---	305	417	288	278	350	434	432	295	318	302	363	288	254	303	432	423	348	398	342	294	177	354	343
MIDLAND TEXAS	328	313	328	321	326	318	317	313	229	269	249	268	308	310	302	278	266	310	168	220	230	316	316	300	288	142	294	288	300	---	287	284
NASHVILLE TENNESSEE	38	224	151	171	293	282	276	288	261	226	258	136	150	149	255	268	47	173	257	257	47	29	69	264	231	64	62	25	223	176	84	175
NEW YORK N.Y. U	103	191	142	3	94	212	210	200	224	226	165	176	175	3	100	146	210	184	57	56	69	45	75	181	217	194	18	4	103	198	87	131
NORTH OMAHA NEBRASKA	36	132	224	174	194	205	232	207	207	170	180	104	130	---	148	---	52	---	161	155	69	148	206	136	145	61	49	156	105	179	241	150
OAK RIDGE TENNESSEE	46	162	46	39	295	294	280	289	286	173	257	223	36	94	268	285	216	248	66	270	122	23	84	284	234	75	83	54	225	220	26	171
OKLAHOMA CITY OKLA.	176	312	316	280	290	300	311	295	203	255	134	250	304	222	235	249	155	166	293	228	36	336	358	---	277	174	21	266	290	147	312	240
PAGE ARIZONA	---	---	---	---	344	326	303	199	300	255	233	306	285	256	209	225	162	281	203	248	239	310	297	230	174	132	303	263	305	298	---	257
PALMER AAES ALASKA	15	14	25	17	33	26	13	31	23	28	15	18	10	8	7	19	26	14	14	7	21	21	19	23	25	25	11	19	29	8	28	19

Note. --Langley is the unit used to denote one gram calorie per square centimeter.
Values with an asterisk are interpolated.

U Indicates Urban sites.

SOLAR RADIATION DATA

Daily totals and monthly averages of solar radiation (direct and diffuse) received on a horizontal surface, tabulated in langleys. DECEMBER 1968

Station	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
PHOENIX ARIZONA	259	332	331	323	315	305	299	234	302	253	265	324	307	245	218	260	221	248	302	82	319	318	305	273	184	176	290	240	301	307	315	273
PORTLAND MAINE	198	50	122	12	140	197	183	81	206	208	172	182	151	19	22	60	163	198	195	34	138	66	29	177	170	209	186	25	66	207	139	129
RAPID CITY S.DAK.	108	209	160	191	138	188	206	130	192	195	177	132	198	182	97	104	47	158	103	142	96	179	133	102	92	72	114	134	183	118	211	145
RENO NEVADA	111	253	242	188	234	207	194	157	161	100	250	206	128	194	29	234	224	181	208	269	247	117	119	203	64	195	139	168	218	179	107	178
RICHLAND 25 NW WASH.	160	90	115	34	136	157	55	99	42	116	88	164	41	109	46	102	106	97	41	156	153	47	67	77	154	155	139	124	140	164	66	105
RIVERSIDE CALIFORNIA	307	342	335	330	326	308	315	309	289	250	202	325	257	288	169	136	326	260	123	110	302	311	309	179	64	196	281	258	283	304	312	262
RUSTON LOUISIANA	30	174	153	299	286	217	302	298	243	232	232	35	285	298	291	171	68	142	261	225	28	104	296	286	119	129	50	264	281	54	260	197
SAINT CLOUD MINN.	30	49	88	85	178	184	194	206	124	107	91	16	141	214	114	180	121	116	89	64	86	60	186	114	91	48	50	133	147	89	194	116
SALT LAKE CITY	115	114	220	239	218	236	221	214	202	111	38	239	237	81	214	58	168	132	108	104	138	264	130	100	80	196	222	105	204	71	220	161
SAN ANTONIO TEXAS	362	66	370	363	347	343	328	351	58	168	47	156	323	345	343	80	178	211	223	31	60	232	353	349	202	182	287	323	316	146	194	237
SANTA MARIA CALIF.	236	307	307	308	306	272	240	282	171	126	297	298	180	76	229	291	292	211	221	287	287	246	243	67	74	203	249	60	294	288	291	234
SAULT STE MARIE MICH	45	59	28	89	57	50	138	111	117	84	26	7	14	158	103	100	103	147	181	108	62	32	85	153	159	67	40	22	138	65	109	86
SEATTLE TACOMA WASH.	64	7	6	36	89	86	26	55	67	16	64	124	14	61	15	52	32	50	153	95	40	25	21	57	94	44	35	98	148	97	37	58
SPOKANE WASHINGTON	68	63	61	51	106	137	75	98	19	29	53	159	39	48	67	87	95	59	100	149	64	57	60	57	157	51	92	176	225	168	64	88
STATE COLLEGE PENN.	77	70	60	38	124	226	114	170	254	232	236	159	98	86	137	174	229	54	28	103	44	27	59	133	150	96	36	10	97	177	62	115
STERLING VIRGINIA	119	74	105	69	202	247	188	134	244	210	260	226	133	30	133	246	231	89	126	194	96	29	117	208	186	77	129	99	111	208	56	148
TAMPA FLORIDA	284	319	288	316	343	306	322	342	344	296	340	311	105	207	314	346	248	231	144	196	270	303	118	352	340	315	301	44	339	289	285	276
TUCSON ARIZONA	209	349	357	354	346	345	329	277	324	307	264	335	333	275	304	319	318	303	323	118	346	344	335	245	272	85	320	331	335	340	338	303
WAKE ISLAND PACIFIC	356	444	473	420	454	434	407	366	316	435	196	248	376	329	312	437	449	436	446	436	434	194	414	369	376	327	357	435	430	245	369	378

Note.--Langley is the unit used to denote one gram calorie per square centimeter.

Values with an asterisk are interpolated.

NET RADIATION

Net radiation in langleys per day (8 a.m. to 8 a.m.) at Palmer, Alaska

DECEMBER 1968

Date.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
Langleys. . .	-32	-46	-52	-68	-63	-70	-85	-45	-76	-47	-55	-72	-44	-42	-33	-52	-60	-22	-33	-27	-25	-38	-40	-56	-40	-52	-50	-59	-55	-37	-93	-50

The measurement is made with a CSIRO FUNK **net exchange radiometer over a plot of** sod. **The value represents the total incoming minus the total outgoing radiation of all wave lengths.**

These data are of an experimental nature and are published as received from the Palmer Exp. Station. **The instrument with which they were measured has not been checked by the ESSA,** Weather Bureau.

SOLAR ULTRA-VIOLET RADIATION DATA

Daily totals and monthly average (<3900 Å) at Ames, Iowa

Date.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
Langleys. . .	2.27	2.86	3.75	6.61	7.79	6.51	7.50	7.50	6.90	6.90	6.31	4.04	4.63	7.50	4.24	7.10	4.34	0.98	3.65	7.99	2.96	3.05	8.88	7.59	4.34	1.77	1.67	6.90	6.41	6.02	9.17	5.42

These data are from an U - V Eppley total ultra violet sensor and Speedomax H (Leeds Northrup) Recorder. It is at the same location (Agronomy Building, Iowa State University, Ames) as the published total solar radiation instrumentation. This instrument has not been checked by the ESSA, Weather Bureau.

TOTAL OZONE DATA

These provisional ozone data are obtained from measurements made with a Dobson ozone spectrophotometer, and are applicable approximately to local apparent noon. The data are presented in the code $\lambda s \Omega \Omega \Omega$ defined in the August 1962 WMO circular entitled "PUBLICATION OF DATA FOR METEOROLOGICAL RESEARCH, WORLD OZONE DATA."

Units: Milli-atmo-cms.

Station	Day of month																															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean O_3
															Data will be delayed																	

The spectrophotometer measures the total amount of ozone in the atmosphere, i.e., the amount contained in a vertical column of air extending from ground level to the top of the atmosphere in the vicinity of the station. The amount of ozone in this column (coded $\Omega \Omega \Omega$) is expressed in terms of a thickness of a layer it would occupy at standard temperature and pressure, e.g., 350 milli-atmo-cm ozone implies an ozone layer 0.350 centimeter thick. The code λs designates the type of measurement made.

RAWINSONDE DATA

Average monthly values

DELAYED DATA

CHIHUAHUA, MEXICO 4/ — 858 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1,428	10.6	6.5	24	.8
1000	31	128				
950	31	557				
900	31	1,018				
850	31	1,506	12.7	6.6	23	1.0
800	31	2,020	15.7	1.9	23	1.7
750	31	2,557	13.0	-1.9	21	2.7
700	31	3,143	9.1	-5.3	21	3.3
650	31	3,745	4.7	-9.2	22	3.9
600	31	4,400	.7	-14.8	23	4.5
550	31	5,083	-3.5	-21.1	26	5.6
500	31	5,841	-8.5	-26.1	26	7.1
450	31	6,643	-14.3	-31.2	26	8.1
400	31	7,534	-20.8	-36.5	27	8.6
350	31	8,506	-28.4	-42.7	27	9.0
300	31	9,592	-36.9	-49.5	28	10.4
250	31	10,829	-46.0		27	13.5
200	30	12,284	-55.5		27	17.4
175	29	13,125	-60.4		27	18.4
150	29	14,074	-65.2		27	19.3
125	29	15,173	-69.5		27	17.7
100	27	16,495	-71.4		28	11.7
80	25	17,818	-69.2		29	7.0
70	25	18,621	-65.7		30	4.7
60	24	19,568	-62.1		32	3.0
50	24	20,702	-59.8		34	2.2
40	24	22,104	-57.7		33	1.4
30	22	23,929	-55.5		14	.6
25	19	25,104	-53.6		12	3.6
20	15	26,550	-51.9			
15						
10						

CHIHUAHUA, MEXICO 5/ — 857 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	1,428	5.0	-.5	22	2.1
1000	30	147				
950	30	571				
900	30	1,023				
850	30	1,496	6.8	-.1	24	1.7
800	30	1,999	9.0	-2.1	25	2.7
750	30	2,522	6.5	-5.3	25	4.7
700	30	3,095	3.6	-10.1	25	6.5
650	30	3,684	.7	-15.8	26	8.8
600	30	4,333	-2.3	-20.5	26	10.0
550	30	5,006	-7.3	-24.8	26	11.1
500	30	5,752	-12.7	-28.1	26	12.6
450	30	6,543	-18.5	-33.0	27	14.0
400	30	7,417	-24.6	-38.3	27	15.6
350	30	8,377	-31.5	-43.4	27	18.4
300	30	9,450	-39.3	-48.3	27	19.3
250	30	10,676	-47.9		27	21.3
200	29	12,130	-56.0		27	23.2
175	28	12,971	-59.5		27	22.6
150	28	13,926	-63.4		27	21.5
125	27	15,032	-67.3		26	18.5
100	26	16,365	-70.3		26	14.0
80	25	17,695	-69.3		26	11.6
70	25	18,493	-68.1		26	10.9
60	25	19,428	-64.8		26	10.2
50	23	20,558	-61.5		27	9.2
40	22	21,948	-59.9		27	10.4
30	20	23,752	-58.6		27	11.5
25	17	24,895	-58.3		26	11.6
20	13	26,321	-56.6			
15						
10						

EMPALME, MEXICO 3/ — 1010 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	12	24.7	20.8	03	2.1
1000	30	98	26.3	20.9	05	1.8
950	30	553	26.1	16.8	11	1.6
900	30	1,029	24.1	11.7	14	.5
850	30	1,527	20.9	8.8	15	1.0
800	30	2,048	17.2	6.1	14	1.5
750	30	2,594	13.3	2.2	13	1.7
700	30	3,172	9.3	-2.4	14	1.8
650	30	3,782	5.6	-8.4	14	1.9
600	30	4,433	2.1	-15.8	20	.7
550	30	5,128	-1.9	-20.5	29	1.1
500	30	5,882	-6.5	-26.6	31	2.4
450	30	6,695	-12.4	-32.0	29	4.8
400	30	7,585	-19.0	-37.8	28	[illegible]
350	30	8,564	-26.2	-43.0	27	7.9
300	30	9,662	-33.9	-49.7	26	11.2
250	30	10,916	-42.7		26	15.0
200	30	12,387	-53.4		25	17.5
175	30	13,234	-59.3		25	18.1
150	30	14,184	-65.3		26	17.4
125	30	15,278	-70.5		26	13.5
100	30	16,596	-70.8		28	5.8
80	30	17,932	-66.4		04	1.3
70	30	18,746	-63.3		09	3.5
60	30	19,699	-60.9		09	6.1
50	29	20,839	-58.4		10	6.6
40	29	22,252	-55.4		09	8.4
30	28	24,096	-53.0		08	10.7
25	27	25,278	-51.0		09	11.3
20	24	26,736	-48.9		09	12.8
15	16	28,631	-46.8		09	13.8
10						

EMPALME, MEXICO 4/ — 1011 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	12	19.8	13.7	02	1.6
1000	31	106	23.0	14.4	02	1.6
950	31	559	24.7	9.8	02	1.0
900	31	1,030	22.5	4.7	07	.6
850	31	1,524	19.4	.0	17	1.8
800	31	2,042	16.6	-4.0	18	2.3
750	31	2,567	13.5	-6.9	20	3.5
700	31	3,164	9.6	-9.4	21	4.0
650	31	3,772	5.9	-13.5	23	4.3
600	31	4,425	2.1	-17.9	25	4.1
550	31	5,118	-2.2	-22.5	26	5.1
500	31	5,872	-7.5	-26.7	27	6.3
450	31	6,682	-13.4	-31.4	27	7.4
400	31	7,568	-20.3	-36.5	27	9.4
350	31	8,543	-27.8	-43.2	28	11.6
300	31	9,632	-36.5	-50.3	28	14.8
250	31	10,871	-45.6		28	16.7
200	31	12,325	-55.5		28	19.6
175	31	13,167	-60.3		27	19.2
150	31	14,117	-65.3		27	18.1
125	31	15,214	-69.8		28	16.1
100	31	16,532	-72.3		28	10.8
80	30	17,848	-69.5		30	7.0
70	29	18,648	-66.3		31	3.4
60	28	19,593	-62.7		34	1.2
50	28	20,724	-59.9		36	.5
40	27	22,129	-56.8		10	.9
30	27	23,958	-55.0		08	1.5
25	26	25,128	-53.4		08	2.5
20	24	26,566	-51.8		06	2.6
15	21	28,450	-48.8		35	2.1
10	8	31,068	-46.0			

EMPALME, MEXICO 5/ — 1014 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	24	12	14.5	9.0	35	.9
1000	24	130	19.6	9.8	34	2.7
950	24	570	19.6	5.4	33	4.6
900	24	1,035	17.3	.6	31	2.2
850	24	1,520	14.2	-2.3	25	2.5
800	24	2,029	11.5	-6.8	23	3.7
750	24	2,565	6.7	-10.1	25	4.4
700	24	3,132	5.8	-13.2	26	5.1
650	24	3,734	3.1	-17.0	27	7.0
600	24	4,379	-.6	-20.9	28	8.3
550	24	5,064	-4.9	-24.7	28	10.1
500	24	5,810	-10.2	-28.2	29	11.4
450	24	6,613	-16.1	-33.4	28	13.5
400	24	7,489	-22.7	-37.8	28	15.0
350	24	8,455	-30.1	-43.3	28	16.5
300	24	9,533	-38.4	-50.1	28	17.9
250	24	10,764	-47.7		28	21.1
200	24	12,207	-56.4		28	21.9
175	24	13,046	-60.9		28	20.3
150	24	13,994	-65.3		28	18.7
125	24	15,093	-69.0		28	16.9
100	23	16,418	-71.5		28	11.9
80	22	17,732	-70.9		29	8.8
70	22	18,526	-69.1		29	6.0
60	21	19,458	-66.1		28	4.3
50	21	20,575	-62.4		26	6.2
40	20	21,958	-60.1		27	7.9
30	19	23,764	-57.9		26	10.2
25	19	24,912	-58.0		27	9.5
20	18	26,319	-56.5		26	9.6
15	13	28,176	-52.7		29	9.3
10						

JACKSON, MISS. 5/ — 1007 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	100	7.6	5.5	19	.7
1000	30	153	8.6	5.4	19	.8
950	30	577	8.8	2.7	24	2.8
900	30	1,026	7.0	-.4	26	4.5
850	30	1,496	6.1	-5.1	27	6.9
800	30	1,992	5.5	-9.5	26	9.2
750	30	2,519	3.6	-11.8	26	11.2
700	30	3,077	1.0	-14.1	27	12.6
650	30	3,665	-1.9	-17.1	27	14.0
600	30	4,303	-5.4	-21.7	26	16.4
550	30	4,976	-9.5	-25.6	26	18.6
500	30	5,713	-14.0	-29.4	26	20.5
450	30	6,499	-19.6	-33.6	26	23.4
400	30	7,370	-25.7	-38.4	26	25.9
350	30	8,326	-32.7	-44.5	26	28.2
300	30	9,395	-40.3	-49.1	26	31.8
250	30	10,618	-48.2		26	35.0
200	30	12,064	-55.3		26	35.6
175	30	12,909	-58.9		26	35.1
150	30	13,869	-62.4		26	31.9
125	29	14,984	-65.7		26	28.0
100	29	16,332	-68.0		26	21.5
80	29	17,673	-67.7		26	15.3
70	29	18,479	-66.1		26	12.2
60	28	19,420	-64.2		27	10.0
50	27	20,534	-63.3		27	7.5
40	26	21,915	-61.4		27	8.6
30	26	23,708	-58.7		28	7.8
25	25	24,861	-57.7		28	7.3
20	24	26,275	-55.5		27	8.1
15	24	28,118	-52.9		28	8.5
10	23	30,763	-47.2		27	15.5
7						
5						

JACKSON, MISS. 6/ — 1008 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	100	4.7	1.2	20	.5
1000	31	165			03	.2
950	31	590	6.1	-1.6	24	2.7
900	31	1,030	5.9	-3.9	27	6.9
850	31	1,498	5.5	-7.6	27	10.1
800	31	1,993	4.3	-8.8	27	12.1
750	31	2,516	2.4	-11.9	26	14.1
700	31	3,074	.2	-14.3	26	16.2
650	31	3,662	-2.6	-18.0	26	18.2
600	31	4,297	-5.7	-21.0	26	20.9
550	31	4,973	-9.5	-25.7	26	23.8
500	31	5,706	-14.3	-29.5	26	24.6
450	31	6,492	-19.7	-33.5	27	27.3
400	31	7,362	-25.9	-37.7	26	29.2
350	31	8,317	-32.7	-43.4	26	31.3
300	31	9,385	-40.9	-46.7	26	34.1
250	31	10,602	-49.9		26	37.6
200	31	12,029	-59.0		26	43.7
175	31	12,861	-61.7		26	43.6
150	31	13,811	-63.7		26	39.7
125	31	14,924	-66.2		26	35.9
100	31	16,267	-68.6		26	29.1
80	30	17,601	-69.7		26	21.5
70	29	18,395	-69.1		26	18.2
60	25	19,317	-67.0		27	14.2
50	24	20,428	-64.8		27	10.7
40	23	21,800	-62.2		27	10.3
30	23	23,586	-59.9		27	11.4
25	21	24,725	-58.7		27	10.9
20	21	26,134	-56.3		28	11.5
15	20	27,980	-52.1		27	13.9
10	18	30,621	-47.4		27	23.7
7						
5						

JOHNSTON IS., PACIFIC AREA 1/ — 1014 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	3	26.7	22.4	08	7.3
1000	31	125	25.6	22.1	08	8.4
950	31	580	22.0	20.2	09	9.7
900	31	1,044	19.1	15.6	09	10.1
850	31	1,535	16.5	11.6	09	9.1
800	31	2,050	14.0	7.2	09	8.8
750	31	2,593	11.7	.6	09	7.8
700	31	3,169	9.0	-3.6	09	6.7
650	31	3,778	5.3	-8.2	10	4.8
600	31	4,429	1.2	-12.5	10	3.6
550	31	5,115	-2.9	-17.2	12	2.0
500	31	5,874	-7.2	-20.5	22	.9
450	31	6,688	-12.4	-25.1	26	2.1
400	31	7,580	-18.5	-30.5	26	4.1
350	31	8,563	-25.5	-37.7	27	7.2
300	31	9,663	-33.9	-44.4	27	12.6
250	31	10,916	-43.7		27	17.4
200	31	12,378	-55.3		27	21.6
175	31	13,218	-61.9		27	23.0
150	31	14,157	-68.0		27	21.2
125	30	15,242	-71.7		27	13.4
100	30	16,560	-70.7		22	.9
80	30	17,888	-69.0		08	8.6
70	30	18,689	-67.0		09	13.6
60	30	19,625	-64.1		09	16.6
50	30	20,754	-59.9		09	20.0
40	30	22,159	-56.7		09	23.3
30	29	24,000	-52.7		09	26.5
25	26	25,185	-50.5		09	28.6
20	24	26,653	-47.6		09	29.0
15	22	28,568	-45.0		09	27.7
10	11	31,308	-41.1			
7	7	33,758	-36.3			
5						

KWAJALEIN, MARSHALL IS. 1/ — 1010 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	4	27.3	24.4	08	3.8
1000	31	95	26.7	23.6	08	4.1
950	31	548	23.5	20.8	09	5.2
900	31	1,020	21.0	17.0	09	6.0
850	31	1,514	18.3	14.0	09	6.1
800	31	2,032	15.6	11.0	09	6.7
750	31	2,579	12.9	7.5	09	7.1
700	31	3,157	9.9	2.4	09	7.5
650	31	3,770	6.0	-.3	09	7.5
600	31	4,422	2.2	-3.5	09	6.8
550	31	5,121	-1.5	-9.2	09	6.3
500	31	5,875	-5.7	-12.5	09	5.9
450	31	6,694	-10.6	-18.1	08	4.3
400	31	7,591	-16.2	-25.0	10	3.9
350	31	8,584	-23.0	-33.9	11	2.5
300	31	9,694	-31.5	-42.1	14	[illegible]
250	31	10,956	-41.6	-50.2	18	1.8
200	31	12,429	-54.3	-61.1	23	2.6
175	31	13,271	-61.5	-68.0	25	3.3
150	31	14,210	-68.9		25	5.3
125	31	15,260	-76.1		24	7.1
100	31	16,558	-77.8		26	2.4
80	31	17,845	-73.0		09	8.1
70	31	18,638	-69.7		09	10.2
60	31	19,564	-66.2		09	12.7
50	31	20,677	-63.1		08	18.9
40	29	22,060	-59.7		09	27.7
30	29	23,879	-54.9		09	33.8
25	29	25,051	-52.4		09	35.3
20	29	26,507	-48.3		09	34.4
15	27	28,418	-44.3		09	23.8
10	24	31,161	-40.8		09	14.4
7	22	33,602	-37.8		08	15.4
5	8	35,950	-33.9			

KWAJALEIN, MARSHALL IS. 2/ — 1011 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	4	27.6	24.4	11	1.8
1000	31	98	27.0	23.7	11	1.7
950	31	551	23.9	21.1	11	2.1
900	31	1,023	21.0	17.2	11	3.2
850	31	1,518	18.5	14.3	10	3.5
800	31	2,037	16.0	11.5	09	3.6
750	31	2,584	13.4	7.1	09	4.0
700	31	3,163	10.4	2.7	09	4.9
650	31	3,777	6.5	-1.2	09	5.3
600	31	4,430	2.6	-4.2	09	5.1
550	31	5,130	-1.1	-9.7	10	5.2
500	31	5,885	-5.4	-13.8	10	4.7
450	31	6,704	-10.4	-19.9	10	4.4
400	31	7,602	-16.0	-26.6	09	4.4
350	31	8,595	-22.8	-34.0	08	4.3
300	31	9,707	-31.2	-41.6	09	3.8
250	31	10,972	-41.1	-49.5	09	4.1
200	31	12,448	-53.8	-61.2	09	3.8
175	31	13,291	-61.2	-68.3	09	3.3
150	31	14,231	-68.8		06	2.0
125	27	15,306	-75.6		35	2.3
100	24	16,586	-78.3		10	5.2
80	21	17,878	-73.3		09	10.6
70	21	18,668	-69.4		09	12.1
60	21	19,594	-66.2		09	16.0
50	21	20,709	-62.9		09	21.0
40	20	22,097	-59.9		09	27.3
30	19	23,914	-54.6		09	34.4
25	19	25,089	-51.8		09	33.1
20	18	26,543	-47.6		09	24.2
15	16	28,459	-44.4		10	14.5
10	14	31,191	-40.4		08	7.8
7	12	33,628	-37.4		09	12.7
5	5	35,936	-35.6			

KWAJALEIN, MARSHALL IS. 3/ — 1010 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	28	4	28.1	23.9	14	1.3
1000	28	97	27.4	23.1	14	1.4
950	28	550	23.9	20.5	14	1.4
900	28	1,022	21.1	16.8	14	1.9
850	28	1,516	18.2	13.7	12	1.9
800	28	2,035	15.7	10.7	11	2.4
750	28	2,581	12.8	6.7	10	3.2
700	28	3,159	9.7	2.2	11	3.4
650	28	3,771	5.9	-2.7	10	3.5
600	28	4,423	2.1	-5.3	10	4.5
550	28	5,122	-1.5	-10.4	11	4.6
500	28	5,875	-5.8	-15.9	10	4.8
450	28	6,694	-10.7	-21.6	10	5.3
400	28	7,590	-16.5	-28.5	09	4.9
350	28	8,581	-23.3	-35.9	09	4.6
300	28	9,690	-31.8	-43.5	09	4.0
250	28	10,953	-41.5	-51.0	07	4.5
200	28	12,426	-54.0	-62.2	06	5.4
175	28	13,269	-61.3	-70.9	05	5.0
150	28	14,208	-68.8		03	4.2
125	27	15,281	-75.6		06	3.3
100	25	16,361	-76.8		09	4.6
80	23	17,857	-73.5		09	9.4
70	23	18,643	-70.6		09	11.3
60	23	19,568	-66.4		09	13.7
50	23	20,679	-63.7		09	18.2
40	23	22,060	-59.5		09	25.9
30	23	23,880	-55.1		09	31.1
25	22	25,053	-52.6		09	29.6
20	22	26,508	-48.2		09	16.0
15	21	28,416	-46.1		09	7.7
10	21	31,142	-41.3		09	5.9
7	14	33,598	-37.2		11	9.7
5						

KWAJALEIN, MARSHALL IS. 4/ — 1010 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	4	27.3	23.5	06	1.4
1000	31	94	26.7	22.7	07	1.3
950	31	546	23.3	20.1	07	1.5
900	31	1,017	20.4	15.9	07	1.5
850	31	1,510	17.7	12.8	08	1.8
800	31	2,028	15.2	10.6	08	2.6
750	31	2,573	12.6	6.2	08	3.2
700	31	3,150	9.6	1.9	09	3.7
650	31	3,763	6.3	-3.1	09	4.3
600	31	4,416	2.7	-7.2	10	4.9
550	31	5,116	-1.1	-11.7	10	5.1
500	31	5,870	-5.4	-18.0	10	4.2
450	31	6,690	-10.1	-23.0	10	3.9
400	31	7,588	-15.9	-27.8	10	3.9
350	31	8,581	-22.6	-34.0	11	2.7
300	31	9,694	-31.1	-42.9	10	3.5
250	31	10,959	-41.3	-50.2	09	5.1
200	31	12,433	-53.7	-61.2	08	5.2
175	31	13,278	-60.4	-68.2	08	5.8
150	30	14,221	-67.8		07	4.9
125	30	15,297	-75.2		08	5.1
100	27	16,568	-80.2		09	9.4
80	25	17,841	-75.8		09	8.5
70	23	18,620	-72.1		09	10.3
60	23	19,538	-67.8		09	12.9
50	23	20,644	-63.9		09	16.3
40	23	22,021	-60.9		09	23.4
30	22	23,830	-55.2		09	28.7
25	22	25,002	-52.3		09	24.5
20	21	26,465	-48.2		09	7.1
15	19	28,381	-44.5		28	2.1
10	19	31,124	-40.0		31	1.6
7	17	33,583	-36.3		17	3.6
5	7	35,940	-32.5			

KWAJALEIN, MARSHALL IS. 5/ — 1010 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	27	4	27.1	23.8	09	4.2
1000	27	95	26.5	23.1	09	4.5
950	27	548	23.3	20.2	09	5.7
900	27	1,019	20.5	16.8	09	6.5
850	27	1,512	17.7	13.8	09	6.9
800	27	2,030	15.4	10.7	09	6.6
750	27	2,576	12.8	6.0	08	6.7
700	27	3,154	10.1	1.4	08	6.5
650	27	3,767	6.7	-3.1	08	6.9
600	27	4,421	2.9	-8.5	09	8.5
550	27	5,121	-.8	-11.8	09	8.6
500	27	5,876	-5.3	-16.6	09	8.8
450	27	6,697	-9.9	-23.0	08	8.0
400	27	7,596	-15.3	-29.0	07	8.0
350	27	8,591	-22.3	-37.4	08	7.2
300	27	9,705	-30.7	-43.8	08	5.8
250	27	10,972	-41.1	-52.6	07	5.2
200	27	12,447	-53.6	-62.9	07	4.3
175	27	13,291	-60.6		08	2.9
150	27	14,234	-68.1		09	2.2
125	26	15,306	-76.4		08	3.0
100	24	16,569	-83.0		08	7.4
80	24	17,814	-80.6		09	12.5
70	23	18,577	-75.9		09	8.8
60	22	19,478	-71.7		09	10.3
50	22	20,566	-67.5		09	16.7
40	20	21,925	-62.4		09	25.3
30	20	23,727	-55.2		09	25.0
25	19	24,911	-50.7		09	10.5
20	19	26,373	-48.6		31	2.1
15	19	28,281	-44.7		27	9.6
10	17	31,019	-40.8		27	11.9
7	14	33,464	-36.9		29	11.6
5						

MONTERREY, MEXICO 4/ — 969 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	423	19.0	18.3	22	.5
1000	31	150				
950	31	590	19.6	17.8	13	1.7
900	31	1,059	17.7	14.3	14	3.4
850	31	1,547	15.9	10.8	13	4.6
800	31	2,061	14.4	4.8	13	2.7
750	31	2,601	12.2	-1.0	11	.3
700	31	3,180	8.3	-3.8	31	2.2
650	31	3,786	4.3	-7.8	30	2.7
600	31	4,436	.3	-13.2	31	2.8
550	31	5,124	-3.6	-21.3	30	2.8
500	31	5,877	-8.2	-26.3	29	2.9
450	31	6,664	-13.7	-30.8	28	4.1
400	31	7,573	-20.3	-36.5	29	5.2
350	31	8,548	-27.8	-42.4	27	7.8
300	31	9,638	-36.3	-49.0	27	10.0
250	31	10,879	-45.5		27	13.4
200	31	12,333	-55.9		26	15.6
175	31	13,172	-61.5		26	16.5
150	30	14,115	-66.6		27	17.1
125	30	15,205	-71.5		27	13.3
100	29	16,510	-73.7		27	8.2
80	29	17,823	-69.9		28	3.2
70	29	18,626	-65.5		34	1.0
60	29	19,570	-62.3		10	2.7
50	29	20,703	-59.6		12	2.4
40	28	22,110	-56.9		07	1.5
30	29	23,941	-54.5		07	4.0
25	29	25,113	-52.9		08	4.3
20	29	26,559	-51.0		08	4.7
15	26	28,450	-45.8		06	3.3
10	20	31,164	-40.5		23	2.3
7	8	33,674	-33.9			
5						

MONTERREY, MEXICO 5/ — 970 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	423	12.5	10.7	34	1.3
1000	30	164				
950	30	596	13.8	10.7	01	1.1
900	30	1,052	12.9	7.6	11	.8
850	30	1,533	12.4	2.8	17	1.9
800	30	2,041	11.3	-1.4	22	2.5
750	30	2,574	8.8	-6.3	25	4.1
700	30	3,146	5.7	-9.9	26	7.0
650	30	3,749	2.2	-14.2	26	10.7
600	30	4,392	-1.5	-21.2	25	11.6
550	30	5,075	-5.5	-25.8	26	10.1
500	30	5,821	-10.3	-30.0	26	11.0
450	30	6,625	-16.3	-34.1	26	12.8
400	30	7,502	-23.0	-39.2	26	14.6
350	30	8,467	-30.4	-45.1	26	16.8
300	30	9,547	-38.6	-50.6	25	20.1
250	30	10,777	-47.4		26	23.1
200	30	12,224	-56.4		26	24.3
175	30	13,063	-61.1		26	23.4
150	31	14,011	-65.7		26	22.8
125	30	15,107	-69.9		26	18.7
100	30	16,426	-72.5		26	13.5
80	29	17,737	-71.8		26	8.0
70	29	18,528	-69.2		26	6.9
60	29	19,456	-65.3		25	5.2
50	29	20,578	-61.7		25	3.9
40	28	21,969	-60.1		25	4.8
30	27	23,773	-58.0		27	8.2
25	27	24,924	-57.0		27	8.0
20	24	26,338	-56.0		27	9.1
15	21	28,191	-50.6		27	12.1
10	9	30,901	-41.5			
7						
5						

See reference note at end of table

RAWINSONDE DATA

Average monthly values

DELAYED DATA

Standard pressure surface (mb.)	SAN NICOLAS, CALIF. 3/ 992 MB				Resultant Wind		YUMA, ARIZ. 2/ 995 MB				Resultant Wind	
	No. of observations	Dynamic height	Temperature	Dew Point	Direction	Speed M.p.s.	No. of observations	Dynamic height	Temperature	Dew Point	Direction	Speed M.p.s.
SURFACE	30	174	15.7	11.8	30	4.2	21	131	26.1	13.7	05	.2
1000	30	102					21	84				
950	30	543	19.9	6.4	32	3.2	21	534	27.3	12.9	23	1.8
900	30	1,010	20.9	.1	32	3.5	21	1,015	24.8	9.5	21	2.9
850	30	1,502	19.5	-1.1	32	2.9	21	1,514	21.6	6.3	20	3.6
800	30	2,020	16.6	-4.5	30	2.1	21	2,036	17.7	4.8	19	3.6
750	30	2,566	13.5	-6.9	30	1.2	21	2,579	13.7	1.8	18	3.6
700	30	3,143	10.1	-9.3	29	1.4	21	3,163	9.7	-2.7	19	3.9
650	30	3,754	6.4	-11.8	29	2.6	21	3,765	5.8	-7.5	21	3.8
600	30	4,405	2.1	-16.1	30	3.7	21	4,424	1.8	-13.1	22	3.5
550	30	5,101	-2.5	-22.1	30	3.9	21	5,111	-2.4	-16.9	22	3.7
500	30	5,850	-7.7	-26.4	31	5.1	21	5,871	-7.0	-22.2	22	4.9
450	30	6,660	-13.6	-31.7	31	6.6	21	6,676	-12.4	-27.7	24	6.5
400	30	7,544	-20.7	-37.5	31	7.5	21	7,574	-19.0	-33.7	25	7.9
350	30	8,515	-28.7	-43.6	31	8.8	21	8,554	-26.6	-40.2	24	9.2
300	30	9,600	-37.4	-51.6	31	11.4	21	9,648	-35.0	-47.3	23	11.9
250	30	10,833	-47.1	-59.4	31	13.1	20	10,894	-44.3		22	13.6
200	30	12,278	-56.3	-67.1	30	15.1	16	12,357	-54.8		22	13.0
175	30	13,118	-60.2	-68.1	29	15.4	15	13,208	-60.0		22	14.1
150	30	14,070	-64.1		29	13.6	14	14,157	-65.2		23	13.3
125	30	15,176	-67.6		29	12.1	11	15,250	-68.2			
100	29	16,515	-68.0		30	7.6						
80	29	17,863	-65.3		32	2.7						
70	29	18,682	-62.1		33	2.6						
60	29	19,643	-59.2		10	1.4						
50	29	20,790	-57.8		09	3.8						
40	29	22,203	-55.7		08	4.4						
30	28	24,047	-52.7		09	5.5						
25	28	25,229	-50.9		08	6.8						
20	28	26,688	-48.9		09	7.0						
15	26	28,581	-46.8		09	7.3						
10	23	31,277	-43.4		08	9.4						
7	18	33,682	-39.3		11	8.9						
5	7	35,945	-36.2									
4	5	37,520	-32.3									

Standard pressure surface (mb.)	YUMA, ARIZ. 3/ 993 MB				Resultant Wind		YUMA, ARIZ. 4/ 995 MB				Resultant Wind		YUMA, ARIZ. 5/ 998 MB				Resultant Wind	
	No. of observations	Dynamic height	Temperature	Dew Point	Direction	Speed M.p.s.	No. of observations	Dynamic height	Temperature	Dew Point	Direction	Speed M.p.s.	No. of observations	Dynamic height	Temperature	Dew Point	Direction	Speed M.p.s.
SURFACE	19	131	22.9	4.6	05	.3	23	131	17.0	3.3	03	.3	19	131	12.6	-.7	36	1.2
1000	19	65					23	90					19	116				
950	19	516	28.9	5.3	02	1.3	23	530	22.8	5.5	34	2.6	19	547	16.7	-1.4	34	5.8
900	19	995	26.0	1.6	24	.3	23	1,002	20.4	2.8	35	1.1	19	1,009	14.1	-3.5	35	5.6
850	19	1,495	22.6	-1.4	20	1.4	23	1,492	17.3	-.8	25	.8	19	1,488	10.9	-5.5	35	3.9
800	19	2,017	18.6	-4.3	18	1.9	23	2,007	14.6	-7.8	22	2.4	19	1,991	7.6	-9.1	33	3.3
750	19	2,559	14.4	-6.7	16	2.2	23	2,542	11.3	-11.8	23	3.6	19	2,512	3.9	-11.8	32	4.5
700	19	3,144	10.2	-9.0	20	1.8	23	3,121	7.6	-14.1	23	4.5	19	3,077	.9	-15.7	31	5.9
650	19	3,748	8.1	-12.9	21	1.5	23	3,718	4.2	-17.8	24	5.0	19	3,661	-2.0	-18.6	32	7.8
600	19	4,405	1.4	-16.7	24	1.7	23	4,373	.2	-20.7	24	6.4	19	4,302	-5.5	-21.1	31	9.5
550	19	5,092	-3.2	-22.0	26	3.0	23	5,054	-4.5	-24.3	24	8.2	19	4,972	-10.0	-25.8	31	10.9
500	19	5,847	-8.3	-28.2	27	4.5	23	5,808	-9.9	-28.6	25	9.6	19	5,709	-14.9	-29.4	30	13.0
450	19	6,646	-14.5	-33.2	28	6.1	23	6,600	-15.8	-33.3	25	12.4	19	6,491	-20.3	-33.5	30	15.0
400	19	7,537	-21.4	-38.8	29	7.5	23	7,490	-22.9	-38.1	25	12.5	19	7,362	-26.2	-39.1	30	17.2
350	19	8,507	-29.4	-44.8	29	10.6	23	8,455	-30.6	-44.0	25	12.7	19	8,315	-33.6	-44.0	31	18.2
300	19	9,589	-37.7	-51.4	29	11.6	23	9,532	-39.1	-50.1	26	15.2	19	9,382	-40.8	-49.4	30	19.4
250	19	10,823	-46.6		28	14.5	23	10,758	-48.0		26	19.2	19	10,602	-49.5		30	20.4
200	14	12,276	-55.2		28	18.2	16	12,208	-56.0		27	21.7	13	12,085	-56.9		28	22.7
175	13	13,115	-59.5		28	21.0	7	13,055	-59.4				7	12,918	-59.2			
150	11	14,069	-64.1															
125	5	15,203	-67.7															

1/ July 1968
2/ August 1968
3/ September 1968
4/ October 1968
5/ November 1968
6/ December 1968

Also see reference notes with current data

SOLAR RADIATION DATA

Daily totals and monthly averages of solar radiation (direct and diffuse) received on a horizontal surface, tabulated in langleys. DELAYED DATA

Station	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
FEBRUARY 1968																																
INYOKERN CALIFORNIA	253	351	342	310	242	340	333	260	44	354	320	362	350	352	303	285	252	401	315	409	380	423	295	424	434	267	440	454	466			337
MARCH 1968																																
INYOKERN CALIFORNIA	432	464	471	475	438	370	208	421	463	463	477	233	364	532	426	530	542	491	557	560	513	412	563	563	519	555	584	582	590	597	580	483
APRIL 1968																																
INYOKERN CALIFORNIA	---	---	598	569	573	606	609	624	623	629	626	462	619	531	625	646	333	643	595	588	664	684	668	665	644	652	667	689	686	641		613
MAY 1968																																
INYOKERN CALIFORNIA	649	610	594	667	553	692	559	578	668	584	714	715	640	719	711	691	664	688	543	712	714	717	697	709	695	693	692	687	694	706	705	667
SEATTLE WASH. UNIV.	488	618	612	513	233	214	404	605	515	574	658	272	225	344	652	658	659	583	203	260	517	569	520	570	252	533	327	443	481	472	354	462
TUCSON ARIZONA	558	495	617	45	182	527	514	525	494	573	---	---	611	404	378	535	402	276	---	255	189	539	142	729	---	---	---	529	538	64	662	431
JUNE 1968																																
INYOKERN CALIFORNIA	701	---	---	580	718	698	496	602	706	715	721	714	717	717	716	688	602	674	700	717	702	689	677	---	---	683	690	711	727	737		685
SEATTLE WASH. UNIV.	104	329	611	690	671	333	145	222	424	459	442	511	451	720	695	424	668	668	308	640	331	206	632	674	438	365	261	388	433	629		462
JULY 1968																																
GAINESVILLE FLORIDA	362	490	573	262	213	716	518	761	316	---	394	308	191	---	463	514	676	709	593	---	---	---	---	---	365	566	596	600	159	---	---	470
INYOKERN CALIFORNIA	712	720	709	694	670	602	534	---	666	682	675	711	695	691	689	692	696	692	664	654	658	659	665	603	647	635	456	416	619	602	622	648
LEXINGTON KENTUCKY	668	428	728	781	744	615	627	362	629	569	646	441	426	432	440	428	679	623	471	475	463	535	622	506	278	279	285	530	508	440	300	515
PROSSER WASHINGTON	749	721	700	710	711	681	723	694	627	640	509	630	674	651	715	641	713	697	519	713	724	639	671	695	575	675	649	672	673	696	682	670
PULLMAN WASHINGTON	736	722	705	705	686	400	160*	333*	635	595	608	372	698	651	582	681	713	686	561	708	692	636	616	652	544	645	634	638	644	662	655	612*
SEATTLE WASH. UNIV.	702	653	625	584	633	698	680	661	508	508	225	227	588	531	599	521	664	600	244	435	652	418	599	621	531	606	607	632	612	636	595	561
AUGUST 1968																																
DAVIS CALIFORNIA	680	688	690	709	674	694	610	594	632	674	668	586	559	648	633	637	672	442	442	537	344	652	651	632	476	614	632	610	627	601	---	610
SEATTLE WASH. UNIV.	597	485	384	439	288	501	593	580	585	572	553	301	145	59	252	240	217	320	226	451	153	202	89	138	98	384	202	395	505	486	437	351
SEPTEMBER 1968																																
PULLMAN WASHINGTON	175	524	447	507	489	407	496	469	438	450	309	433	275	297	235	398	135	151	240	97	75	340	381	414	410	392	323	386	387	373		348
OCTOBER 1968																																
FLAMING GORGE UTAH	---	---	---	104	419	290	213	292	400	331	359	278	204	268	96	120	391	374	369	302	365	260	324	328	345	321	433	326	328	---	206	298
PAGE ARIZONA	543	543	126	453	512	508	381	479	353	218	407	463	477	380	366	484	448	440	282	408	426	445	436	421	423	410	419	419	413	222	---	410
PULLMAN WASHINGTON	294	389	378	196	340	199	220	326	142	256	44	192	249	218	140	339	262	165	165	73	203	99	136	276	276	276	246	264	168	104	256	222
NOVEMBER 1968																																
LOS ANGELES CALIF. U	354	296	233	287	341	315	304	355	342	334	246	217	---	---	---	363	224	298	285	304	300	249	114	66	266	306	292	306	308	289		281
MATANUSKA ALASKA	51	20	90	87	75	23	62	79	27	12	25	30	56	99	29	31	36	27	---	32	46	---	---	---	---	---	---	---	---	---		---
PULLMAN WASHINGTON	241	55	93	114	185	189	45	36	86	69	46	66	132	197	58	172	120	43	121	142	62	178	159	58	152	84	88	124	25	163		110
SEATTLE WASH. UNIV.	154	96	186	154	71	114	122	10	129	39	23	83	109	136	66	48	52	47	92	156	20	113	108	27	32	57	59	69	6	9		80

Note.--Langley is the unit used to denote one gram calorie per square centimeter.
Values with an asterisk are interpolated.

U Indicates Urban sites.

SOLAR ULTRA-VIOLET RADIATION DATA

Daily totals and monthly average (<3900 Å) at Ames, Iowa

CORRECTED DATA

Date.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
October 1968																																
Langleys. . .	17.87	15.98	13.73	17.76	4.26	15.62	15.39	3.55	8.28	15.62	15.74	10.06	3.55	10.18	14.44	7.34	4.14	6.51	10.77	14.08	12.31	11.72	11.72	10.53	11.36	12.66	5.44	9.70	11.95	11.72	10.18	11.10
November 1968																																
Langleys. . .	11.48	5.44	11.36	9.35	3.55	3.55	8.05	4.73	8.88	4.02	1.06	12.07	11.48	7.10	8.76	2.13	7.22	2.84	4.85	7.93	8.99	8.40	6.51	7.10	2.72	2.88	7.81	3.55	7.45	7.93		6.63

These data are from an U - V Eppley total ultra violet sensor and Speedomax H (Leeds Northrup) Recorder. It is at the same location (Agronomy Building, Iowa State University, Ames) as the published total solar radiation instrumentation. This instrument has not been checked by the ESSA, Weather Bureau.

C O R R E C T I O N S

Month: 1963 Annual

page 47: Texas — The record lowest temperature for the State should be -23, and for succeeding years through 1967.

page 83: Mauna Loa Obs., Hawaii — The value for February should be 595, and annual value 581.

Month: 1964 Annual

page 95: Matanuska, Alaska — The value for December should be 20.

page 22: Johnston Is., Pacific — Should appear with stations in Pacific Area.

Month: 1967 Annual

page 47: Pittsburgh, Pa. U
Pittsburgh Gtr. AP — The data for these two stations have been interchanged beginning with the column January, Mean total Snow, Sleet.

page 48: Quillayute, Wash.
Seattle, Wash. U 1964 — The data for these two stations have been interchanged beginning with the column January, Mean total Snow, Sleet.

Month: April 1968

page 184: Kentucky — The number of injuries under tornadoes should be 408.

Michigan — Due to a late tornado report, the number of tornadoes should be 3, and injuries 13. (This delayed report will be shown in the late reports and corrections section of STORM DATA for June 1969.)

Month: May 1968

page 234: Arkansas — The number of injuries under tornadoes should be 413, and 3 injuries under windstorms.

Iowa — Due to a late report, one tornado was added to the reported 4, making a total of 5 tornadoes.

Month: June 1968

page 307: Iowa — Due to a late report 2 tornadoes were added to the reported 6, making a total of 8 tornadoes.

South Dakota — Due to a late report 2 tornadoes were added to the reported 11, making a total of 13 tornadoes occurring on 4 days.

Month: August 1968

page 416: Connecticut — There should be no injuries under tornadoes, and damage should be category 4.

Pacific Area — The estimated damage to property and crops was in category 3 in the Mariana Is., on the 29th by Typhoon Wendy.

Month: September 1968

page 466: Pacific Area — The estimated damage to property and crops was in category 3 in the Mariana Is., on the 2nd by Typhoon Agnes.

Puerto Rico — Property damage under "all others" should be in category 5.

Month: October 1968

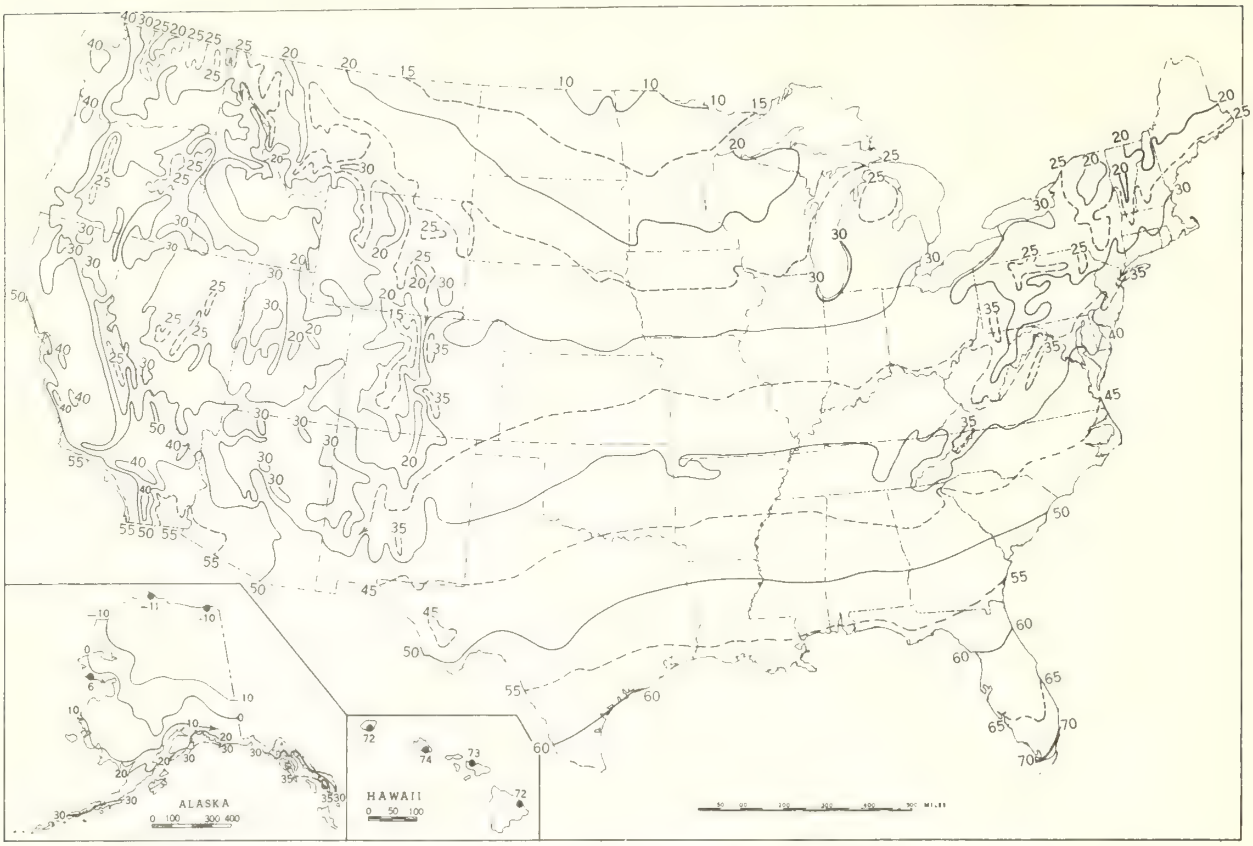
page 504: Lynchburg, Va. — Data not printed should be: Elevation 916; average maximum temperature 69; average minimum temperature 47; average 57.8; departure from normal -0.4; highest 85 on the second; lowest 29 on the 27+; number of days maximum 90 or above 0; minimum 32 or below 4.

page 529: Ames, Iowa — Corrected ultra-violet data are in the above table.

Month: November 1968

page 577: Ames, Iowa — Corrected ultra-violet data are in the above table.

Chart 1. A. Normal Daily Average Temperature (°F. 1931-60), December



B. Temperature Departure from 30 - Year Mean (°F 1931-60), December 1968.

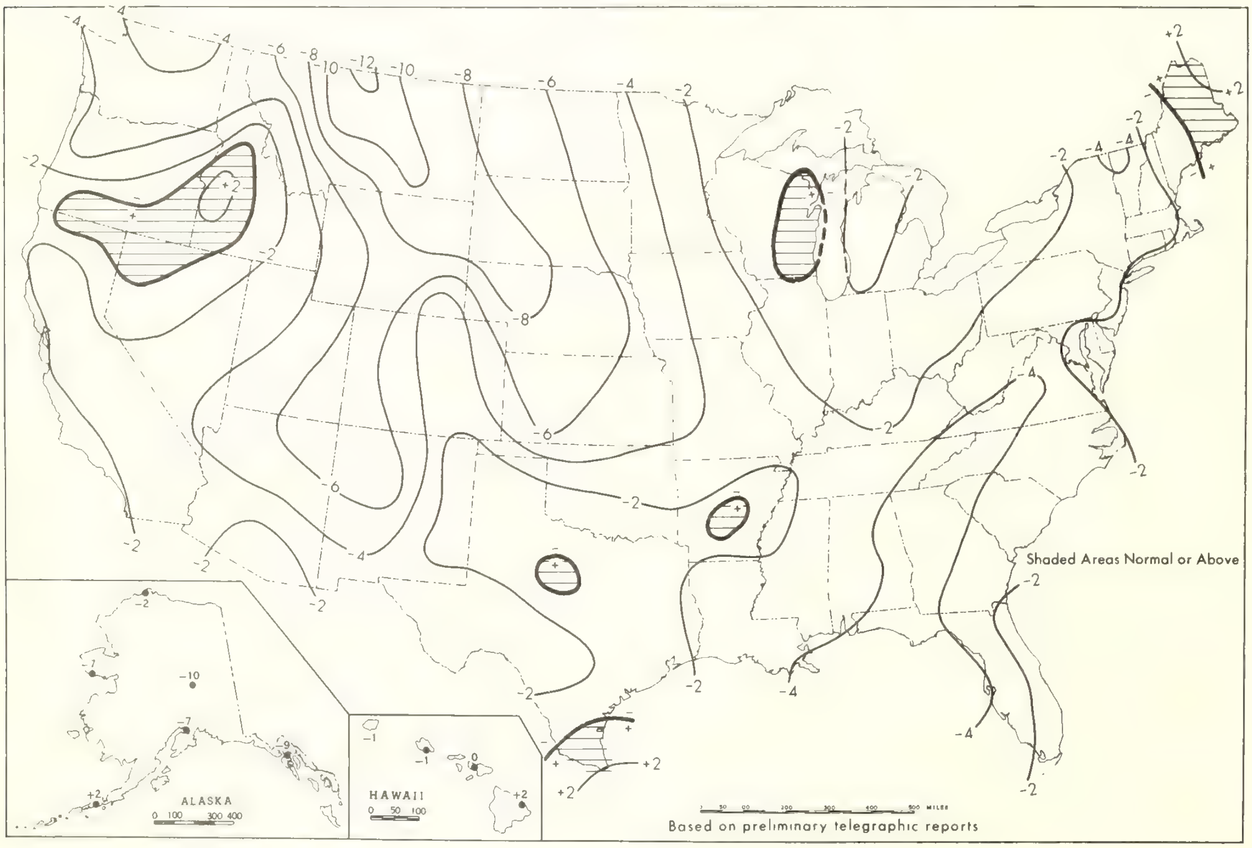


Chart II. Total Precipitation (Inches), December 1968.

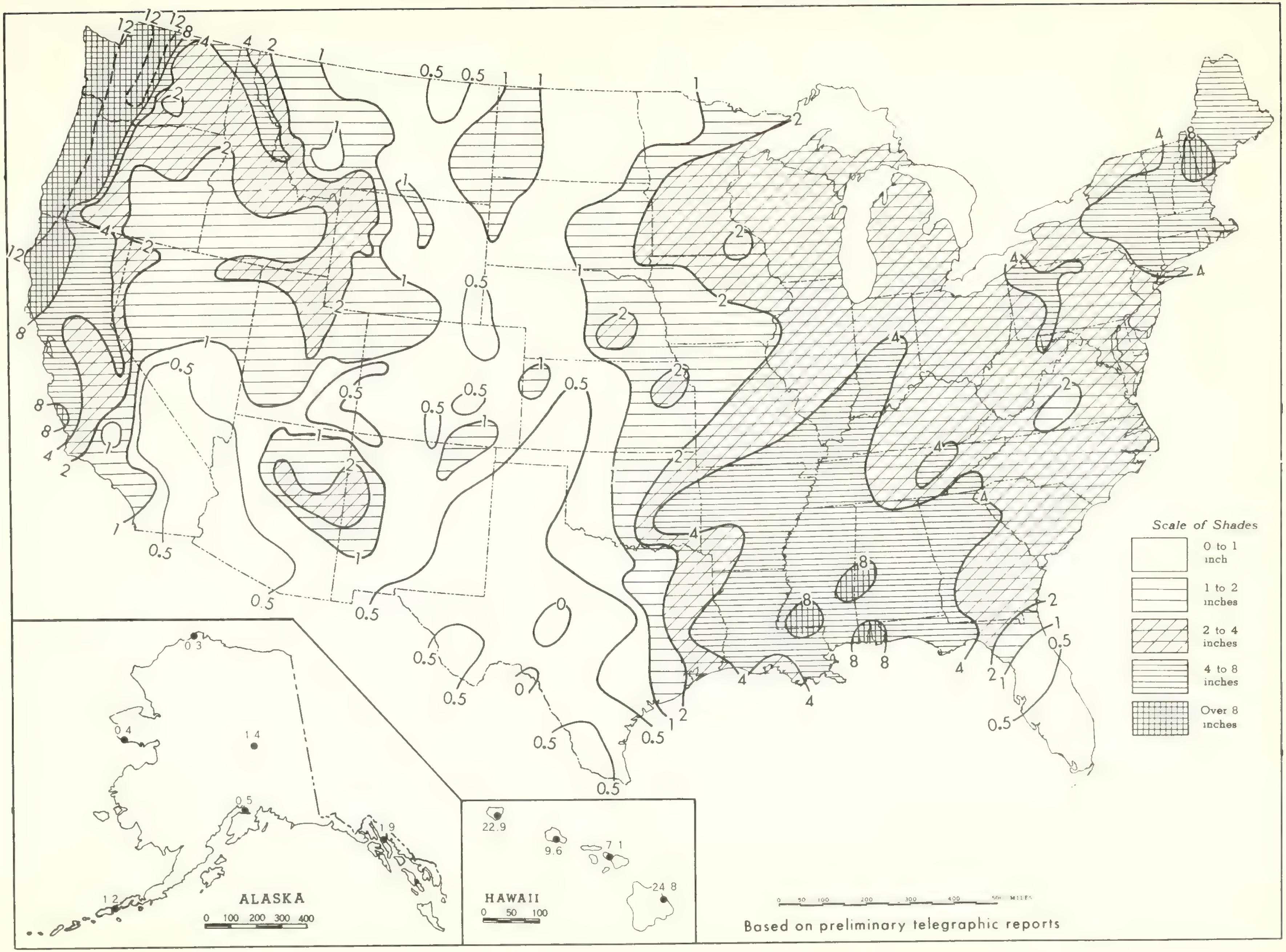


Chart III. Percentage of Normal Precipitation, December 1968.

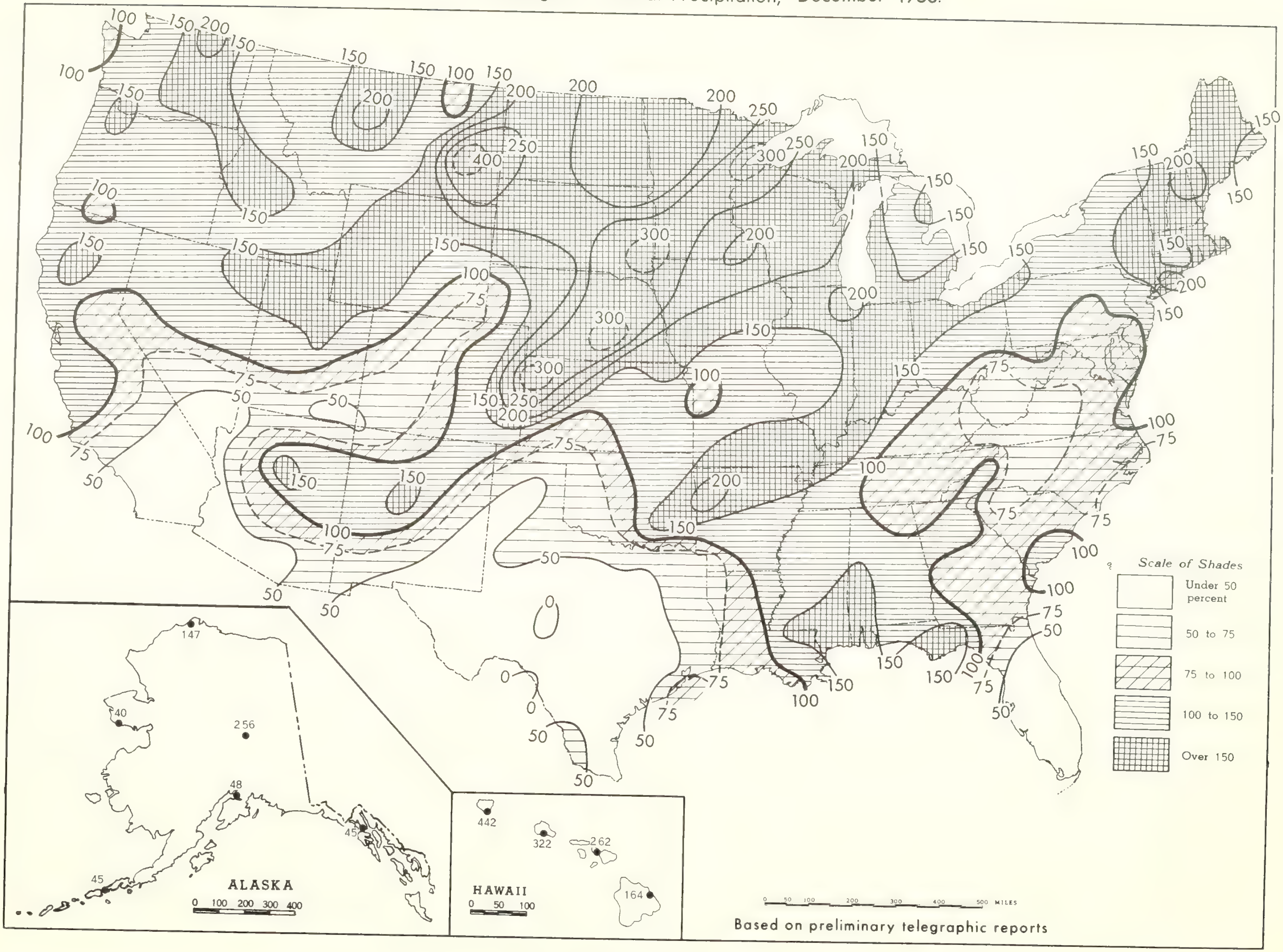
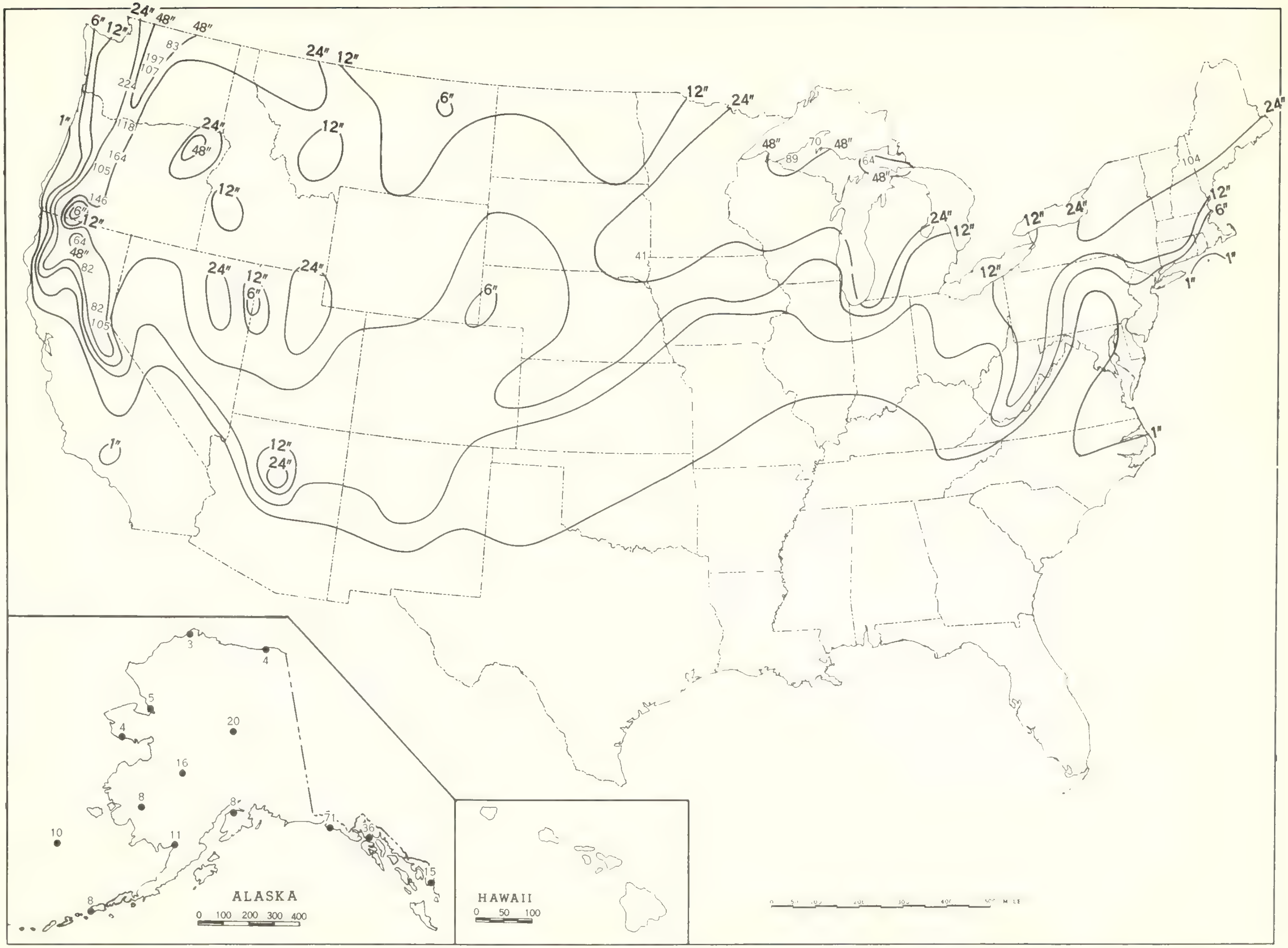
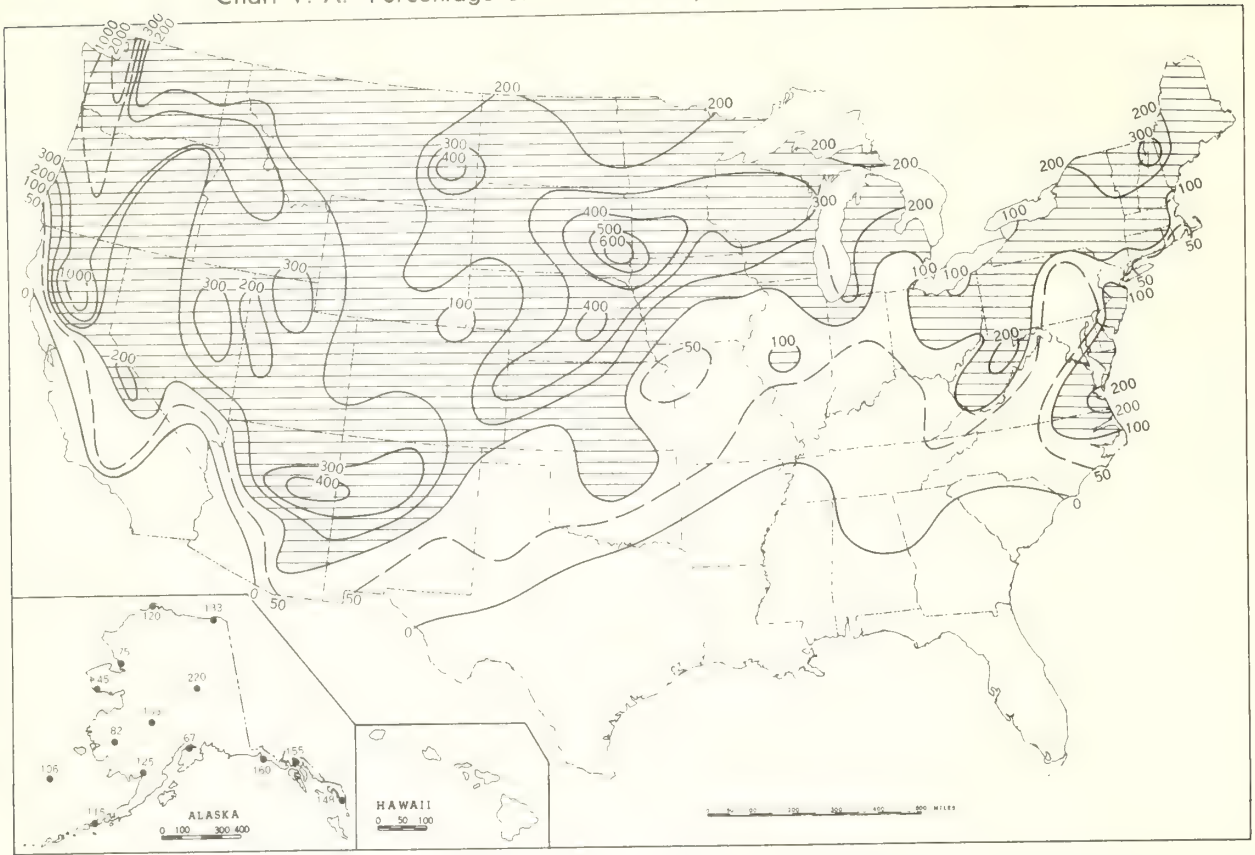


Chart IV. Total Snowfall (Inches), December 1968.

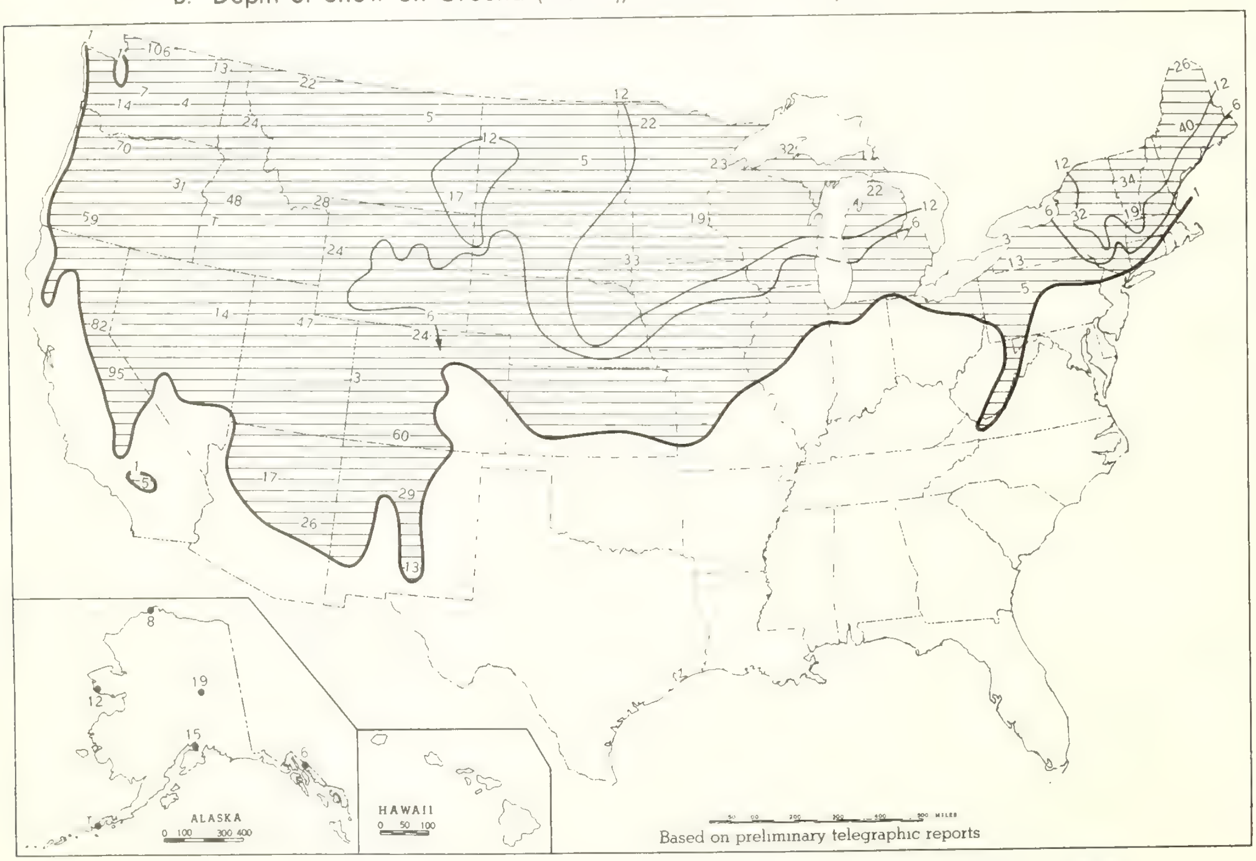


This is the total of unmelted snowfall recorded during the month at Weather Bureau and selected cooperative stations. This Chart and Chart V are published only for the months of November through April, although of course there is some snow at higher elevations, particularly in the far West, earlier and later in the year.

Chart V. A. Percentage of Mean Monthly Snowfall, December 1968.

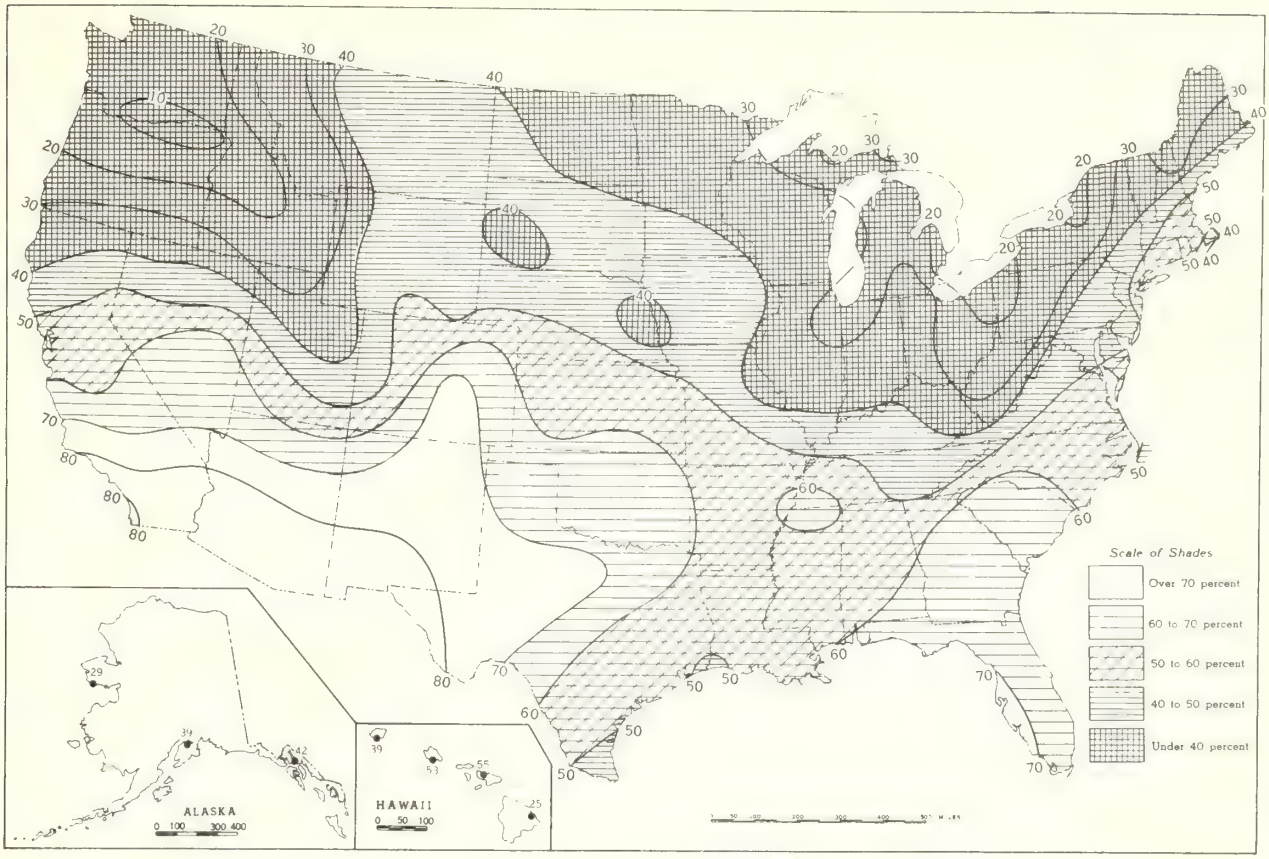


B. Depth of Snow on Ground (Inches), 7:00 a.m. E. S. T., December 30, 1968.

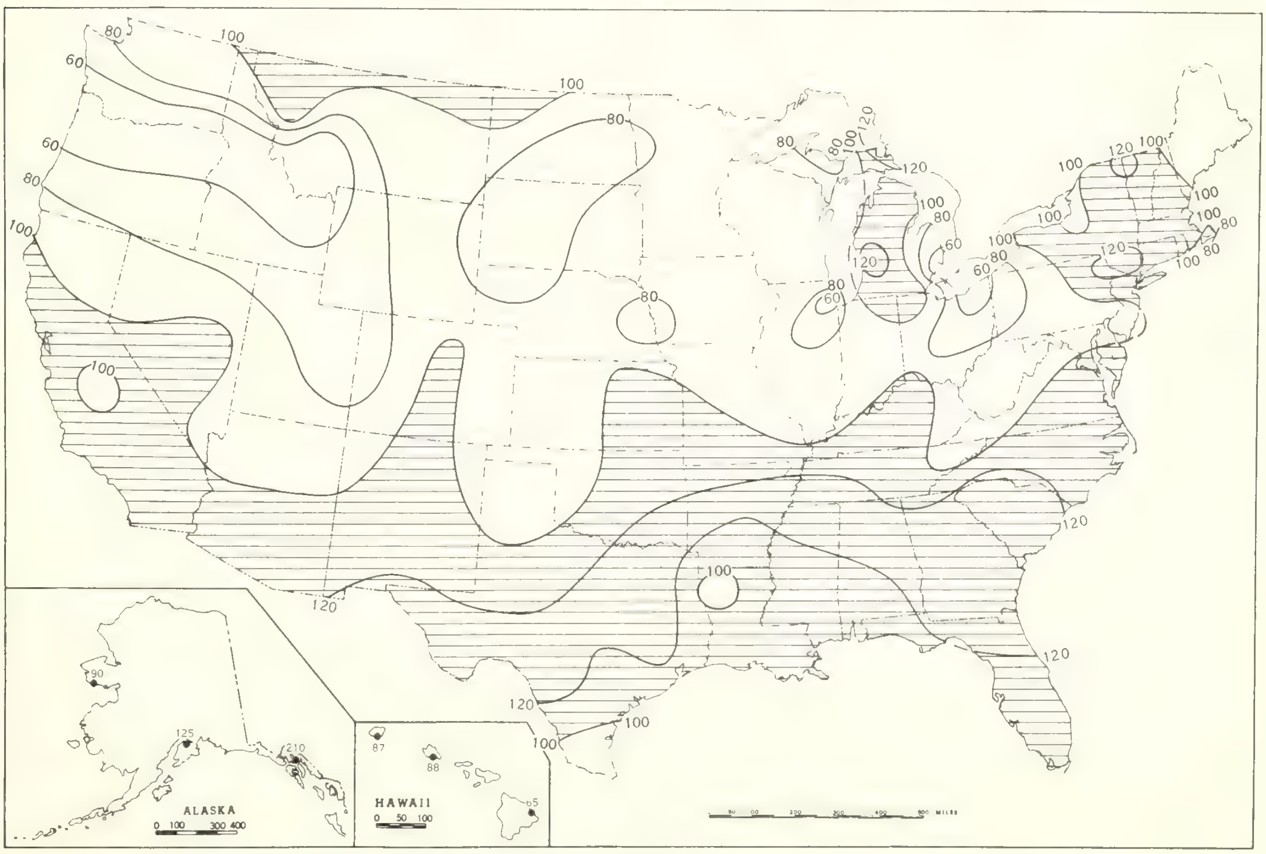


A. Amount of mean monthly snowfall is computed for Weather Bureau stations having at least 10 years of record.
B. Shows depth currently on ground at 7:00 a.m. E.S.T., of the Monday nearest the end of the month.
It is based on reports from Weather Bureau and selected cooperative stations.

Chart VI. A. Percentage of Possible Sunshine, December 1968.

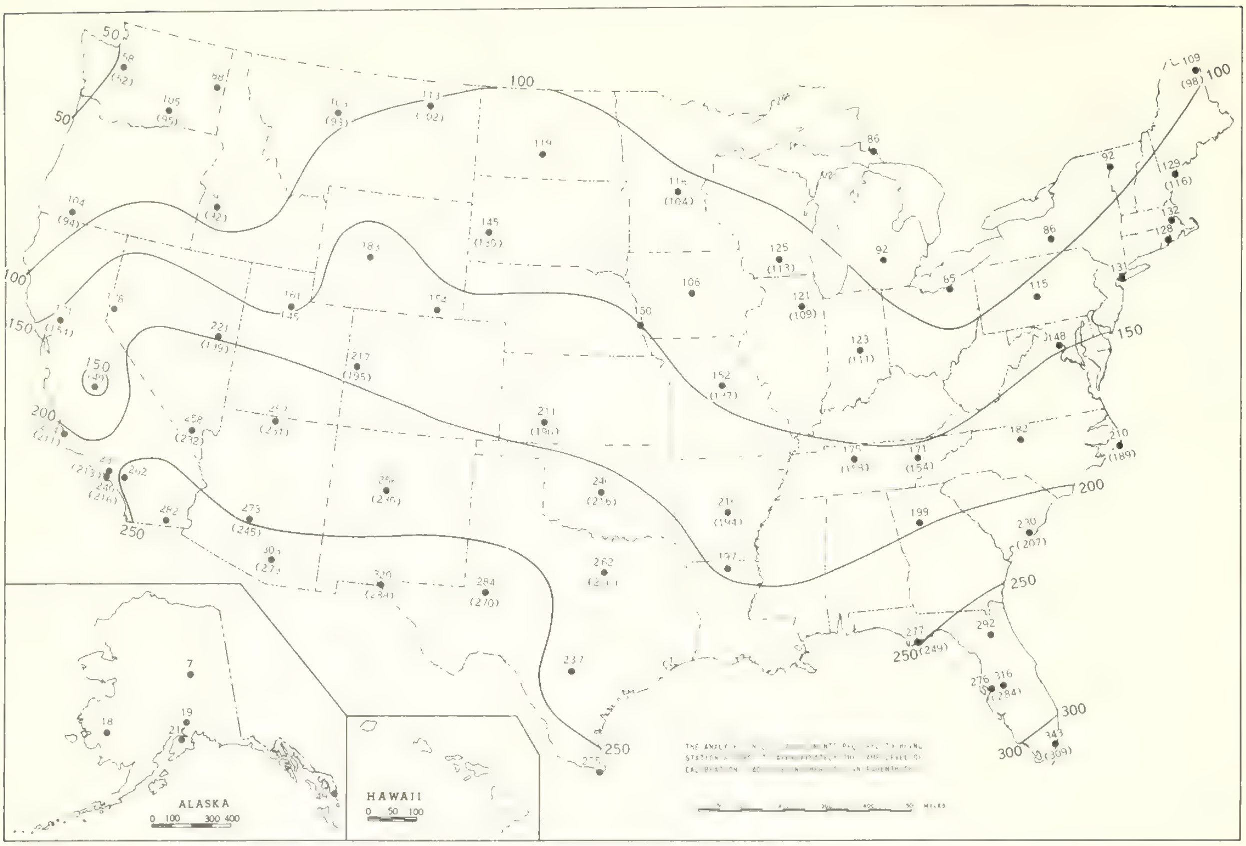


B. Percentage of Mean Monthly Sunshine, December 1968.

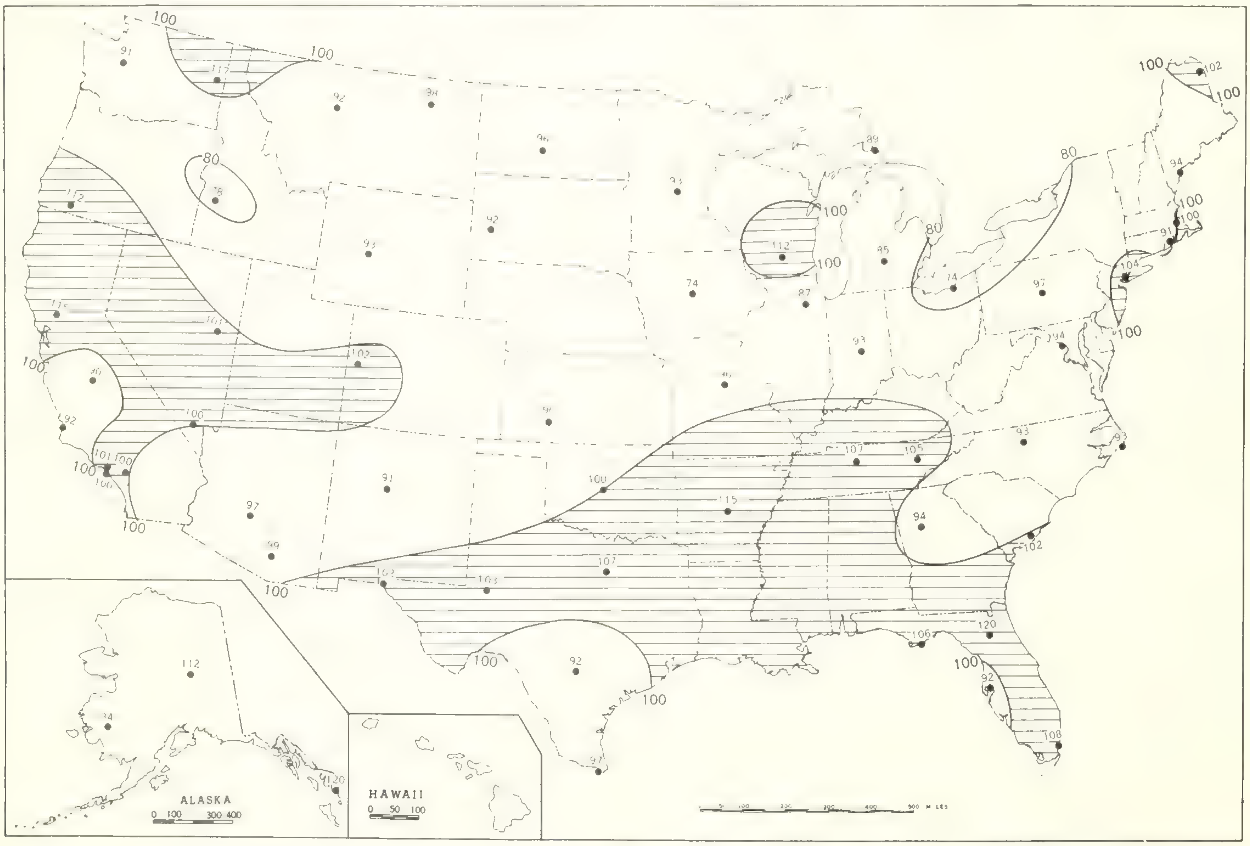


A. Computed from total number of hours of observed sunshine in relation to total number of possible hours of sunshine during month. B. Means are computed for stations having at least 10 years of record.

Chart VII. A. Average Daily Values of Solar Radiation, Langleys, December 1968.

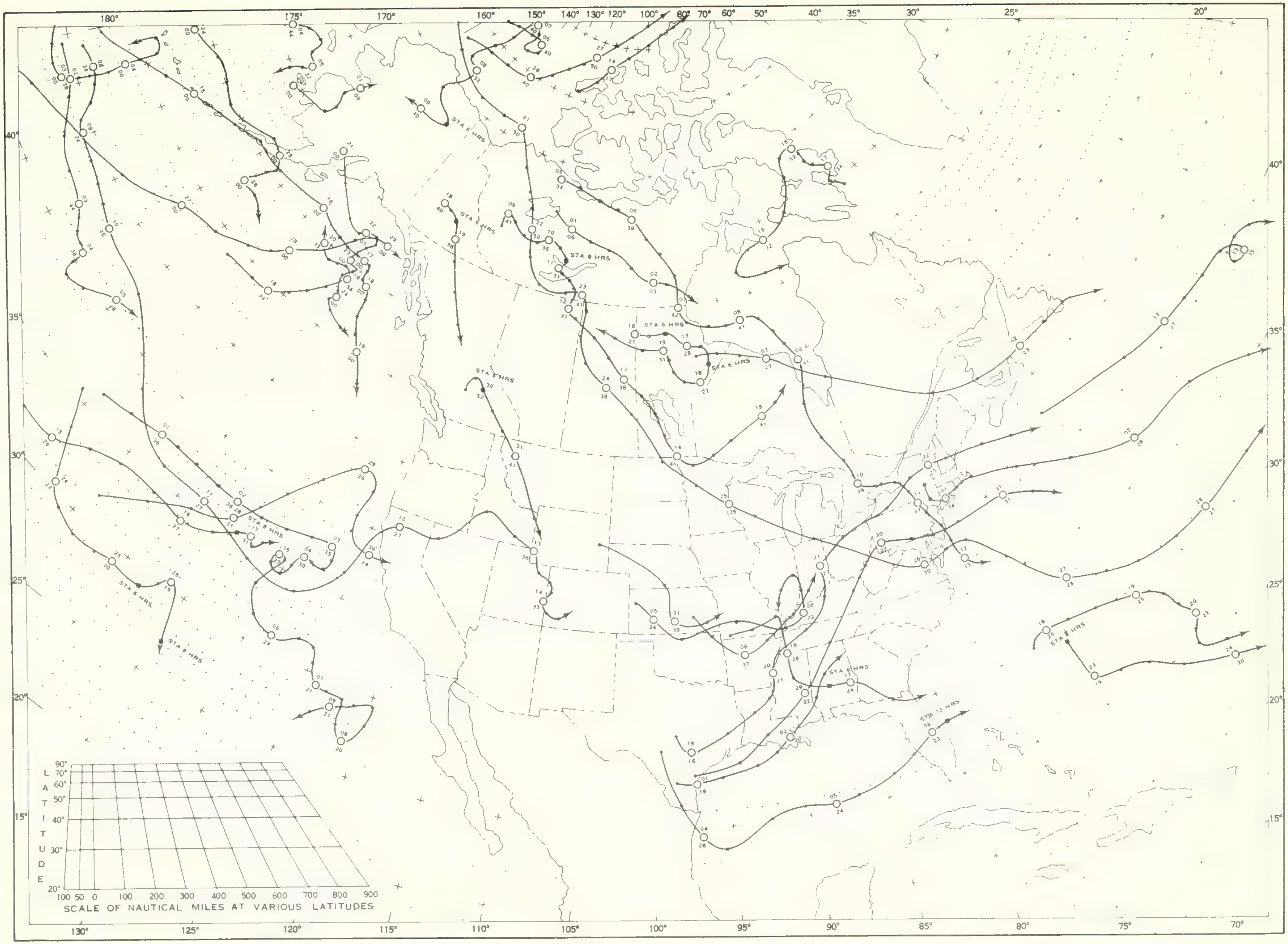


B. Percentage of Mean Daily Solar Radiation, December 1968.



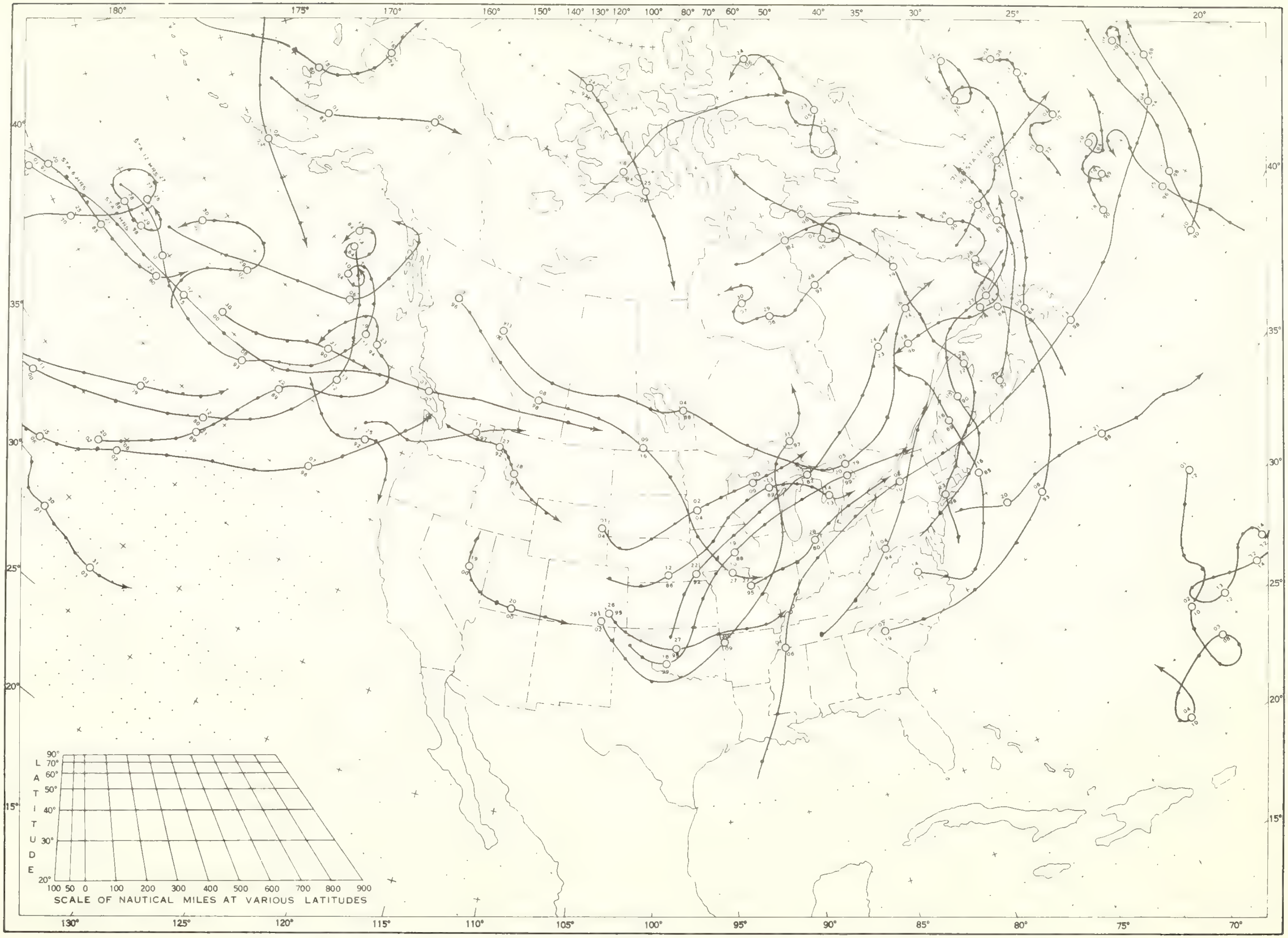
A. Mean daily solar radiation, direct + diffuse, received on a horizontal surface in langleys (1 langley = 1 gm. cal. cm.$^{-2}$) and recorded in International Pyrheliometer Scale of 1956. B. Percentage of the mean based on at least 5 years of record during the period 1950-60, and corrected to the International Pyrheliometer Scale of 1956.

Chart VIII. Tracks of Centers of Anticyclones at Sea Level, December 1968.



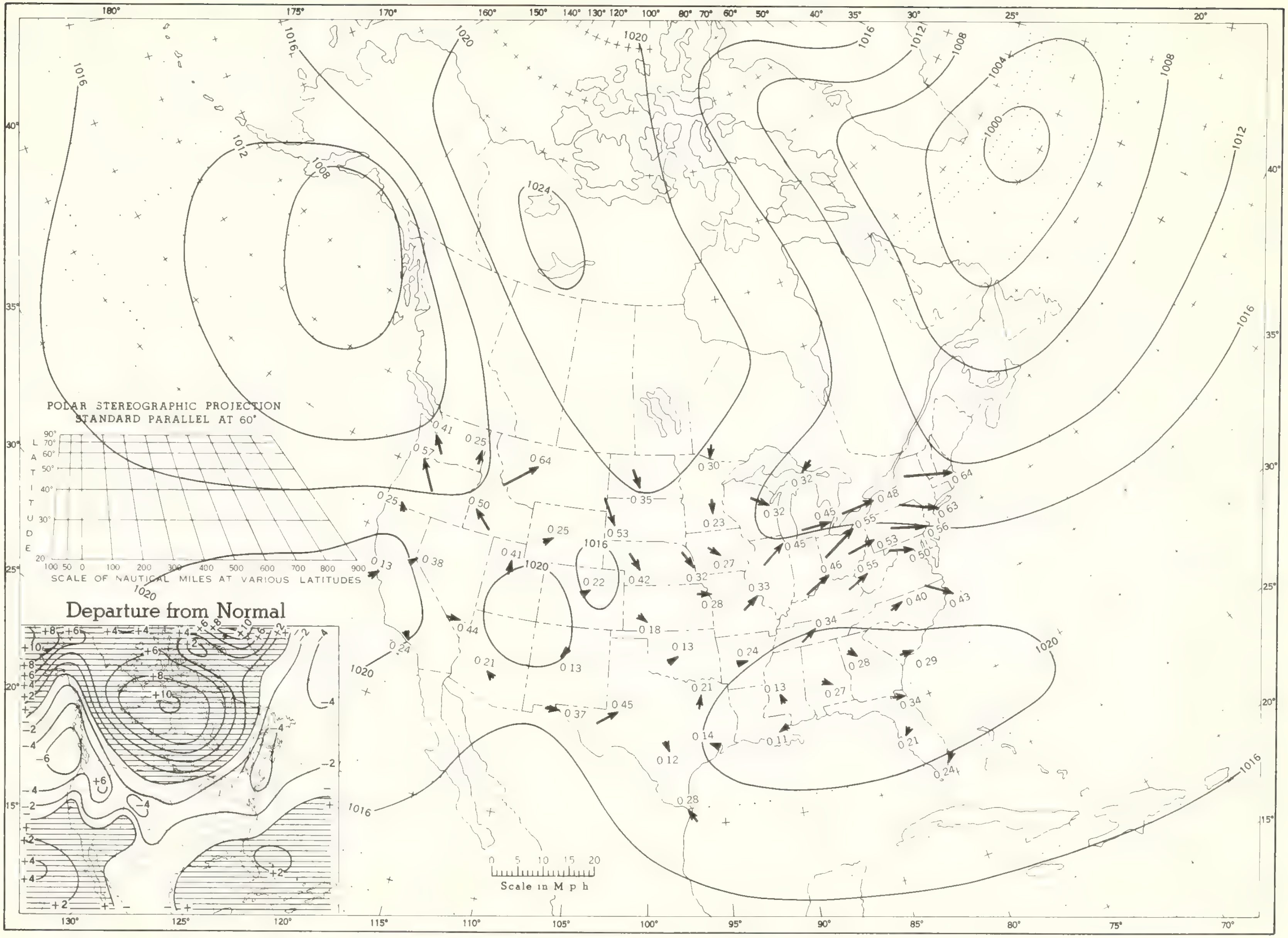
Circle indicates position of center at 7:00 a.m. E.S.T. Figure above circle indicates date, figure below, pressure to nearest millibar. Dots indicate intervening 6-hourly positions. Squares indicate position of stationary center for period shown. Dashed line in track indicates reformation at new position. Only those centers which could be identified for 24 hours or more are included.

Chart IX. Tracks of Centers of Cyclones at Sea Level, December 1968.



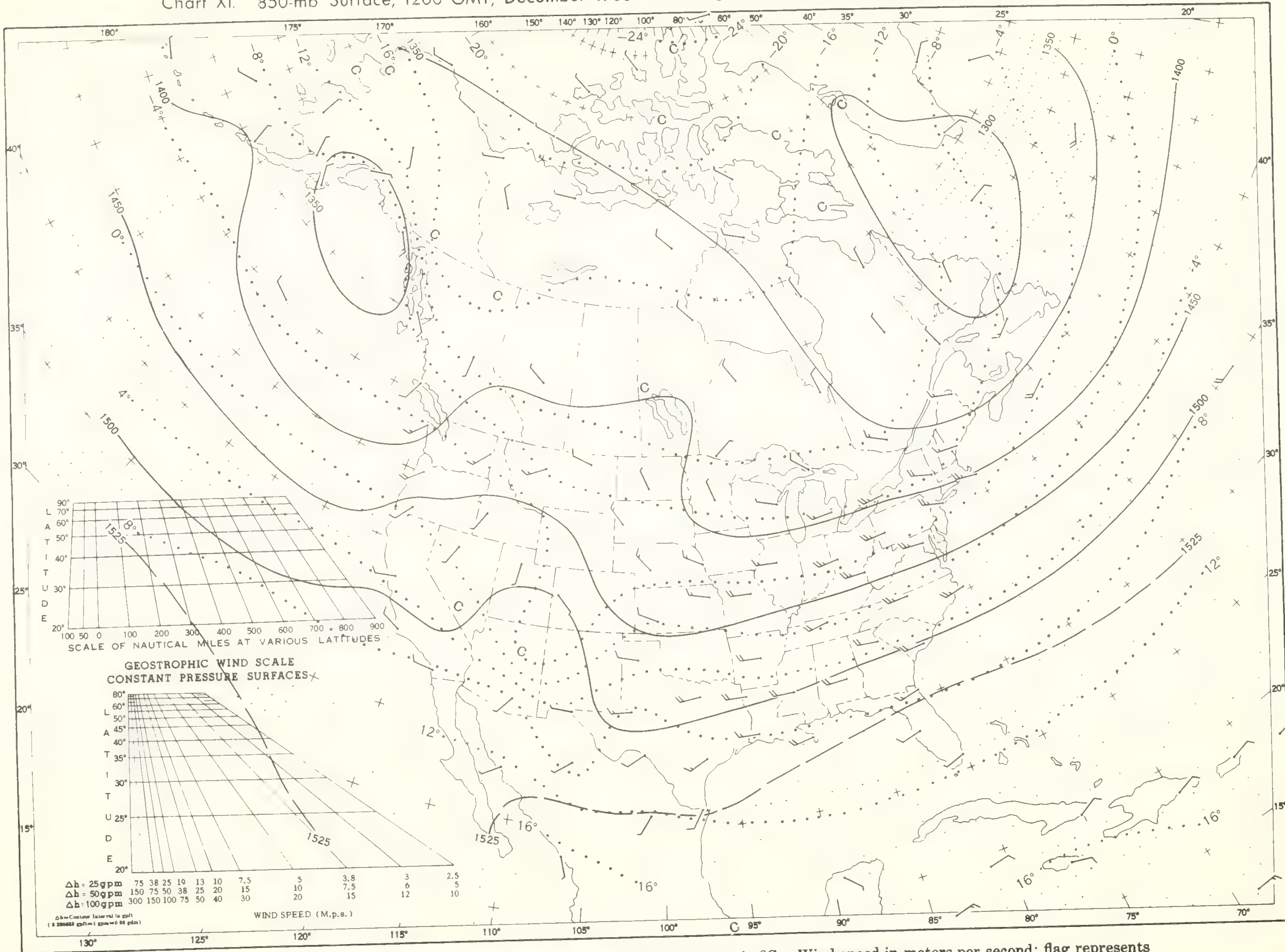
Circle indicates position of center at 7:00 a.m. E.S.T. Figure above circle indicates date, figure below, pressure to nearest millibar. Dots indicate intervening 6-hourly positions. Squares indicate position of stationary center for period shown. Dashed line in track indicates reformation at new position. Only those centers which could be identified for 24 hours or more are included.

Chart X. Average Sea Level Pressure (mb) and Resultant Surface Wind, **December 1968.** Inset: Departure of Average Pressure (mb) from Normal, **December 1968.**



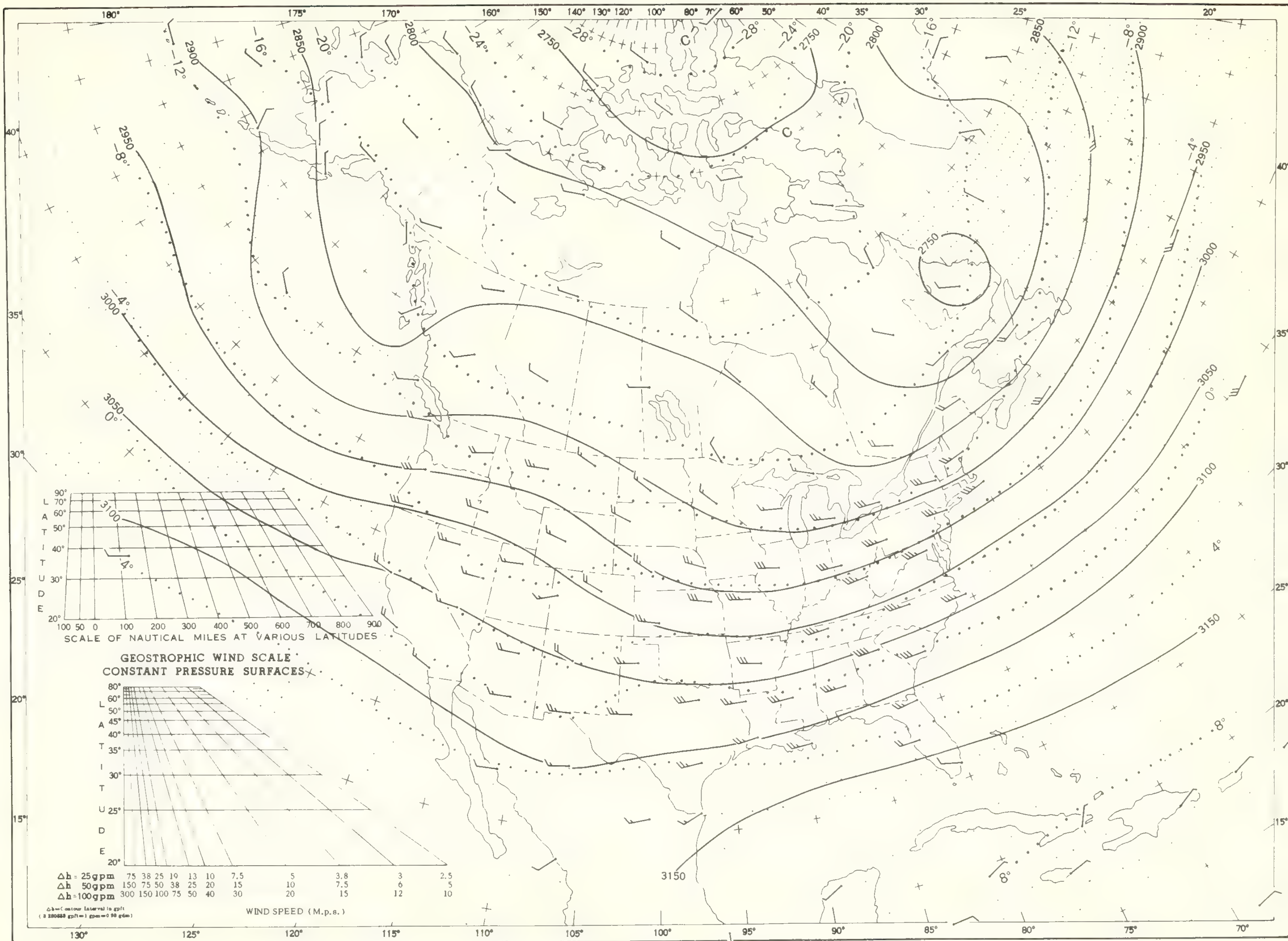
Average sea level pressures are obtained from eight daily 3-hourly observations. Resultant wind directions and speeds are shown by arrows. Constancy ratios (resultant speed÷average speed) are shown to two decimal places. Pressure normals are computed for stations having at least 10 years of record and for 10° intersections in a diamond grid over the oceans.

Chart XI. 850-mb Surface, 1200 GMT, December 1968. Average Height and Temperature, and Resultant Winds.



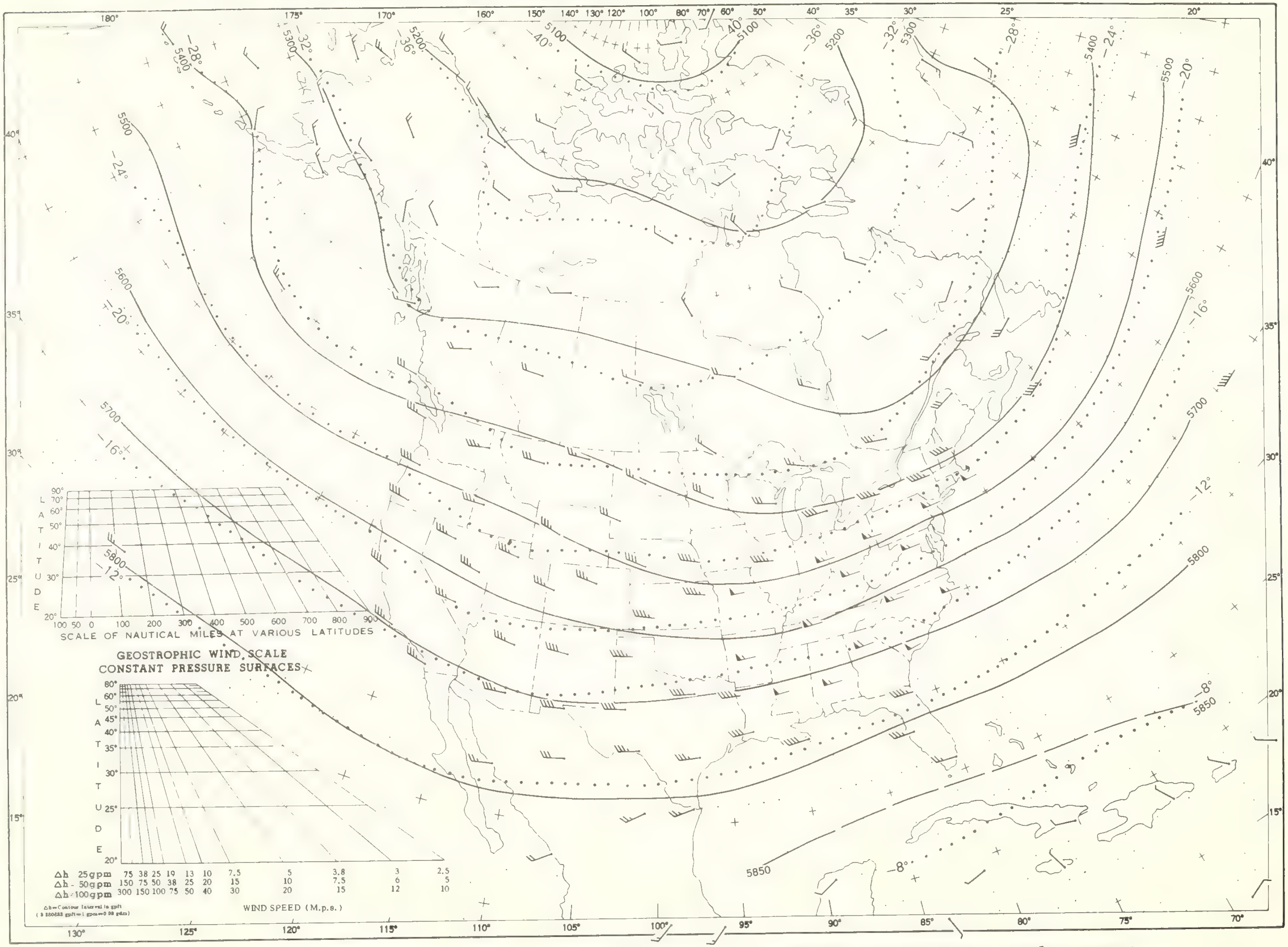
Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25mps, full feather 5mps, and half feather 2.5mps. All wind data are based on rawin observations.

Chart XII. 700-mb. Surface, 1200 GMT, December 1968. Average Height and Temperature, and Resultant Winds.



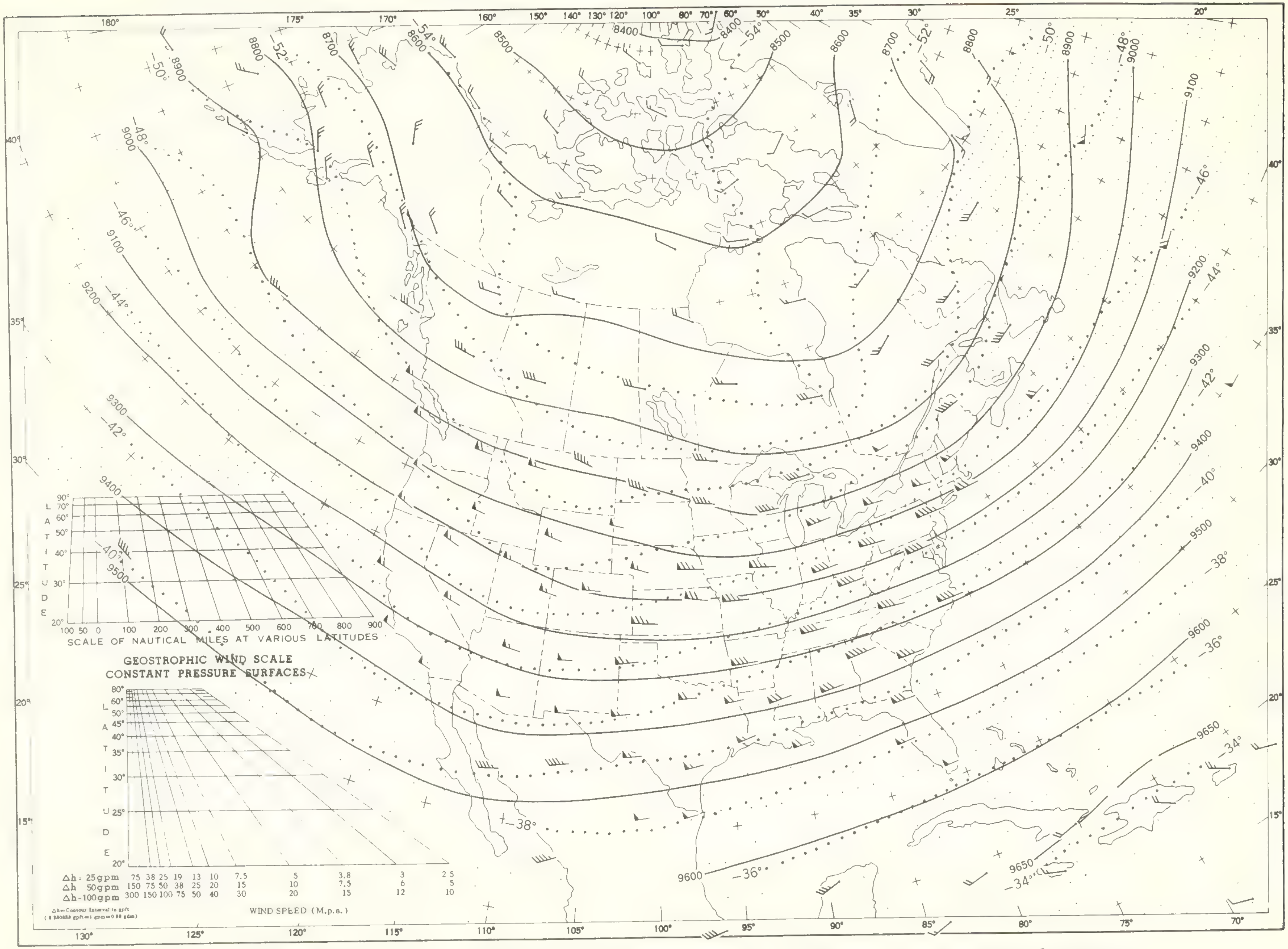
Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XIII. 500-mb. Surface, 1200 GMT, December 1968. Average Height and Temperature, and Resultant Winds.



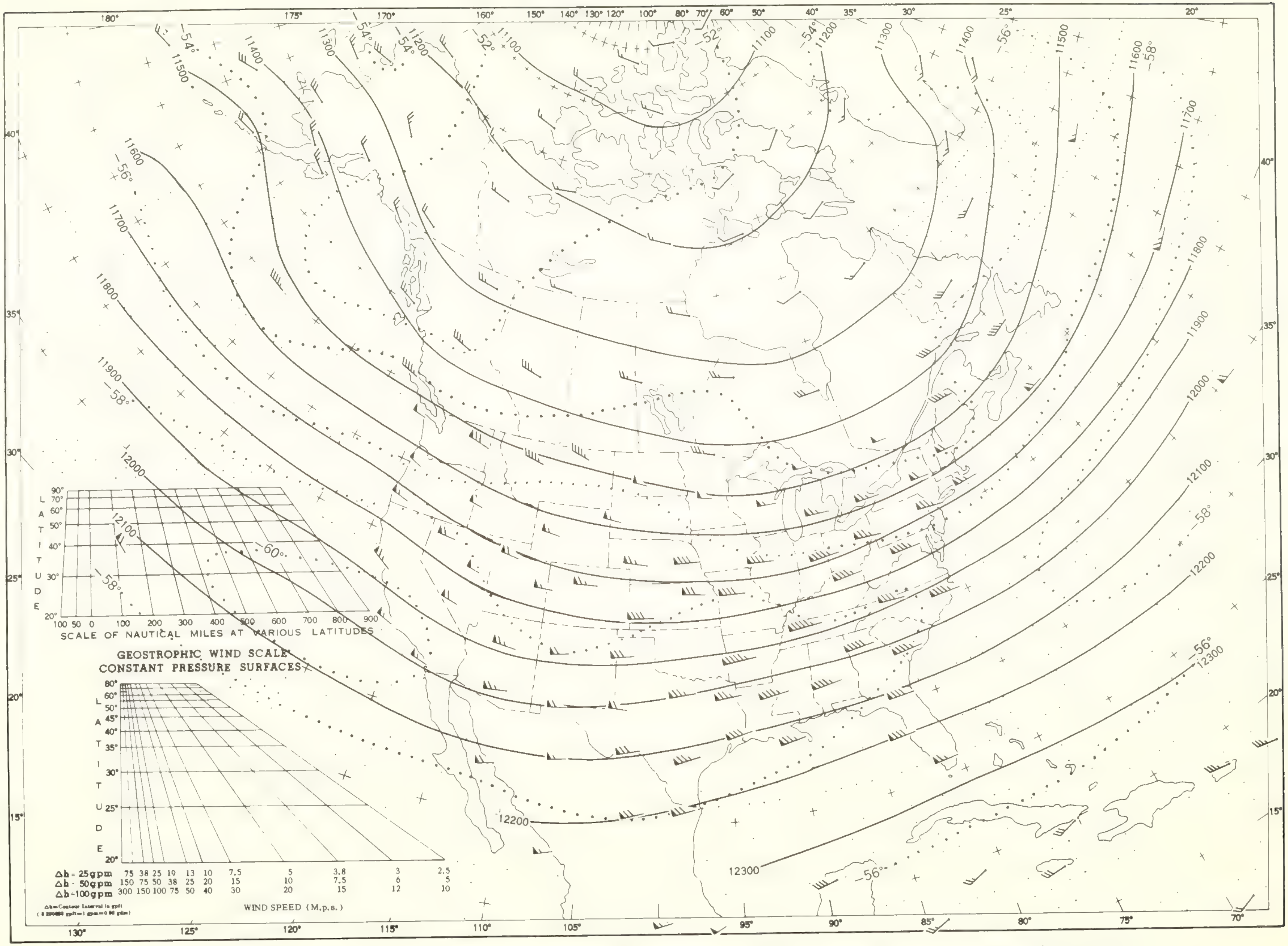
Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XIV. 300-mb. Surface, 1200 GMT, December 1968. Average Height and Temperature, and Resultant Winds.



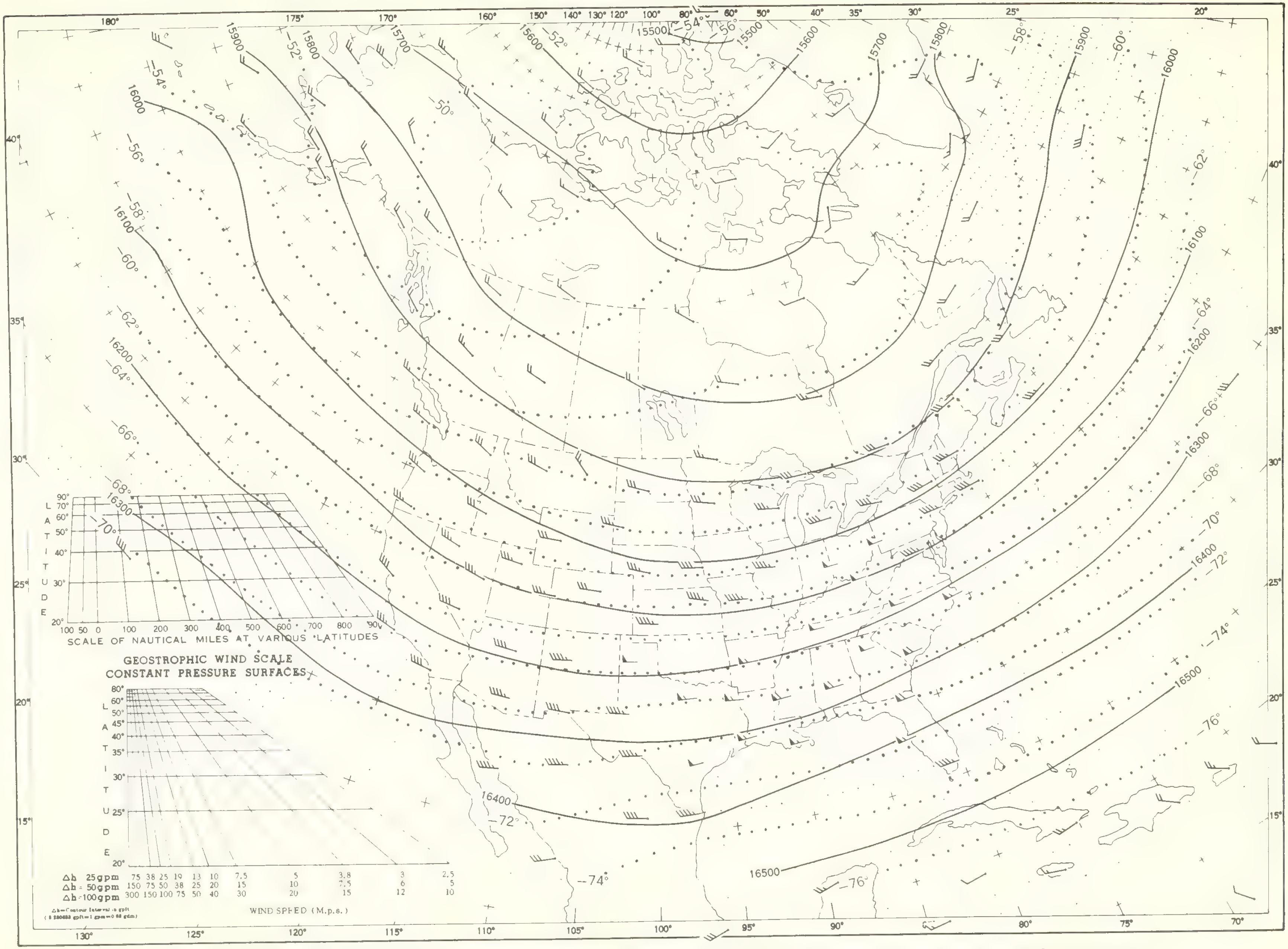
Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XV. 200-mb. Surface, 1200 GMT, December 1968. Average Height and Temperature, and Resultant Winds.



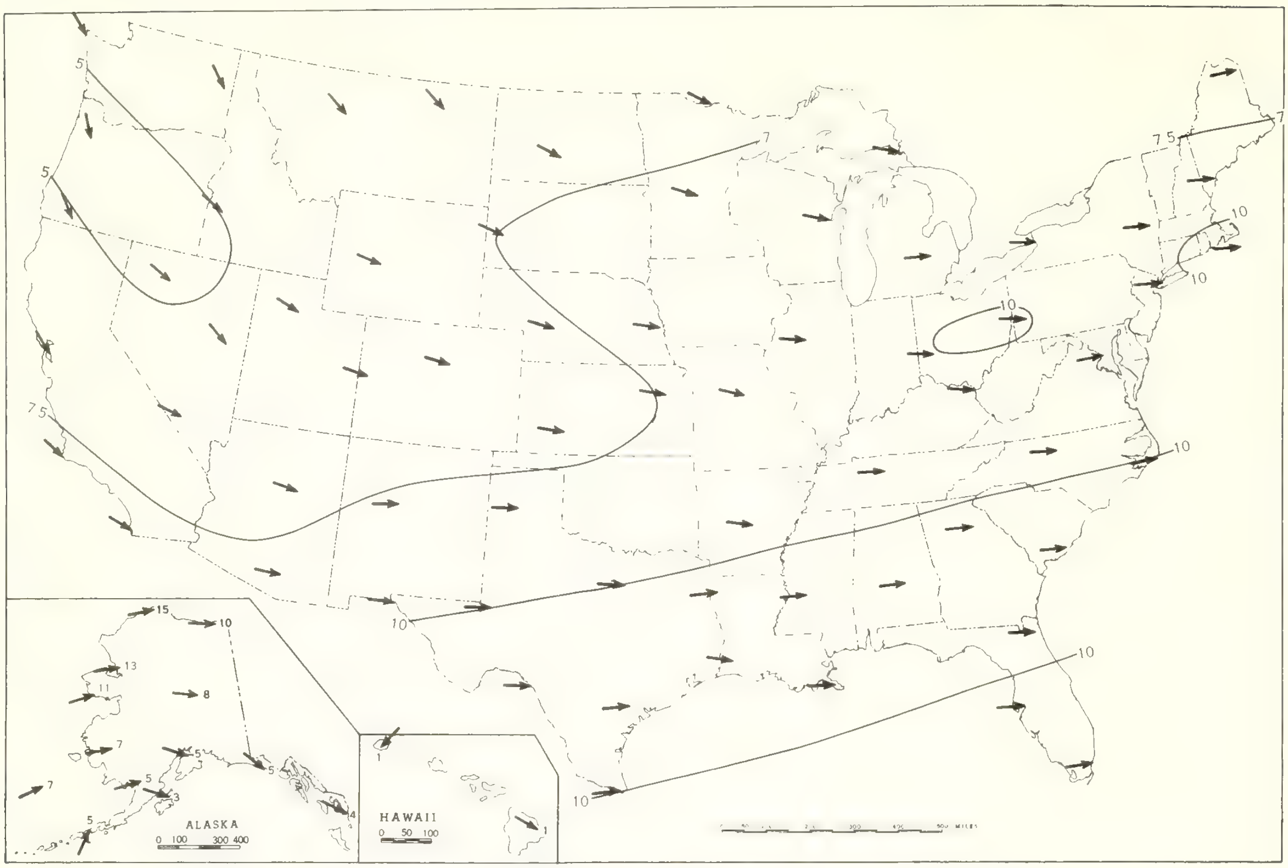
Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XVI. 100-mb. Surface, 1200 GMT, December 1968. Average Height and Temperature, and Resultant Winds.

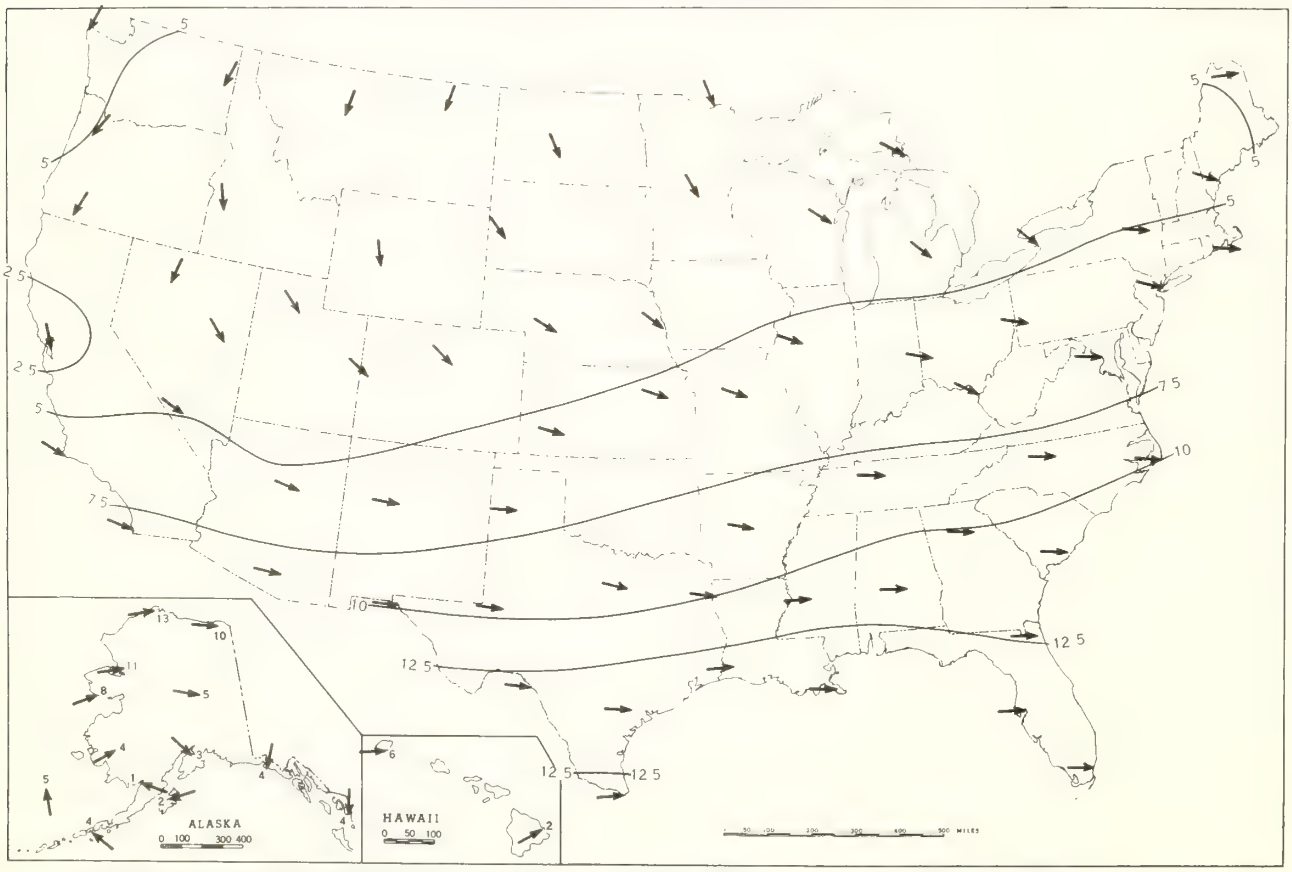


Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XVII. A. 50-mb. Surface, 1200 GMT, December 1968. Resultant Winds.



B. 30-mb. Surface, 1200 GMT, December 1968. Resultant Winds.



Wind speed (isotachs) in meters per second. Arrows show resultant wind direction. All wind data are based on rawin observations.

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CLIMATOLOGICAL DATA

NATIONAL SUMMARY

ANNUAL 1968
Volume 19 No. 13

Asheville 1969

CONTENTS

RAWINSONDE DATA (Average Annual Values) - tabulation discontinued. The tabulation RAWINSONDE DATA (Average monthly Values) is carried in the monthly issue of the publication CLIMATOLOGICAL DATA NATIONAL SUMMARY.

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CLIMATOLOGICAL DATA

NATIONAL SUMMARY

Volume 19 No. 13 Year 1968

GENERAL SUMMARY OF WEATHER CONDITIONS

L. H. Seamon
Environmental Data Service, ESSA
Washington, D. C.

HIGHLIGHTS:

1. Below normal winter and spring snowfall in western mountains.
2. March floods in New England.
3. May floods in New Jersey and Ohio Valley.
4. Outbreak of tornadoes in Midwest May 15.
5. Atlantic coastal storm November 11-12.
6. Hurricane Gladys crossed Florida October 19.
7. Cold, stormy, and snowy December.

Weather conditions in the United States during 1968 were mostly favorable for agriculture, commerce, and industry. Suffering, deaths, and losses due to storms and other adverse weather conditions were near normal. The crop season set a new high in total production as higher crop yields offset lower acreages.

TEMPERATURE.--In the 48 States temperatures for 1968 averaged above normal in Michigan, Wisconsin and Minnesota, the Pacific States, and the Great Basin, and below normal elsewhere. This was one of the coolest years on record in the Southeast. The temperature for the year at Tampa, Fla., averaged 69.8°, the lowest during a record dating back to 1885; and 65.9° for New Orleans, La., was the lowest back through 1871. In some sections of the Southeast average temperatures for every month were subnormal. The year was colder than normal in Alaska and warmer than normal in Hawaii. Extreme temperatures for the year in the 48 States ranged from 122° in Death Valley, Calif., on June 22 to -52° at a station about 22 miles south of Baudette, Minn., on Jan. 6. In Alaska the highest was 94° at West Fork on July 24, and the lowest -68° at Hughes on Jan. 19. Hawaiian temperatures ranged from 96° at Mauna Kea Beach 98 on June 30, to 25° at Mauna Loa Slope Observatory on Jan. 29.

Temperatures for the first 2 months of 1968 averaged above normal in the Far West and below in the East. The first half of January was unusually cold from the Rockies to the Atlantic coast. Temperatures fell to as low as -50° in the eastern North Dakota - northwestern Minnesota area and to -40° in the Northeast. Zero readings occurred as far south as northern Texas, Arkansas, and Tennessee and lows dropped into the 20's along the middle Gulf coast. Temperatures did not rise above zero in parts of the extreme northern Great Plains during the first 10 days of January. The cold weather was more bitter than usual in parts of the Northeast where frequent strong winds added to the chill. At Burlington, Vt., 115 continuous hours of subzero temperatures, January 7-12, set a new record. A low of -26° at Albany, N. Y., equaled the alltime January low recorded there. Wilmington, N. C., had minima of 32° or below on 22 days in January and 23 days in February, new records for both months.

February was among the coldest in the South and among the warmest in the Great Basin and Pacific States. San Antonio and Corpus Christi, Tex., had their coldest February in 63 years; Macon, Ga., in 70 years; and New Orleans, La., in 74 years. In contrast, Portland, Oreg., and Bakersfield, Calif., had their warmest February on record.

SPRING (March-May).--Average temperatures for the 3-month period were above normal in California and from Montana and the upper Great Plains to the Atlantic coast, and below elsewhere.

March was abnormally warm, except in the Gulf States. This was particularly so in the North Central States where numerous stations reported the warmest March in 20 to 30 years or more.

April temperatures, in general, averaged below normal in the western half of the 48 States and normal or above in the eastern half. Abnormally cool temperatures were quite persistent in the Pacific Northwest, and mostly above normal in the eastern half of the 48 States until the advent of a cold spell the last week. A freeze on April 13 in the Pacific Northwest caused several million dollars fruit damage in Oregon.

May was abnormally cool for the second consecutive year. Below-normal temperatures were persistent during the month except in the upper Great Plains at the beginning and west of the Rockies during the closing days. On May 6 a freeze over most of Ohio damaged fruit, particularly grapes.

SUMMER (June-August).--Summer temperatures averaged below normal in most sections of the 48 States for the second consecutive year. The main exceptions were California, Pennsylvania and along the Atlantic coast south of New England where temperatures were abnormally warm.

June temperatures were quite changeable. Relative to normal the month was hottest in California where Fresno had 13 days with 100° or higher, the greatest number for June in 28 years. Near record low June temperatures occurred at scattered stations in the Rocky Mountain States early in the month.

July was abnormally warm in some areas along the Pacific and Atlantic coasts and cool in most interior areas. The weather was very hot and humid along the middle Atlantic coast the last week of the month.

August was relatively cool west of the Mississippi except along the immediate California coast, and hot below the Great Lakes and east of the Mississippi. Periods of unusually hot and humid weather occurred from Maryland to South Carolina until the passage of a cold front on the 26th. August was among the coolest in the Rocky Mountain region. It was the coolest August in 40 years in Sheridan, Wyo,; in 77 years in Grand Junction, Colo.; and in 70 years in Flagstaff, Ariz. San Francisco, Calif., recorded 96° on the 20th, the highest for August in 99 years.

AUTUMN (September-November).--Autumn temperatures averaged within 2° of normal as did also all three autumn months.

September was quite cool in the Midcontinent the first week, and in the Southeast the second week. The third week was much cooler than normal west of the Great Plains, but unusually warm in the St. Lawrence Valley and upper Great Lakes, and hot weather continued the rest of the month in the New England and Middle Atlantic States.

October temperatures averaged near normal and the month passed without any unusual hot or cold spells, although some stations in the western half reported record-high temperatures for so late in the season and some in the Southeast had record early season lows.

The first decade of November was cold and the remainder alternately warm and cold. Cold air outbreaks extended far southward several times during the month. Freezing temperatures were recorded in northern Florida and subzero temperatures in the central Rockies the last week.

Average temperatures were nearly all below normal. Only brief periods of above-normal temperatures occurred east of the Rockies. Parts of the Northwest reported the coldest weather since the notable winter of 1949-50. Yuma, Ariz., had its coldest December in 36 years, and Albuquerque, N. Mex., in 55 years. Freezing occurred deep in the Florida Peninsula on December 15-17, with frost in the suburbs of Miami. Damage was mostly light except severe to some tender vegetables.

PRECIPITATION.--January precipitation from east Texas to the southern Appalachians exceeded 4 inches, with major flooding in south-central Texas the third week. Unusually heavy precipitation in Montana was in the form of snow. February precipitation was above normal mainly from the Pacific Northwest through New Mexico and west Texas. With the above exceptions, precipitation for the 2 months was mostly below normal.

SPRING (March-May).--Dry weather continued during the 3 months in eastern Oregon and Washington, and amounts in portions of eastern Montana were less than 50% of normal. Totals were slightly above to slightly below normal in the rest of the 48-State area.

Florida, the upper Great Plains, and interior sections of the Pacific Northwest had unusually dry, sunny weather in March. In contrast abnormally heavy amounts of 4 to over 8 inches of precipitation fell in a belt extending from northeast Texas northeastward and eastward to the Appalachians, and along the north Atlantic coast with damaging floods in New England.

Dry weather continued in Florida, the Middle Atlantic States, the Pacific Northwest, and eastern Montana during April, but unusually heavy amounts fell in the upper Mississippi and nearby Red River basins, and northern portions of Louisiana and Mississippi.

May rainfall was very heavy from Oklahoma and eastern Texas northeastward, and in the Florida Peninsula where water supplies were replenished after 2 very dry months. Torrential rains in eastern Texas on the 10th to 12th ranged up to 10 inches in 24 hours. Monthly totals in southern Florida ranged up to 20 inches. Flooding, sometimes severe, occurred along many streams in the heavy rainfall belt, with heavy damage in northern New Jersey.

SUMMER (June-August).--Summer rainfall was below normal in parts of Arizona and Minnesota and in the region east of the Mississippi below the Great Lakes, except above in South Carolina and Florida. Driest areas were southern Alabama and adjacent areas of nearby States, and in eastern portions of the Atlantic Coastal States from North Carolina to southeastern New York.

In early June tropical storm Abby brought heavy rains to Florida, causing some flood damage. Miami received over 22 inches for the month. Rainfall was also heavy along the Texas coast, with totals of 8 to over 12 inches. Well above normal amounts in the northern Great Plains benefited eastern Montana.

July rainfall was spotty with above normal amounts from the Southwest to the Great Lakes. Below-normal amounts were the rule in the Pacific Northwest, the central Gulf area, the Middle Atlantic States, and New England. On July 15-16 rainfall totaled up to 9 inches in southeastern Nebraska and 5 to 15 inches in parts of Iowa. On the 8th and 9th, 15.68 inches fell at Columbus, Miss. This was the driest July in 142 years at Albany, N. Y., only 0.49 inch, and the second driest at Boston, Mass., in 151 years, with 0.55 inch.

August rainfall was above normal in most of the area west of the Mississippi, with record amounts in parts of the Pacific Northwest. Numerous localities reported flash floods, resulting from heavy downpours. Much of the East had below normal amounts, less than 50% along the Atlantic coast from the Carolinas to New Jersey.

AUTUMN (September-November).--Autumn precipitation was near to well above normal except in the western portions of the Great Plains where deficits were over 50% in some sections.

September rains were more than twice normal in western Montana, large portions of the Mississippi Valley, and eastern Pennsylvania, but less than half normal in many coastal areas from northern Florida to northern Maine and most of the western half of the 48 States.

October rains were heavy in southern California, the lower Missouri and upper Mississippi River Valleys, the Carolinas where spring and summer amounts were below normal, and southern Florida.

November was a wet month, except very dry from Minnesota to the lower Colorado River Valley. Precipitation in the form of rain and snow was frequent in the Pacific Northwest, and monthly totals exceeded 12 inches along the Washington and Oregon coast.

Precipitation during December was below normal in the Colorado River Valley, the lower Great Plains, and from Maryland to Florida. Deficits were over 50% in the lower Colorado River Valley, Texas, and the Florida Peninsula. Elsewhere in the 48 States amounts were well above normal, with greatest amounts, relative to normal, in the upper Mississippi Valley and upper Great Plains. From northwestern Kansas to eastern Montana where the autumn was very dry, December totals ranged up to 400% of normal. In New England monthly totals ranged up to 200% of normal. This was the wettest December in 66 years at Portland, Oreg., and in 69 years at Marquette, Mich.

SNOWFALL.--Above normal snowfall in January and February was limited mostly to southern areas east of the Rockies--that for January south of the Great Lakes, that for February in a wide belt from the Virginias and Carolinas to New Mexico.

January totals ranged up to 400% of normal in sections of central Indiana and Illinois. The snowfall of 17 inches at Indianapolis, Ind., was the second heaviest since 1895. There were two notable storms during the month. During the first from the 6th to 8th, falls of 3 to 20 inches over New England were blown by 60 m.p.h. winds into drifts up to 20 feet high which closed schools and halted transportation. A number of buildings in Massachusetts collapsed under the weight of snow and ice. During the second storm between the 13th and 16th, heavy drifted snow from the Mississippi River to the Appalachians delayed transportation and forced many schools to close, particularly in the area from the Virginias to southern Michigan.

In February, 4- to 5-inch snow depths in southeastern Mississippi were the most there this century. At Oklahoma City, Okla., February falls totaled 7.7 inches,

a new record. Heavy falls also occurred in Upper Michigan where Sault Ste. Marie reported a record fall of 39.5 inches. Traces fell as far south as New Orleans, La. Most of the snow in the South fell during storms about midmonth and on the 21st to 24th. Examples of the light snow in the West were 0.9 inch at Helena, Mont., the least for February on record, and 21.9 inches at Stampede Pass, Wash., the second lowest total for February.

March snowfall was above normal in a wide band from New Mexico to the central Great Lakes, in Louisiana and Mississippi, and some sections of the Northeast. Totals ranged up to more than a foot in the Ohio Valley, and Memphis, Tenn., reported 17.3 inches for the most in March since 1892. During a snowstorm from Oklahoma to Ohio on the 11th and 12th, up to 16 inches of drifting snow in the Ozark region of Oklahoma, Arkansas, and Missouri halted traffic, marooned many cars and busses, and damaged trees, carports, brooder houses, etc. During another storm on the 21st to 23d, snowfall was unusually heavy for a spring storm in the lower Mississippi and Ohio Valleys. Snow fell to the coast in southwestern Louisiana and up to 8 inches of snow was measured in the northern part of that State. Falls ranged up to 16 inches or more in eastern Arkansas, northern Mississippi, and western Tennessee, and near to over a foot in western Kentucky, southern Indiana, and western Ohio.

April snowfall was relatively heavy from Arizona and Utah to the northern Great Plains. Many cars were stranded in southern Wyoming and many schools were closed in South Dakota and northwestern Nebraska as roads became impassable by wind-driven snow. Falls in the latter State ranged up to 20 inches.

The 1968-69 snow season got off to an auspicious start in Montana during September; Kalispell had the second greatest fall of record for the month, 3.1 inches, and Del Bonita reported a fall of 28.5 inches on the 21st. In the Cascade Mountains of Washington snow accumulated to 30 inches above 5500 feet by the end of the third week of October, and 1 to 2 feet were reported in some of the higher mountains of the northern Rockies.

Three storms hit the Northeast within a period of 5 days during the first part of November. The first on the 7th and 8th produced 5 to 20 inches of snow over northern New England, causing heavy damage to trees and utilities, but permitted early opening of ski resorts. The second storm on the 10th again produced up to 20 inches in northern New England and up to 17 inches in the Berkshires of Massachusetts. The third snowstorm, moving up the Atlantic coast Nov. 10-13, left up to a foot of snow in the lower Appalachians, 15 to 17 inches in sections of western Maryland, up to 14 inches in the Poconos, up to 2 feet or more in the central mountains of Pennsylvania, 11 to 15 inches in central New York State, and 5 to 10 inches over much of New England. In many areas this third snowstorm was one of the heaviest on record for so early in the season. Unusually heavy snow also fell in Iowa on November 10, up to a foot in the Des Moines area. During a snowstorm in the Southwest the last week of November, 7 inches fell at El Paso, Texas, a new record for November.

A trace of snow at Columbia, S. C., on the 11th of November was the earliest in 55 years, 1.2 inches was the most in 89 years for November at Raleigh, N. C., and 18.8 inches at Burlington, Vt., was the most for November in 62 years. Snowfall for November was several hundred percent of normal from the lower Appalachians and Piedmont region northward through New England, in west Texas and eastern New Mexico, and in Iowa. Actual totals for the month ranged up to 2 feet or more at many New England stations, and over 3 feet in northern Maine.

December, like November, was a snowy month. Frequent snowstorms left an unusually deep cover for December in the western Mountains and north-central areas. In the Sierras, Norden, Calif., reported 75 inches on the ground, 36 inches above normal. A total of 28.7 inches was a new December record for Minneapolis, Minn. In the Northeast, Mt. Washington, N. H., measured 103.7 inches, a new record for any month. Five storms occurred in the general area of the central Great Plains to the Great Lakes, on December 10-13, 17-19, 20-23, 26-28, and 29-31. Blizzard conditions and glaze occurred in several areas during the first three storms. High winds, drifting snow, and glaze marooned hundreds of motorists and caused heavy damage to utilities. The storm of the 20th to 23d was unusually severe; snowdrifts 5 to 10 feet high were reported. In some local areas winds of 60 m.p.h. and drifts up to 20 feet high were reported.

STORMS AND OTHER UNUSUAL WEATHER PHENOMENA.--March 17-19: Heavy rains of 4 to 7 inches caused severe flooding in New England with greatest damage in eastern Massachusetts where losses were estimated at $50 million.

April 11: Typhoon Jean passed over the Pacific Island of Saipan. A tower designed to withstand winds up to 200 m.p.h. was toppled. Total damage on the Island was estimated at $16.5 million.

May 15: An outbreak of more than 30 tornadoes occurred in the Midwest, killing more than 30 persons, injuring several hundred, and causing property losses of tens of millions of dollars. Three of these tornadoes passed through densely populated areas and were unusually destructive. The worst one swept through Charles City and Elma, Iowa, leaving 13 persons dead, 462 injured, and property losses estimated at $31.5 million. Another tornado moved through Oelwein and Maynard, Iowa, Killing 5 persons, injuring 156, and causing property losses estimated up to $21 million. A third tornado struck Tuckerman and Jonesboro, Ark., where total losses included 35 persons killed, 361 injured and property losses exceeding $5 million.

May 29: Heavy rainfall (up to 7 inches) caused the highest flood since 1903 in parts of northeastern New Jersey. Estimates of losses totaled well over $100 million.

May 23-27: Heavy rains in the Ohio Basin resulted in floods that cuased losses estimated at more than $40 million.

May 23-24: As severe thunderstorms moved across Oklahoma County, Okla., hail, rain that produced flash floods, and lightning that set fires caused losses estimated at $20 million. Since a great part of the damage was caused by hail, this was one of the most destructive hailstorms of record.

June 11: A tornado in a mountainous area about 30 miles north of Enterprise, Oreg., destroyed 1800 acres of prime timber and damaged an additional 1200 acres.

June 20-21: A line of thunderstorms with winds up to 100 m.p.h., hail 1/2 to 3 inches in diameter, and 9 or more tornadoes crossed South Dakota, probably causing the most extensive damage ever in the State. Total damage was estimated as high as $15 million.

June 30: A seiche on Lake Superior caused maximum water level changes between 5 and 6 feet at Baraga and L'Anse in the Keweenaw Peninsula area.

June 1-30: Sault Ste. Marie, Mich., did not record a single clear day during June, the first such occurrence for June since 1892.

July 16-17: Record 24-hour rainfalls in northeast Iowa ranged up to 12.40 inches at Shell Rock, and an unofficial total of 16.20 inches at Waverly was substantiated by a bucket survey. Severe flooding occurred. Four persons lost their lives, and property losses were estimated at $14.5 million.

August 6: A dust devil caused a helicopter to crash near Eagle Summit, Alaska. One person was killed and two injured.

August 11: A dust devil near Bristol, Conn., on August 11, carried a 150-pound roof covering a picnic area into a tree and then into a lake where it injured a young girl.

August 14: A freeze damaged crops in eastern and northern-central North Dakota on August 14.

August 14-28: Persistent heavy rainfall in most of Oregon during this period produced record-breaking totals for August at many stations. The rains hampered or prevented harvesting operations, resulting in many millions of dollars crop loss.

August 16: Wind and flooding rain caused several million dollars damage in Chicago and vicinity.

September 6: In the western third of Kansas, hail, wind, and heavy rain that resulted in some flash floods caused heavy crop losses.

October 16-19: Hurricane Gladys caused $6.7 million damage on the Florida Peninsula.

November 12: A coastal storm caused damage from South Carolina to Maine. Up to 2 feet of snow fell in the Appalachians, but most damage occurred in coastal areas from winds, high tides, and flooding, particularly from southern New Jersey to Long Island, New York. Total damage probably was well over $20 million. In many areas this storm was comparable to the great November storms of 1950 and 1913.

December 20-22: Cold weather severely damaged flower crops, citrus, and avocados in some areas of southern California.

EXCESSIVE PRECIPITATION

(Excessive Short Duration Rainfall)

Year 1968

This table contains statistics of maximum amounts of rainfall during the calendar year 1968. Data presented in this table are generally from stations equipped with recording gages. Stations are at Airport locations unless otherwise shown.

Excessive precipitation data for the years 1896-1935 inclusive, generally present the accumulated amounts of precipitation for each 5, 10, or 20 minute intervals during storms in which the rate of fall equaled or exceeded .25 inch in any 5 minute period, or .30 in any 10 minute period, or .35 in any 15 minute period, etc., the tabulation beginning with the 5 minute period where the rate of .05 inch in 5 minutes began and continuing by 10 or 20 minute intervals up to 120 minutes. A detailed explanation of the method used may be found in the publications listed in the last paragraph of this explanation.

The present method, adopted with data for the calendar year 1936, gives the maximum fall of precipitation for the periods 5 to 180 minutes, the maximum amounts being taken for the periods in which the fall is greatest for the given time, and is tabulated to show maximum amounts for 5, 10, 15, 20, 30, 45, 60, 80, 100, 120, 150 and 180 minutes, even if the fall does not equal the excessive rate for some of the periods. (The 15 minute amount was not computed for 1936-43 and the 150 minute amount was not computed for 1944 through 1948).

The following Table A shows limits at which precipitation was considered excessive in this publication:

TABLE A

Duration (minutes)	Depth of precipitation (inches)	Duration (minutes)	Depth of precipitation (inches)
5	.25	60	.80
10	.30	80	1.00
15	.35	100	1.20
20	.40	120	1.40
30	.50	150	1.70
45	.65	180	2.00

This table is made up from the formula, $A = t + 20$ where A is the accumulated depth in hundredths of inches and t is the time in minutes.

For the years 1936 through 1948 stations in North Carolina, South Carolina, Georgia, Florida, Alabama, Mississippi, Tennessee, Arkansas, Louisiana, Texas, Oklahoma, and San Juan, P. R., used the limits shown in the following Table B:

TABLE B

Duration (minutes)	Depth of precipitation (inches)	Duration (minutes)	Depth of precipitation (inches)
5	.40	60	1.50
10	.50	80	1.90
15	.60	100	2.30
20	.70	120	2.70
30	.90	150	3.30
45	1.20	180	3.90

This table is made up from the formula $A = 2t + 30$. Its use, however, was discontinued at the end of 1948 and Table A is used by all sections for 1949 and the following years.

Publication of Data. A summary of maximum precipitation data for the years prior to 1896 is published in the annual report of the Chief of the Weather Bureau for 1895-1896. Excessive precipitation data for the period 1881-1896 are published in the annual report of the Chief of the Weather Bureau 1896-1897. Data for the years 1897 through 1934 have been published in the appropriate annual reports of the Chief of the Weather Bureau. For the years 1935 through 1949 these data are published in the appropriate issue of the United States Meteorological Yearbook. For 1950 and succeeding years excessive precipitation are presented in the annual issues of the Climatological Data National Summary.

EXCESSIVE SHORT DURATION RAINFALL

Station and date	Maximum precipitation in inches (5 to 180 minutes)											
	5	10	15	20	30	45	60	80	100	120	150	180
ALABAMA												
BIRMINGHAM												
MAR 10	.28	.49	.74	.78	1.10	1.20	1.24	1.31	1.32	1.32	1.34	1.36
MAR 11	.34	.62	.70	.78	.87	1.09	1.41	1.52	1.81	1.94	2.00	2.03
APR 28	.20	.32	.38	.47	.60	.69	.80	1.10	1.24	1.37	1.51	1.57
MAY 14	.36	.55	.60	.71	.77	.83	.87	.93	1.02	1.04	1.04	1.04
JUL 8	.23	.33	.35	.37	.39	.44	.47	.52	.56	.60	.63	.67
JUL 8	.22	.35	.37	.44	.51	.58	.66	.72	.76	.82	.87	.90
JUL 9	.16	.25	.32	.41	.52	.77	1.00	1.20	1.43	1.56	1.77	2.02
JUL 21	.18	.32	.36	.41	.44	.54	.56	.59	.61	.62	.66	.67
JUL 29	.18	.28	.42	.56	.68	.70	.71	.72	.73	.74	.74	.74
AUG 11	.20	.33	.42	.43	.44	.45	.45	.45	.45	.45	.45	.45
AUG 19	.30	.34	.35	.35	.44	.45	.46	.46	.46	.46	.46	.46
SEP 4	.20	.31	.40	.48	.76	.91	1.10	1.17	1.25	1.34	1.43	1.46
NOV 17	.19	.28	.33	.44	.49	.52	.67	.71	.79	.83	.83	.83
DEC 27	.37	.63	.67	.69	.79	.91	1.01	1.14	1.31	1.41	1.70	1.78
HUNTSVILLE												
MAR 30	.23	.44	.48	.52	.63	.65	.67	.71	.73	.73	.85	.88
APR 14	.45	.49	.50	.57	.76	.76	.76	.77	.80	.83	.83	.90
MAY 11	.15	.27	.38	.40	.41	.41	.41	.41	.45	.59	.59	.59
MAY 14	.50	.73	.73	.77	.79	.82	.86	.90	.96	.97	1.00	1.03
JUL 19	.30	.30	.30	.32	.39	.42	.44	.46	.55	.60	.68	.68
SEP 4	.49	.94	1.00	1.23	1.31	1.32	1.32	1.34	1.34	1.34	1.34	1.41
SEP 5	.27	.52	.55	.67	.78	.92	1.03	1.09	1.13	1.13	1.13	1.13
OCT 6	.25	.48	.53	.54	.58	.75	.94	1.01	1.09	1.10	1.12	1.12
DEC 27	.48	.96	1.01	1.06	1.09	1.24	1.31	1.36	1.39	1.39	1.41	1.42
MOBILE												
MAY 18	.22	.35	.43	.53	.57	.71	.74	.75	.76	.80	.87	1.01
MAY 25	.25	.47	.54	.57	.57	.57	.57	.57	.57	.57	.57	.57
JUN 9	.30	.59	.62	.68	1.00	1.20	1.27	1.37	1.38	1.39	1.39	1.39
JUN 22	.25	.43	.57	.69	.69	.69	.69	.69	.69	.69	.69	.69
JUN 26	.20	.34	.39	.41	.42	.53	.55	.56	.56	.56	.56	.56
JUL 9	.24	.45	.45	.55	.60	.60	.63	.76	.77	.77	.77	.77
JUL 22	.23	.38	.48	.66	.90	1.00	1.06	1.07	1.07	1.07	1.10	1.10
AUG 2	.22	.34	.37	.48	.56	.60	.70	.70	.70	.71	.71	.78
AUG 11	.50	.80	.86	1.00	1.15	1.20	1.23	1.23	1.23	1.23	1.23	1.23
AUG 18	.50	.91	.95	1.15	1.33	1.35	1.35	1.35	1.35	1.35	1.35	1.35
SEP 9	.35	.45	.45	.55	.58	.58	.58	.58	.58	.58	.58	.58
SEP 16	.30	.50	.55	.70	.92	1.20	1.60	2.13	2.28	*2.93	3.05	*3.08
NOV 3	.25	.30	.32	.32	.32	.32	.32	.32	.32	.32	.32	.32
NOV 17	.50	.75	.87	.90	.94	1.01	1.12	1.24	1.28	1.29	1.31	1.33
DEC 30	.20	.40	.50	.60	.75	.90	1.03	1.25	1.32	1.45	1.62	1.66
DEC 30	.29	.47	.71	.83	1.00	1.47	1.57	1.60	2.13	2.20	2.24	2.36
MONTGOMERY												
MAR 10	.26	.36	.38	.38	.38	.38	.38	.38	.36	.38	.36	.42
JUN 10	.31	.39	.42	.42	.42	.48	.48	.46	.48	.48	.48	.48
JUL 2	.27	.41	.55	.69	.72	.72	.80	.82	.82	.82	.82	.82
JUL 21	.25	.42	.60	.70	.89	.90	.90	.90	.90	.90	.90	.90
AUG 2	.30	.38	.43	.43	.43	.43	.43	.43	.43	.43	.43	.43
AUG 24	.22	.32	.35	.37	.38	.38	.38	.38	.38	.38	.38	.38
NOV 17	.25	.39	.50	.58	.64	.84	.97	1.00	1.38	1.43	1.48	1.58
ALASKA												
ANCHORAGE						NONE						
ANNETTE						NONE						
COLD BAY						NONE						
FAIRBANKS						NONE						
JUNEAU						NONE						
KING SALMON						NONE						
MC GRATH						NONE						
ST. PAUL ISLAND						NONE						
YAKUTAT						NONE						
ARIZONA												
FLAGSTAFF												
JUL 28	.19	.31	.36	.36	.36	.36	.36	.36	.36	.36	.36	.36
PHOENIX												
JUL 31	.40	.64	.74	.76	.78	.85	.85	.85	.86	.88	.88	.88
TUCSON						NONE						
WINSLOW												
JUL 6	.25	.30	.33	.34	.35	.39	.42	.42	.42	.42	.42	.42
YUMA						NONE						
ARKANSAS												
FORT SMITH												
MAR 9	.17	.32	.42	.44	.48	.59	.64	.64	.64	.64	.64	.64
APR 19	.26	.50	.58	.78	.91	.96	1.09	1.13	1.22	1.26	1.31	1.33
APR 19	.28	.37	.37	.37	.37	.38	.38	.38	.38	.38	.38	.38
MAY 3	.25	.44	.46	.47	.47	.70	.91	.97	1.25	1.37	1.37	1.38
MAY 9	.26	.45	.48	.51	.57	.60	.65	.68	.69	.70	.78	.81
MAY 13	.43	.72	.96	1.16	1.44	1.64	1.87	2.00	2.35	2.55	2.77	2.84
JUN 25	.15	.20	.25	.35	.50	.55	.56	.58	.80	.95	1.27	1.28
JUL 1	.30	.55	.58	.62	.72	.79	.80	.81	.82	.83	.85	.89
NOV 2	.35	.50	.50	.51	.55	.60	.66	.75	.82	.90	1.06	1.14
DEC 27	.12	.17	.24	.31	.47	.66	.90	1.06	1.21	1.27	1.36	1.44
LITTLE ROCK												
APR 3	.27	.35	.49	.55	.62	.83	.83	.83	.84	1.02	1.02	1.02
APR 22	.44	.49	.58	.63	.68	.80	.84	.97	.98	.99	1.01	1.12
MAY 13	.50	.65	.98	1.01	1.05	1.07	1.10	1.12	1.15	1.28	1.35	1.43
MAY 13	.21	.40	.53	.65	1.02	1.13	1.16	1.60	1.70	1.76	1.80	2.09
MAY 15	.24	.35	.50	.50	.51	.51	.53	.53	.53	.53	.53	.53
JUN 6	.25	.35	.48	.57	.75	1.02	1.25	1.30	1.31	1.31	1.31	1.31
JUN 11	.20	.30	.36	.36	.36	.36	.36	.39	.39	.40	.50	.50
JUN 16	.50	.75	.90	1.00	1.07	1.07	1.07	1.08	1.08	1.08	1.08	1.08
JUN 25	.30	.52	.80	.95	1.05	1.12	1.45	1.57	1.72	1.88	1.97	2.07

Station and date	Maximum precipitation in inches (5 to 180 minutes)											
	5	10	15	20	30	45	60	80	100	120	150	180
ARKANSAS												
LITTLE ROCK												
JUL 13	.30	.40	.43	.43	.43	.43	.43	.43	.43	.43	.47	.47
JUL 22	.20	.21	.40	.45	.48	.50	.50	.50	.50	.50	.50	.50
JUL 27	.45	.60	.88	1.14	1.35	1.85	1.90	1.90	1.90	1.90	1.90	1.90
JUL 29	.30	.54	.65	.94	1.12	1.20	1.23	1.27	1.30	1.35	1.50	1.55
SEP 8	.40	.73	.85	.85	.85	.86	.89	.89	.89	.89	.90	.90
TEXARKANA												
MAR 9	.20	.33	.41	.46	.57	.64	.67	.80	.87	.90	1.04	1.07
MAR 20	.20	.31	.37	.47	.51	.52	.55	.56	.56	.56	.56	.56
MAR 20	.30	.36	.47	.50	.60	.73	.77	.86	.95	1.07	1.10	1.11
MAY 7	.18	.36	.45	.48	.49	.51	.55	.55	.55	.55	.55	.55
MAY 9	.25	.48	.55	.67	.81	.92	1.03	1.08	1.14	1.19	2.00	1.20
MAY 10	.37	.46	.61	.75	.96	1.25	1.53	1.74	1.79	2.00	2.22	2.29
MAY 10	.21	.30	.35	.44	.49	.60	.72	.95	1.14	1.23	1.48	1.65
MAY 17	.20	.28	.36	.38	.52	.59	.63	.83	.85	.87	.95	.99
MAY 17	.25	.40	.47	.52	.69	.87	.96	1.03	1.07	1.12	1.13	1.13
MAY 17 T	.15	.25	.30	.41	.42	.42	.42	.42	.42	.42	.42	M
JUN 17	.18	.33	.38	.49	.61	.79	.86	.88	.91	.93	.94	.95
JUN 19	.26	.38	.45	.48	.50	.52	.53	.53	.53	.53	.53	.53
JUL 18	.20	.34	.45	.53	.58	.62	.64	.85	.86	.88	.91	.91
JUL 21	.39	.62	.71	.79	.80	.81	.82	.82	.82	.82	.82	.82
JUL 29	.15	.26	.34	.43	.46	.50	.50	.50	.50	.50	.50	.50
AUG 14 C	.30	.57	.62	.63	.64	.67	.81	1.10	1.17	1.32	1.37	1.40
CALIFORNIA												
BAKERSFIELD						NONE						
BISHOP						NONE						
BLUE CANYON						NONE						
EUREKA U						NONE						
FRESNO						NONE						
LOS ANGELES												
MAR 7	.32	.55	.68	.78	1.03	1.24	1.38	1.52	1.63	1.75	1.84	2.01
MT SHASTA R						NONE						
OAKLAND						NONE						
RED BLUFF						NONE						
SACRAMENTO						NONE						
SANDBERG R						NONE						
SAN DIEGO												
MAR 8	.15	.25	.38	.48	.58	.67	.76	.95	1.08	1.17	1.25	1.28
SAN FRANCISCO U												
JAN 10	.26	.31	.35	.38	.41	.48	.54	.63	.71	.77	.86	.90
SANTA MARIA						NONE						
COLORADO												
ALAMOSA						NONE						
DENVER												
JUL 24	.22	.44	.52	.55	.62	.75	.76	.78	.78	.78	.78	.78
AUG 9	.11	.16	.24	.32	.44	.68	.80	.94	1.08	1.12	1.16	1.17
GRAND JUNCTION												
MAY 10	.17	.30	.35	.40	.46	.50	.52	.56	.56	.56	.56	.56
PUEBLO												
JUL 2	.25	.41	.52	.68	.88	1.01	1.26	1.40	1.64	1.68	1.75	1.78
JUL 5	.25	.47	.56	.60	.74	.76	.77	.77	.77	.77	.77	.77
CONNECTICUT												
BRIDGEPORT												
JUN 19	.37	.56	.58	.60	.62	.65	.69	.77	.84	.93	1.02	1.03
JUL 24	.18	.25	.27	.33	.53	.58	.61	.61	.61	.61	.61	.61
AUG 1	.30	.33	.33	.34	.53	.55	.57	.60	.61	.61	.62	.62
AUG 9	.37	.74	.85	.97	1.21	1.30	1.61	1.73	1.76	1.76	1.76	1.76
AUG 16	.37	.51	.55	.71	.83	.89	.94	1.01	1.07	1.12	1.15	1.15
HARTFORD												
JUN 12	.22	.32	.33	.38	.53	.70	.95	1.12	1.20	1.26	1.29	1.33
AUG 9	.36	.60	.65	.73	.80	.85	1.45	1.52	1.52	1.52	1.52	1.52
NEW HAVEN												
JUN 19	.17	.29	.37	.40	.46	.49	.55	.63	.70	.79	.84	.86
JUL 24	.27	.43	.51	.61	.74	.84	.85	.85	.85	.85	.85	.85
AUG 4	.20	.25	.31	.43	.60	.75	.86	.91	.92	.92	.92	.92
AUG 9	.41	.51	.54	.54	.54	.54	.54	.54	.54	.54	.54	.54
DELAWARE												
WILMINGTON												
JUN 12	.32	.42	.42	.51	.56	.56	.97	.99	.99	.99	.99	1.03
JUN 12	.18	.31	.37	.46	.54	.56	.56	.56	.56	.56	.56	.57
JUL 2	.26	.28	.31	.31	.33	.39	.40	.41	.46	.47	.48	.49
AUG 10	.23	.44	.64	.65	.66	.66	.67	.69	.71	.72	.72	.72
SEP 10	.26	.40	.48	.58	.63	.73	.75	.76	.76	.76	.76	.76
FLORIDA												
APALACHICOLA U												
MAY 4	.15	.29	.39	.49	.59	.62	.65	.66	.66	.66	.66	.67
MAY 28	.34	.41	.49	.53	.53	.55	.55	.55	.55	.55	.55	.55
JUL 8	.35	.61	.86	.94	.97	.98	.98	1.17	1.20	1.20	1.22	1.33
JUL 10	.26	.47	.51	.54	.56	.58	.59	.59	.60	.61	.65	.72
AUG 10	.29	.38	M	M	M	M	M	.88	.88	.88	.88	.88
SEP 16	.33	.59	.76	.88	1.15	1.31	1.46	1.90	2.06	2.10	2.29	2.46
SEP 18	.24	.33	.50	.59	.69	.74	.76	.89	.93	.94	.96	.96

T CLOCK MALFUNCTION
M NO RECORD

C RECORD ENDED AUGUST 31.

Station and date	Maximum precipitation in inches (5 to 180 minutes)											
	5	10	15	20	30	45	60	80	100	120	150	180
FLORIDA												
APALACHICOLA U												
OCT 5	.50	.60	.70	.73	.76	.79	.83	.83	.88	.90	.92	.92
OCT 6	.29	.50	.67	.82	.98	1.20	1.40	1.59	1.61	1.61	1.63	1.63
NOV 4	.26	.45	.60	.66	.74	.77	.79	.81	.84	.87	.87	.87
DAYTONA BEACH												
MAY 26	.38	.64	.65	.67	.69	.69	.69	.69	.74	.92	1.07	1.08
MAY 28	.36	.62	.74	.78	.84	.93	.96	.96	1.05	1.74	1.76	1.77
JUN 4	.25	.40	.48	.66	.95	1.16	1.23	1.25	1.28	1.38	1.44	1.58
JUN 10	.32	.55	.70	.75	.78	.80	.81	.82	.84	.85	.85	.86
JUN 12	.37	.61	.67	.79	1.03	1.03	1.03	1.03	1.31	1.33	1.34	1.34
JUN 19	.12	.22	.30	.38	.54	.78	.89	.95	.99	1.01	1.03	1.06
JUN 26	.35	.65	.95	1.20	1.42	1.56	1.64	1.71	1.76	1.78	1.82	1.85
JUN 27	.30	.60	.90	1.08	1.21	1.36	1.41	1.44	1.65	1.67	1.72	1.77
JUL 5	.26	.36	.40	.42	.44	.47	.50	.60	.62	.64	.68	.70
JUL 8	.37	.57	.72	.70	.75	.90	1.18	1.40	1.57	1.60	1.94	2.12
JUL 9	.37	.60	.64	.67	.68	.68	.68	.68	.68	.68	.68	.68
JUL 9	.25	.36	.38	.39	.42	.49	.52	.54	.54	.54	.54	.54
JUL 20	.45	.68	.81	.88	.92	.96	1.02	1.04	1.08	1.09	1.12	1.13
AUG 11	.25	.40	.45	.48	.49	.49	.49	.49	.49	.49	.49	.49
AUG 17	.28	.51	.60	.67	.77	.78	.78	.78	.78	.78	.78	.78
AUG 26	.35	.61	.68	.78	1.08	1.32	1.48	1.56	1.59	1.59	1.60	1.60
AUG 28	.30	.47	.48	.49	.50	.50	.50	.50	.70	.70	.70	.70
AUG 29	.33	.55	.70	1.00	1.15	1.25	1.26	1.27	1.29	1.30	1.30	1.30
AUG 29	.25	.50	.51	.52	.53	.61	.61	.65	.70	.75	.75	.88
AUG 31	.19	.34	.35	.36	.37	.37	.37	.37	.37	.37	.37	.37
SEP 12	.40	.70	.95	1.07	1.15	1.18	1.20	1.44	1.86	1.88	1.89	1.89
SEP 22	.30	.45	.46	.50	.51	.51	.51	.51	.56	.56	.56	.56
SEP 26	.32	.43	.56	.72	.77	.83	1.03	1.05	1.06	1.23	1.28	1.31
OCT 17	.46	.68	.84	1.02	1.10	1.16	1.25	1.31	1.43	1.45	1.47	1.49
OCT 19	.12	.20	.30	.40	.60	.84	1.04	1.28	1.50	1.62	1.74	1.87
NOV 4	.25	.37	.40	.60	.75	.88	.93	.98	.98	.98	.98	.98
DEC 28	.20	.25	.35	.38	.43	.49	.56	.58	.61	.75	.80	.84
FORT MYERS												
MAY 7	.48	.95	1.10	1.45	2.00	2.35	2.73	2.90	3.00	3.02	3.12	3.12
MAY 23	.50	.80	1.00	1.13	1.27	1.28	1.32	1.32	1.32	1.32	1.32	1.32
MAY 24	.18	.30	.40	.50	.70	.77	.93	.93	.93	.93	.93	.93
MAY 29	.72	1.35	1.60	1.95	2.11	2.11	2.14	2.15	2.15	2.65	2.93	2.98
JUN 3	.36	.65	.75	.85	1.14	1.48	1.52	1.55	1.60	1.72	1.80	1.85
JUN 14	*1.13	*2.15	2.22	2.80	3.05	3.05	3.05	3.05	3.05	3.05	3.05	3.06
JUN 17	.29	.36	.37	.38	.39	.39	.40	.40	.40	.40	.40	.40
JUN 20	.40	.62	.69	.82	1.05	1.25	1.36	1.40	1.42	1.50	1.52	1.57
JUL 1	.28	.33	.34	.34	.35	.38	.40	.70	.73	.75	.97	1.08
JUL 6	.65	1.25	1.48	1.63	1.70	1.70	1.70	1.70	1.70	1.70	1.72	1.73
JUL 18	.30	.53	.58	.67	.88	1.03	1.07	1.10	1.10	1.10	1.10	1.10
JUL 20	.45	.83	.83	.88	.88	.88	.90	.95	.95	.95	.95	.95
JUL 22	.60	1.10	1.22	1.30	1.32	1.32	1.32	1.32	1.32	1.32	1.32	1.32
AUG 2	.35	.51	.54	.68	1.00	1.06	1.07	1.09	1.10	1.10	1.10	1.10
AUG 4	.30	.39	.40	.40	.40	.40	.40	.40	.40	.40	.40	.40
AUG 9	.28	.42	.44	.46	.46	.46	.48	.48	.83	.88	.89	.89
AUG 11	.29	.43	.53	.72	.88	.93	.96	.97	.98	1.11	1.12	1.12
AUG 12	.80	1.20	1.27	1.36	1.49	1.76	1.79	1.79	1.79	1.79	1.79	1.79
AUG 25	.46	.50	.51	.52	.52	.53	.53	.53	.53	.54	.55	.56
AUG 26	.50	.72	.86	.99	1.17	1.24	1.25	1.25	1.26	1.26	1.26	1.26
AUG 26	.45	.76	.90	1.06	1.09	1.09	1.09	1.10	1.10	1.11	1.11	1.11
AUG 27	.32	.50	.59	.70	.82	.89	.92	.95	.96	.98	1.02	1.05
AUG 28	.29	.32	.32	.32	.32	.32	.32	.32	.32	.32	.32	.32
SEP 5	.60	.68	.69	.70	1.10	1.23	1.23	1.43	1.48	1.49	1.53	1.53
SEP 6	.27	.49	.51	.52	.52	.52	.52	.52	.52	.55	.63	.63
SEP 12	.57	.85	.95	1.25	1.79	2.03	2.08	2.08	2.09	2.09	2.10	2.12
SEP 13	.26	.37	.40	.45	.45	.45	.45	.45	.45	.45	.45	.45
OCT 15	.40	.54	.55	.58	.59	.86	.99	.99	.99	.99	1.17	1.59
OCT 18	.42	.63	.85	1.10	1.30	1.42	1.50	1.57	1.77	2.09	2.30	2.56
OCT 23	.50	.57	.68	.70	.72	.72	.72	.72	.72	.72	.72	.72
NOV 9	.25	.46	.59	.63	.77	.80	.90	1.01	1.10	1.20	1.29	1.37
NOV 11	.65	.86	.90	.93	.94	1.02	1.05	1.05	1.05	1.05	1.06	1.06
JACKSONVILLE												
JUN 6	.16	.27	.34	.41	.47	.65	.79	.94	1.32	1.46	1.74	2.09
JUN 9	.26	.33	.37	.37	.37	.37	.37	.37	.37	.37	.37	.37
JUN 12	.54	1.02	1.46	1.58	1.79	2.16	2.45	3.08	3.13	3.36	3.38	3.38
JUN 27	.28	.39	.55	.74	1.04	1.12	1.12	1.12	1.12	1.12	1.12	1.12
JUL 7	.24	.31	.32	.32	.32	.32	.32	.36	.38	.38	.38	.38
JUL 8	.14	.24	.31	.38	.50	.52	.57	.83	.86	.93	.93	.93
JUL 9	.26	.26	.27	.28	.28	.28	.28	.28	.28	.28	.28	.28
JUL 12	.34	.50	.72	.87	1.05	1.06	1.07	1.07	1.07	1.07	1.09	1.09
JUL 17	.47	.50	.57	.59	.65	.68	.70	.70	.70	.70	.70	.70
JUL 25	.34	.61	.72	.82	.87	.88	.88	.88	.88	.88	.88	.88
AUG 28	.46	.83	1.16	1.35	1.51	1.56	1.59	1.63	1.67	1.70	1.74	1.76
AUG 28	.18	.26	.35	.46	.68	.86	.99	1.22	1.43	1.63	2.12	2.42
AUG 29	.20	.34	.38	.49	.60	.66	.73	.74	.80	.81	.83	.86
AUG 30	.31	.51	.74	.83	.86	.88	.90	.94	.97	.97	.97	.97
AUG 30	.49	.82	1.06	1.20	1.39	1.51	1.53	1.53	1.53	1.54	1.59	1.62
SEP 6	.30	.54	.73	.85	1.08	1.42	1.52	1.53	1.53	1.53	1.53	1.53
KEY WEST												
FEB 23	.40	.53	.56	.56	.57	.57	.59	.65	.65	.65	.65	.65
MAR 16	.23	.34	.40	.50	.62	.67	.70	.70	.70	.70	.70	1.00
MAY 5	.29	.49	.72	.87	.98	1.11	1.20	1.21	1.24	1.30	1.38	1.49
MAY 8	.25	.43	.53	.57	.60	.85	1.00	1.06	1.10	1.15	1.19	1.20
MAY 9	.22	.32	.37	.40	.50	.71	.73	.77	.79	.80	.80	.82
JUN 1	.33	.60	.87	1.02	1.38	1.85	2.32	2.35	2.37	2.38	2.40	2.42
JUN 2	.23	.32	.44	.51	.64	.71	.77	.80	.82	.93	.94	.97
JUN 9	.27	.46	.51	.58	.66	.69	.69	.69	.69	.69	.69	.69
JUL 2	.37	.61	.64	.66	.67	.67	.67	.67	.67	.67	.67	.67
AUG 3	.28	.30	.32	.32	.32	.32	.33	.33	.33	.33	.33	.33
AUG 17	.24	.32	.52	.62	.72	.84	.84	.85	.85	.89	1.04	1.05
AUG 27	.23	.36	.43	.54	.71	.77	.84	.88	1.26	1.34	1.39	1.39
SEP 3	.31	.42	.50	.50	.50	.51	.62	.66	.66	.66	.66	.72
SEP 21	.45	.97	1.02	1.07	1.12	1.14	1.17	1.31	1.32	1.32	1.32	1.32
OCT 4	.30	.43	.50	.54	.58	.60	.60	.61	.61	.61	.61	.61
OCT 11	.43	.53	.76	.83	.86	.90	.90	.90	.90	.90	.90	.90
NOV 9	.42	.52	.61	.66	.69	.87	.99	.99	.99	.99	.99	1.05
NOV 29	.40	.58	.80	1.12	1.39	1.48	1.53	1.58	1.67	1.80	2.23	2.38
MIAMI BEACH U												
MAY 19	.17	.25	.30	.42	.51	.65	.72	.73	.76	.77	.78	.78
MAY 23	.32	.51	.77	.93	1.17	1.47	1.62	1.64	1.69	1.70	1.72	1.72
MAY 26	.26	.33	.50	.64	.89	1.01	1.05	1.15	1.30	1.32	1.58	1.79
MAY 29	.25	.37	.40	.49	.72	.89	1.01	1.22	1.24	1.28	1.32	1.35
MAY 30	.30	.55	.58	.66	.90	.93	.93	.93	.93	.93	.93	.93
JUN 7	.43	.83	.90	.91	.91	.92	.93	.96	.97	1.00	1.02	1.03
JUN 9	.35	.70	.95	1.23	1.70	1.95	2.10	2.15	2.27	2.35	2.47	2.49
JUN 9	.22	.33	.41	.49	.62	.74	.78	.83	.89	.90	.90	.90
JUN 11	.50	.80	.85	.98	1.28	1.63	1.70	1.72	1.85	2.35	2.99	3.02

Station and date	Maximum precipitation in inches (5 to 180 minutes)											
	5	10	15	20	30	45	60	80	100	120	150	180
FLORIDA												
MIAMI BEACH U												
JUN 17	.28	.47	.60	.80	1.10	1.22	1.38	1.46	1.49	1.49	1.49	1.49
JUN 18	.26	.45	.47	.50	.50	.50	.50	.50	.50	.50	.54	.67
JUN 27	.35	.63	.78	.94	1.17	1.30	1.33	1.39	1.45	1.49	1.51	1.51
JUN 28	.37	.65	.75	.95	1.21	1.37	1.45	1.52	1.57	1.64	1.72	1.74
AUG 2	.30	.35	.35	.35	.35	.35	.35	.35	.35	.35	.50	.50
AUG 2	.30	.36	.36	.36	.36	.36	.36	.42	.42	.42	.42	.42
SEP 13 T	M	M	M	M	M	M	M	M	M	M	M	M
SEP 25	.25	.35	.40	.43	.52	.53	.53	.63	.69	.69	.70	.70
SEP 27 T	M	M	M	M	M	M	M	M	M	M	M	M
OCT 17 T	M	M	M	M	M	M	M	M	M	M	M	M
MIAMI												
JAN 18	.25	.45	.50	.52	.64	.69	.71	.73	.78	.83	.85	.87
FEB 23	.27	.34	.35	.37	.38	.40	.42	.45	.62	.65	.68	.68
APR 25	.30	.60	.65	.75	.77	.77	.77	.77	.77	.77	.77	.77
APR 30	.27	.43	.45	.47	.50	.50	.50	.50	.50	.50	.50	.50
MAY 7	.43	.66	.88	.97	1.19	1.62	1.67	1.70	1.72	1.74	1.74	1.74
MAY 10	.20	.40	.42	.47	.56	.66	.70	.90	.91	.92	.92	.93
MAY 10	.26	.36	.40	.45	.62	.62	.62	.85	1.02	1.03	1.03	1.03
MAY 11	.30	.50	.52	.55	.57	.59	.60	.61	.62	.63	.65	.66
MAY 19	.65	.75	1.20	1.40	2.00	2.50	3.25	4.10	4.37	4.40	4.42	4.42
MAY 20	.50	.60	.65	.74	.85	.85	.85	.85	.85	.85	.86	.87
MAY 26	.34	.65	.68	.96	1.12	1.18	1.30	1.45	1.45	1.55	1.81	1.90
JUN 3	.20	.30	.32	.40	.57	.74	.86	.87	.88	.91	.91	.92
JUN 7	.20	.30	.33	.38	.49	.56	.56	.56	.56	.56	.61	.69
JUN 9	.45	.70	.75	.78	.84	.86	.87	.91	1.00	1.04	1.15	1.24
JUN 9	.35	.43	.43	.45	.80	1.00	1.15	1.50	1.55	1.56	1.95	2.04
JUN 11	.40	.54	.54	.60	.85	.91	1.07	1.32	1.35	1.36	1.41	1.43
JUN 19	.58	.90	.98	1.12	1.45	1.98	2.08	2.08	2.08	2.10	2.10	2.10
JUN 26	.45	.70	.88	1.10	1.46	1.63	1.69	1.71	1.72	1.72	1.82	1.91
JUN 28	.45	.60	.68	.75	.85	.89	.97	.99	1.01	1.02	1.40	1.57
JUN 30	.48	.78	.80	.83	.92	.96	.96	.96	.96	.96	.96	.96
JUL 2	.18	.25	.30	.37	.55	.66	.69	.90	.93	.96	1.02	1.07
JUL 8	.35	.45	.55	.80	.96	.99	1.01	1.02	1.04	1.05	1.05	1.06
JUL 13	.30	.51	.52	.60	.62	.62	.62	.62	.62	.62	.62	.62
AUG 2	.26	.47	.47	.47	.47	.47	.47	.53	.59	.60	.68	.80
AUG 4	.26	.44	.52	.65	.86	.92	.94	1.38	1.46	1.47	1.70	1.78
AUG 9	.23	.37	.40	.49	.52	.55	.61	.70	.79	.92	.95	1.10
AUG 11	.32	.44	.49	.49	.49	.49	.49	.49	.49	.50	.50	.50
AUG 12	.20	.40	.45	.48	.56	.73	.77	1.07	1.09	1.29	1.31	1.39
SEP 9	.30	.35	.37	.38	.44	.44	.44	.44	.44	.44	.44	.44
SEP 25	.15	.30	.43	.50	.57	.60	.63	1.08	1.18	1.23	1.24	1.30
SEP 26	.25	.30	.43	.47	.52	.55	.62	.78	.90	.93	.94	.96
SEP 30	.48	.93	1.15	1.29	1.50	1.54	1.54	1.54	1.54	1.54	1.54	1.54
OCT 10	.15	.25	.28	.37	.52	.56	.56	.56	.56	.56	.56	.56
OCT 17	.35	.52	.52	.53	.59	.72	.77	.84	1.03	1.31	1.50	1.77
OCT 24	.30	.42	.50	.53	.65	.83	.85	.86	.87	.87	.87	.87
OCT 24	.26	.42	.50	.57	.85	1.00	1.11	1.13	1.20	1.21	1.21	1.22
NOV 9	.29	.51	.55	.56	.67	.70	.70	.71	.71	.71	.71	.71
MIAMI U												
FEB 23	.25	.38	.48	.54	.73	.78	.84	.90	1.08	1.17	1.19	1.19
APR 25	.41	.75	.92	.97	1.00	1.16	1.30	1.55	1.55	1.55	1.56	1.56
MAY 7	.52	.93	1.27	1.49	1.74	1.95	1.98	2.11	2.32	2.33	2.34	2.35
MAY 10	.33	.50	.65	.75	.88	.97	1.17	1.31	1.31	1.31	1.31	1.31
MAY 19	.42	.60	1.13	1.48	1.88	2.15	2.38	2.61	2.85	2.97	3.01	3.02
MAY 23	.33	.63	.92	1.19	1.45	1.61	1.66	1.69	1.69	1.70	1.71	1.72
MAY 29	.33	.47	.53	.58	.60	.62	.62	.63	.63	.64	.65	.65
MAY 30	.22	.43	.51	.54	.58	.65	.66	.66	.66	.66	.66	.66
JUN 7	.33	.53	.61	.61	.64	.64	.64	.64	.64	.64	.64	.64
JUN 11	.28	.53	.75	.99	1.14	1.26	1.27	1.28	1.34	1.38	1.39	1.41
JUN 15	.31	.44	.63	.85	1.03	1.17	1.30	1.32	1.34	1.38	1.44	1.47
JUN 17	.21	.32	.39	.44	.58	.64	.81	.90	1.25	1.45	1.45	1.51
JUN 18	.33	.49	.53	.54	.54	.54	.54	.54	.54	.54	.54	.54
JUN 19	.51	.81	.90	.99	1.08	1.10	1.10	1.10	1.11	1.11	1.32	1.32
JUN 26	.22	.34	.43	.47	.52	.54	.57	.58	.58	.60	.61	.63
JUN 26	.31	.56	.61	.65	.81	.91	.94	.96	.96	.99	1.08	1.14
JUN 27	.30	.55	.79	.95	1.31	1.91	2.01	2.04	2.10	2.15	2.19	2.21
JUN 28	.31	.61	.72	.80	1.03	1.15	1.19	1.23	1.29	1.34	1.39	1.40
JUL 2	.16	.31	.34	.34	.50	.56	.57	.61	.66	.67	.73	.82
JUL 7	.30	.49	.66	.88	1.26	1.50	1.53	1.53	1.53	1.53	1.53	1.53
SEP 12	.31	.54	.66	.73	.74	.74	.74	.75	.75	.75	.75	.75
SEP 13	.22	.41	.54	.54	.55	.55	.57	.60	.64	.64	.66	.66
SEP 26	.23	.31	.36	.48	.58	.65	.73	.80	.83	.85	.85	.85
SEP 30	.35	.53	.65	.74	.83	.90	.93	.96	.96	.96	.96	.96
OCT 17	.46	.65	.79	.98	1.35	1.61	1.67	1.69	1.73	2.39	2.50	2.66
OCT 24	.29	.41	.44	.45	.48	.49	.49	.49	.49	.50	.50	.51
OCT 24	.41	.52	.73	.83	1.05	1.30	1.39	1.41	1.42	1.42	1.42	1.42
NOV 9	.27	.34	.39	.43	.49	.51	.51	.51	.51	.51	.51	.51
ORLANDO												
MAR 10	.32	.50	.56	.64	.84	.92	.98	1.00	1.00	1.00	1.00	1.00
MAY 28	.26	.36	.41	.54	.60	.65	.65	.65	.65	.65	.89	.90
MAY 28 T	.24	.40	.44	.47	.50	.52	.52	.58	.59	.60	.60	M
JUN 4	.36	.58	.63	.85	1.08	1.18	1.55	1.90	2.16	2.37	2.72	2.82
JUN 5	.14	.28	.42	.55	.83	1.25	1.66	1.84	1.87	1.92	1.98	2.04
JUN 11	.31	.35	.37	.46	.60	.65	.68	.72	.75	.75	.75	.78
JUN 15	.55	.73	.84	.89	.94	.96	.97	.97	.97	.97	.97	.97
JUN 19	.37	.67	.92	1.15	1.75	2.00	2.25	2.52	2.56	2.83	3.07	3.16
JUN 26	.40	.51	.55	.60	.68	.70	.70	.70	.70	.70	.70	.70
JUL 15	.41	.73	.74	.75	.82	.92	.96	1.10	1.11	1.12	1.15	1.18
JUL 17	.39	.65	.77	1.06	1.18	1.20	1.21	1.21	1.22	1.22	1.22	1.22
AUG 17	.36	.57	.74	1.01	1.29	1.40	1.45	1.46	1.46	1.46	1.46	1.46
SEP 8	.51	.90	1.24	1.52	2.38	2.67	2.82	2.86	3.12	3.13	3.20	3.24
OCT 17	.20	.31	.39	.47	.61	.64	.65	.65	.66	.69	.87	.91
NOV 9	.46	.57	.59	.63	.75	.88	1.00	1.07	1.12	1.19	1.34	1.37
NOV 11	.29	.30	.31	.32	.34	.37	.37	.37	.37	.37	.37	.37
PENSACOLA												
MAR 10	.15	.25	.34	.40	.53	.60	.68	.70	.74	.87	.95	.99
APR 29	.26	.36	.51	.62	.71	.72	.72	.72	.72	.73	.73	.74
JUN 10	.46	.96	1.17	1.43	1.78	2.35	2.78	2.80	2.80	2.80	2.80	2.80
JUN 21	.43	.78	1.10	1.32	1.56	1.59	1.60	1.60	1.60	1.60	1.61	1.61
JUL 2	.67	1.06	1.41	1.75	2.13	2.28	2.31	2.33	2.33	2.33	2.33	2.34
JUL 4	.19	.27	.36	.39	.41	.42	.42	.42	.42	.42	.43	.43
JUL 7	.28	.42	.55	.65	.69	.71	.72	.73	.73	.73	.73	.73
JUL 12	.23	.32	.36	.37	.37	.38	.38	.38	.38	.38	.38	.38
AUG 6	.16	.25	.33	.42	.43	.46	.59	.73	.82	.84	.95	1.06
AUG 15	.42	.79	1.04	1.22	1.64	1.98	1.99	1.99	1.99	1.99	1.99	1.99
AUG 18	.33	.55	.76	.96	1.22	1.53	1.75	1.81	1.83	1.85	1.85	1.85
AUG 26	.28	.51	.63	.77	.79	.80	.80	.80	.80	.80	.80	.80
SEP 18	.31	.52	.67	.79	1.09	1.22	1.23	1.28	1.70	1.87	[illegible].12	2.17
DEC 1	.17	.30	.38	.42	.44	.44	.46	.46	.46	.46	.47	.67
DEC 13	.31	.35	.41	.44	.51	.58	.59	.59	.59	.59	.61	.61
DEC 31	.13	.19	.28	.36	.53	.58	.62	.67	.75	.81	.87	.88

T CLOCK MALFUNCTION
M NO RECORD

EXCESSIVE SHORT DURATION RAINFALL

Station and date	5	10	15	20	30	45	60	80	100	120	150	180
	Maximum precipitation in inches (5 to 180 minutes)											
FLORIDA												
TALLAHASSEE												
MAR 12	.21	.30	.32	.37	.59	.62	.64	.70	.82	.90	.98	1.00
MAY 4	.15	.29	.33	.41	.59	.70	.86	.96	1.06	1.16	1.38	1.53
JUN 8	.27	.53	.73	.88	.90	.90	.90	.90	.90	.90	.90	.90
JUL 21	.42	.58	.66	.73	.79	.81	.82	.83	.86	.86	.86	.86
JUL 22	.25	.45	.46	.47	.47	.47	.47	.47	.47	.47	.47	.47
JUL 31	.23	.38	.39	.41	.41	.41	.41	.41	.41	.41	.41	.41
AUG 1	.31	.53	.60	.68	.84	.86	.87	.88	.89	.89	.89	.89
AUG 12	.30	.57	.65	.75	.80	.86	.88	.88	.88	.88	.88	.88
AUG 26	.22	.38	.38	.48	.69	.73	.76	.77	.78	.78	.78	.78
AUG 27	.50	.70	.79	.85	.93	.96	1.01	1.05	1.12	1.17	1.23	1.25
SEP 8	*1.16	*2.25	*2.55	3.20	*3.80	4.45	*5.16	5.65	5.69	*5.73	5.73	*5.73
SEP 8	.27	.42	.53	.70	.77	.79	.79	.79	.79	.79	.79	.79
OCT 18	.40	.55	.78	1.05	1.55	2.00	2.27	2.46	2.69	2.73	2.76	2.89
NOV 4	.31	.60	.80	.91	.94	.94	.99	1.04	1.04	1.04	1.04	1.04
DEC 3	.25	.48	.58	.65	.95	1.09	1.12	1.26	1.37	1.40	1.42	1.42
DEC 3	.18	.25	.43	.50	.64	.67	.70	.72	.81	.95	1.03	1.25
DEC 14	.26	.29	.30	.31	.40	.45	.47	.50	.52	.52	.52	.52
TAMPA												
FEB 23	.30	.33	.34	.34	.34	.35	.37	.37	.37	*.37	.37	*.37
MAY 5	.40	.55	.72	.72	.72	.72	.72	.72	.72	*.72	.72	*.72
JUN 18	.20	.30	.35	.40	.44	.44	.44	.44	.44	.44	.44	.44
JUN 27	.35	.64	.67	.67	.67	.68	.68	.69	.69	.69	.75	*.83
JUN 29	.17	.32	.35	.36	.51	.51	.51	.51	.53	.63	.74	.74
JUL 7	.35	.55	.65	.75	.85	.90	.95	.95	.95	*.95	.95	*.95
JUL 7	.30	.55	.60	.77	1.15	1.20	1.28	1.28	1.30	*1.30	1.33	*1.35
JUL 9	.40	.55	.60	.72	.87	.93	1.08	1.15	1.19	1.29	1.36	*1.37
JUL 15	.27	.39	.42	.46	.58	.59	.63	.73	.74	.78	.89	.96
JUL 28	.25	.42	.50	.60	.65	.75	.78	.97	1.00	1.00	1.00	1.00
JUL 30	.25	.40	.42	.43	.44	.44	.44	.44	.44	.44	.44	.44
AUG 12	.40	.73	.80	1.05	1.30	1.52	1.70	1.71	1.71	*1.71	1.71	*1.71
AUG 27	.29	.37	.38	.39	.39	.39	.39	.42	.45	.45	.46	.47
AUG 28	.13	.25	.32	.43	.51	.67	.72	.74	.75	.80	.85	.87
SEP 10	.23	.40	.41	.41	.41	.41	.41	.41	.41	.41	.41	.41
SEP 19	.25	.34	.34	.34	.34	.34	.34	.34	.34	.34	.34	.35
NOV 9	.35	.45	.50	.60	.95	1.05	1.10	1.20	1.25	1.30	1.35	1.45
NOV 11	.17	.25	.37	.48	.62	.68	.83	.83	.83	.83	.83	.83
WEST PALM BEACH												
FEB 23	.50	.75	.87	1.02	1.16	1.20	1.21	1.21	1.22	1.22	1.27	1.34
MAR 16	.14	.25	.35	.44	.52	.60	.65	.70	.73	.73	.75	.78
MAY 4	.40	.60	.70	.70	.71	.73	.75	.76	.79	.80	.80	.80
MAY 9	.26	.52	.56	.59	.64	.66	.66	.78	.80	.80	.80	.80
MAY 19	.22	.35	.50	.61	.85	1.08	1.16	1.19	1.19	1.20	1.42	1.72
MAY 24	.40	.56	.63	.68	.74	.85	.90	.97	1.00	1.02	1.10	1.10
MAY 26	.55	*1.05	*1.35	1.71	*2.40	2.76	3.29	3.35	3.40	3.43	3.51	3.56
MAY 28	.32	.48	.52	.54	.55	.67	.90	.98	1.10	1.14	1.15	1.15
JUN 3	.35	.50	.65	.79	.80	.81	.84	.85	.90	1.08	1.46	1.87
JUN 8	.16	.31	.40	.49	.56	.60	.60	.60	.60	.60	.60	.60
JUN 9	.20	.34	.43	.54	.68	1.06	1.25	1.39	1.49	1.51	1.52	1.59
JUN 11	.35	.55	.80	1.10	1.54	1.65	1.66	1.66	1.66	1.66	1.66	1.66
JUN 16	.20	.35	.49	.60	.63	.64	.65	.65	.65	.65	.65	.65
JUN 18	.22	.36	.50	.65	.66	1.08	1.15	1.24	1.28	1.31	1.35	1.36
JUN 26	.21	.40	.51	.56	.58	.60	.64	.65	.70	.76	.95	1.04
JUL 6	.45	.71	.90	1.03	1.17	1.30	1.33	1.35	1.35	1.46	1.66	1.72
JUL 7	.15	.21	.31	.34	.53	.60	.69	.73	.75	.75	.75	.75
JUL 8	.32	.54	.56	.57	.62	.64	.65	.84	.85	.86	.87	.88
AUG 10	.25	.43	.65	.70	1.10	1.60	2.05	2.14	2.64	3.15	3.32	3.41
AUG 22	.35	.45	.57	.60	.69	.69	.69	.69	.69	.69	.69	.69
AUG 31	.30	.55	.73	.85	.89	.93	1.02	1.02	1.06	1.35	1.40	1.40
SEP 1	.25	.46	.57	.80	.87	.91	.91	.91	.91	.91	.91	.91
SEP 10	.30	.53	.61	.70	.75	.75	.75	.75	.75	.75	.75	.75
SEP 20	.33	.48	.48	.48	.48	.46	.55	.55	.55	.55	.55	.57
SEP 23	.17	.30	.35	.38	.41	.43	.43	.43	.43	.43	.43	.43
SEP 25	.30	.45	.54	.57	.58	.65	.70	.70	.70	.70	.70	.70
SEP 26	.40	.55	.67	.72	.80	1.35	1.47	1.50	1.50	1.51	1.55	1.80
SEP 27	.30	.55	.73	.85	1.10	1.24	1.32	1.42	1.44	1.45	1.46	1.49
SEP 30	.55	.84	1.00	1.25	1.55	1.70	1.86	2.00	2.44	2.56	2.60	2.64
OCT 2	.29	.45	.50	.57	.86	1.00	1.07	1.24	1.61	1.76	1.84	2.00
OCT 7	.27	.45	.55	.58	.62	.88	.97	.97	.97	.97	.97	.97
OCT 17	.25	.40	.47	.55	.70	.76	.79	.89	.97	1.05	1.13	1.19
OCT 23	.20	.37	.45	.50	.66	.74	.83	1.03	1.05	1.06	1.18	1.24
NOV 9	.40	.65	.70	.75	.89	.93	.96	.99	1.02	1.06	1.11	1.11
GEORGIA												
ATHENS												
MAR 10	.27	.46	.51	.55	.57	.58	.60	.61	.61	.62	.65	.65
MAY 11	.16	.30	.30	.31	.31	.31	.32	.32	.32	.33	.33	.33
MAY 14	.25	.48	.55	.57	.57	.57	.57	.57	.57	.57	.57	.57
MAY 16	.41	.54	.59	.61	.61	.62	.63	.64	.65	.65	.65	.65
MAY 17	.29	.34	.42	.49	.51	.53	.54	.54	.54	.54	.54	.71
MAY 25 T	M	M	.59	.60	.61	.61	.61	.61	.62	.62	.65	.68
JUN 11	.31	.59	.64	.80	.92	.93	.94	.96	.96	.96	.96	.96
JUL 3	.45	.80	.95	1.36	1.55	1.69	1.74	1.77	1.80	1.84	1.85	1.85
JUL 5	.19	.29	.40	.53	.64	.85	1.10	1.16	1.26	1.28	1.29	1.29
JUL 24	.42	.48	.71	.73	.77	.79	.80	.82	.83	.83	.84	.85
AUG 12	.19	.37	.42	.56	.83	1.02	1.13	1.23	1.33	1.38	1.40	1.41
AUG 25	.27	.36	.38	.40	.41	.43	.44	.45	.46	.46	.46	.46
SEP 9	.19	.22	.30	.41	.46	.47	.49	.50	.52	.53	.53	.53
OCT 19	.18	.32	.40	.55	.67	.73	.75	.83	.87	.88	.91	.92
NOV 17 T	M	M	M	M	M	M	M	M	M	M	M	M
ATLANTA												
MAY 11	.18	.31	.34	.36	.38	.38	.38	.38	.38	.36	.38	.38
MAY 16	.23	.36	.42	.42	.44	.48	.56	.59	.59	.59	.59	.59
MAY 18	.20	.30	.35	.42	.50	.59	.59	.59	.59	.59	.59	.59
MAY 25	.37	.49	.56	.67	.79	.91	.97	.97	.97	.97	.97	.97
JUN 26	.25	.37	.39	.42	.43	.43	.43	.45	.45	.45	.45	.45
JUL 2	.31	.42	.52	.59	.62	.69	.89	1.02	1.13	1.15	1.16	1.17
JUL 16	.26	.36	.43	.47	.57	.63	.66	.71	.76	.76	.76	.76
JUL 17	.40	.50	.51	.52	.52	.52	.52	.52	.52	.52	.52	.52
JUL 31	.35	.47	.50	.50	.50	.50	.50	.50	.50	.50	.50	.50
AUG 2	.13	.22	.29	.37	.53	.68	.80	.84	.85	.86	.90	.95
AUG 19	.25	.42	.56	.69	.78	1.24	1.45	1.48	1.48	1.48	1.48	1.48
OCT 6	.25	.37	.44	.51	.73	.87	.90	.95	.97	1.02	1.07	1.10
NOV 17	.20	.33	.38	.44	.50	.54	.59	.63	.65	.65	.84	.93
AUGUSTA												
MAY 16	.36	.68	.82	.87	.89	.92	1.05	1.12	1.14	1.15	1.17	1.18
MAY 16	.26	.37	.38	.39	.39	.39	.39	.39	.39	.39	.39	.39
MAY 17	.35	.50	.51	.52	.55	.75	.80	.80	.80	.80	.80	.80
JUN 2	.22	.40	.44	.47	.49	.50	.53	.55	.55	.55	.55	.55
JUN 17	.27	.53	.66	.71	.72	.72	.72	.72	.72	.72	.72	.72
GEORGIA												
AUGUSTA												
JUL 16	.26	.42	.48	.62	.82	.98	1.13	1.15	1.15	1.15	1.16	1.16
JUL 17	.22	.37	.45	.54	.82	1.08	1.25	1.30	1.30	1.31	1.31	1.31
AUG 11	.25	.41	.45	.48	.51	.53	.56	.61	.68	.70	.73	.85
SEP 1	.20	.32	.41	.45	.55	.66	.83	1.15	1.31	1.51	1.68	1.86
SEP 9	.45	.65	.90	1.10	1.15	1.16	1.16	1.16	1.16	1.16	1.17	1.17
SEP 19	.23	.40	.44	.47	.57	.60	.67	.60	.60	.60	.60	.60
SEP 28	.18	.33	.37	.42	.58	.70	.76	.76	.77	.77	.78	.78
OCT 6	.26	.48	.54	.62	.83	.91	.93	.95	.97	1.00	1.01	1.02
OCT 19	.20	.39	.45	.49	.52	.52	.52	.52	.52	.52	.53	.52
COLUMBUS												
JAN 23	.26	.31	.36	.39	.39	.39	.39	.39	.39	.39	.39	.39
MAR 11	.28	.37	.39	.41	.48	.49	.50	.54	.55	.56	.60	.61
MAR 12	.26	.37	.42	.48	.62	.98	1.08	1.35	1.70	1.95	2.06	2.15
APR 8	.20	.35	.46	.47	.52	.53	.53	.53	.53	.53	.53	.53
MAY 11	.31	.43	.46	.47	.48	.49	.49	.49	.49	.49	.49	.49
MAY 17	.32	.41	.42	.44	.51	.51	.51	.79	.80	.81	.85	.85
MAY 18	.23	.36	.40	.43	.47	.49	.50	.50	.52	.53	.53	.53
MAY 27	.30	.36	.39	.43	.45	.47	.52	.54	.55	.55	.55	.55
JUN 16	.18	.25	.29	.37	.53	.54	.54	.54	.54	.54	.54	.54
JUL 15	.26	.30	.32	.33	.33	.33	.33	.33	.33	.33	.33	.33
JUL 18	.20	.30	.35	.40	.42	.43	.43	.43	.43	.43	.43	.43
JUL 28	.23	.44	.48	.51	.54	.54	.57	.62	.70	.80	.80	.80
AUG 1	.27	.47	.48	.49	.50	.50	.50	.50	.50	.50	.50	.50
AUG 9	.45	.65	.97	1.09	1.34	1.43	1.53	1.56	1.57	1.58	1.59	1.60
SEP 8	.30	.33	.33	.33	.33	.35	.36	.36	.36	.36	.36	.36
SEP 16	.18	.31	.35	.41	.44	.46	.47	.48	.49	.49	.49	.49
SEP 29	.40	.65	.74	.75	.78	.78	.78	.78	.78	.78	.78	.78
NOV 4	.25	.33	.35	.40	.44	.59	.78	.83	.95	1.01	1.11	1.16
NOV 18	.23	.38	.46	.61	.66	.77	.82	.99	.94	.97	1.01	1.03
DEC 28	.23	.31	.34	.51	.58	.60	.65	.96	.90	.91	.95	1.01
MACON												
APR 28	.25	.35	.43	.48	.58	.61	.62	.62	.62	.64	.66	.66
MAY 15	.27	.45	.60	.66	.83	.94	1.03	1.04	1.05	1.17	1.70	1.85
JUL 31	.35	.56	.72	.79	1.00	1.11	1.14	1.27	1.28	1.28	1.28	1.28
AUG 10	.20	.31	.34	.37	.41	.49	.50	.50	.50	.50	.50	.50
SEP 9	.39	.67	.92	1.04	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08
NOV 18	.21	.34	.43	.53	.63	.80	.88	1.01	1.09	1.17	1.25	1.31
ROME												
MAR 11	.33	.36	.39	.50	.60	.66	.69	.84	1.03	1.12	1.15	1.15
MAY 16	.12	.24	.26	.29	.50	.50	.50	.57	.59	.60	.60	.60
MAY 17	.25	.46	.59	.59	.63	.64	.74	.75	.75	.75	.75	.75
MAY 29	.33	.61	.80	.80	.81	.81	.82	.83	.91	.91	.91	.91
JUL 11	.25	.38	.57	.60	.71	.74	.75	.75	.75	.75	.75	.75
DEC 28	.32	.33	.45	.50	.49	.62	.71	.80	.80	.82	.87	.93
SAVANNAH												
APR 29	.24	.35	.42	.44	.46	.47	.47	.49	.53	.54	.54	.54
MAY 28	.21	.29	.39	.37	.41	.42	.43	.44	.46	.54	.66	.75
JUN 10	.19	.29	.37	.42	.45	.47	.48	.49	.49	.49	.49	.49
JUN 23	.31	.53	.79	.95	1.06	1.08	1.08	1.08	1.08	1.08	1.08	1.09
JUL 20	.32	.52	.70	.78	.83	.83	.83	.83	.83	.83	.83	.87
JUL 30	.15	.27	.35	.45	.69	.87	1.06	1.27	1.29	1.40	1.47	1.50
JUL 31	.25	.34	.46	.58	.63	.67	.81	.87	.87	.91	.95	1.02
AUG 12	.33	.62	.86	1.03	1.08	1.11	1.12	1.12	1.12	1.25	1.40	1.42
OCT 8	.24	.40	.52	.55	.57	.57	.57	.57	.59	.60	.67	.78
OCT 24	.37	.58	.76	.77	.78	.85	.84	.86	.86	.86	.86	.86
HAWAII												
HILO												
FEB 1	.33	.58	.70	.76	.84	1.00	1.22	1.32	1.41	1.51	1.69	1.78
FEB 3	.24	.40	.53	.66	.96	1.25	1.47	1.68	1.91	2.11	2.42	3.10
FEB 3	.40	.70	.94	1.21	1.81	2.05	2.42	2.62	2.66	2.70	2.72	2.73
MAR 14	.24	.45	.69	.87	1.09	1.19	1.20	1.21	1.21	1.21	1.21	1.22
APR 7	.15	.27	.37	.46	.53	.58	.58	.58	.58	.58	.58	.58
APR 7	.15	.24	.32	.38	.50	.62	.68	.68	.68	.68	.68	.69
APR 16	.17	.28	.39	.53	.66	.74	.77	.80	.83	.85	.91	.97
APR 16	.23	.41	.52	.66	.88	1.04	1.33	1.75	2.06	2.43	2.71	2.85
APR 23	.26	.39	.44	.48	.57	.84	.94	1.06	1.08	1.13	1.26	1.33
APR 24	.19	.29	.42	.46	.52	.70	.71	.72	.84	.94	1.16	1.57
APR 24	.14	.23	.28	.34	.48	.68	.89	1.16	1.32	1.43	1.67	1.90
APR 24	.24	.31	.32	.32	.32	.35	.50	.55	.62	.63	.88	.92
APR 27	.22	.34	.45	.56	.63	.98	1.07	1.09	1.09	1.23	1.25	1.25
JUN 13	.19	.28	.35	.40	.42	.46	.46	.47	.52	.55	.62	.65
JUL 14	.17	.29	.35	.38	.41	.44	.45	.45	.45	.45	.46	.51
SEP 1	.33	.38	.45	.54	.66	.86	.96	1.14	1.43	1.62	1.84	2.23
SEP 28	.30	.45	.57	.68	.75	.76	.76	.76	.76	.76	.78	.78
DEC 4	.30	.52	.73	.81	.86	.86	.86	.86	.86	.86	.86	.86
HONOLULU												
JAN 4	.21	.31	.40	.46	.51	.54	.55	.62	.64	.65	.66	.66
JAN 27	.27	.47	.66	.85	1.20	1.54	1.89	2.22	2.42	2.53	2.67	2.69
FEB 3	.20	.29	.35	.41	.53	.62	.64	.66	.68	.71	.72	.72
MAR 15	.21	.37	.46	.49	.52	.71	.73	.77	.79	.83	.84	.85
APR 16	.39	.74	1.12	1.41	1.75	1.95	2.01	2.03	2.05	2.07	2.07	2.07
NOV 29	.24	.42	.52	.64	.80	.94	1.06	1.25	1.32	1.36	1.37	1.43
DEC 8	.33	.45	.53	.61	.73	.84	.84	.84	.84	.84	.84	.84
DEC 17	.28	.41	.48	.51	.52	.53	.53	.53	.54	.54	.54	.54
DEC 18	.37	.60	.79	.85	.98	1.09	1.09	1.12	1.17	1.24	1.27	1.28
DEC 25	.24	.39	.56	.63	.77	.95	1.04	1.16	1.31	1.41	1.45	1.55
DEC 25	.26	.44	.55	.65	.73	.89	1.01	1.03	1.05	1.09	1.12	1.13
KAHULUI												
FEB 21	.19	.26	.32	.43	.50	.69	.90	1.06	1.25	1.33	1.38	1.47
MAR 14	*.55	*1.07	*1.57	1.98	*2.45	2.83	*2.99	3.22	3.34	*3.61	4.03	*4.26
APR 19	.17	.31	.42	.56	.61	.77	.80	.82	.82	.83	.85	.86
NOV 28	.23	.36	.56	.68	1.00	1.14	1.22	1.77	1.86	1.86	1.86	1.97
DEC 20	.27	.42	.47	.49	.51	.53	.56	.57	.58	.58	.59	.58
DEC 25	.16	.27	.32	.38	.57	.71	.75	.77	.78	.78	.78	.81
LIHUE												
JAN 5	.22	.33	.35	.39	.65	.77	.82	.84	.85	.85	.85	.86
JAN 22	.22	.38	.46	.47	.51	.52	.70	.86	.87	.88	1.13	1.16
JAN 27	.28	.36	.38	.40	.42	.46	.61	.65	.71	.75	.76	.90
FEB 3	.24	.41	.47	.49	.56	.68	.77	.80	.84	.84	.84	.94
MAR 16	.49	.70	.96	1.27	1.84	2.28	2.69	3.17	3.38	3.49	3.56	3.80
SEP 9	.24	.34	.42	.51	.77	.98	1.10	1.14	1.15	1.16	1.23	1.38
OCT 1	.27	.35	.47	.53	.56	.60	.65	.73	.79	.81	.85	.89
OCT 1	.25	.44	.54	.61	.64	.66	.67	1.28	1.32	1.33	1.57	1.66
OCT 9	.37	.55	.63	.73	.76	.77	.77	.77	.77	.77	.77	.77
OCT 16	.35	.67	.97	1.27	1.67	1.99	2.15	2.38	2.43	2.46	2.59	2.64

T CLOCK MALFUNCTION
M NO RECORD

EXCESSIVE SHORT DURATION RAINFALL

Station and date	Maximum precipitation in inches (5 to 180 minutes)											
	5	10	15	20	30	45	60	80	100	120	150	180
HAWAII												
LIHUE												
NOV 13	.16	.30	.34	.37	.41	.62	.71	.82	.89	.91	.95	1.03
NOV 29	.51	.93	1.23	1.52	2.22	2.95	*3.30	3.48	3.65	3.66	3.67	3.67
DEC 1	.51	.75	.93	1.11	1.68	2.42	2.96	3.39	4.18	*4.87	6.15	*6.51
DEC 1	.26	.46	.59	.73	.87	.96	1.14	1.21	1.23	1.35	1.54	1.54
DEC 1	.31	.57	.73	.79	.99	1.17	1.23	1.33	1.41	1.42	1.90	1.99
DEC 2	.24	.38	.58	.66	.78	.86	.89	.96	.98	1.03	1.09	1.17
DEC 8	.35	.55	.80	.93	1.33	1.71	2.27	2.81	3.25	3.32	3.74	3.86
DEC 24	.20	.29	.45	.51	.53	.54	.76	.82	.88	.94	1.03	1.06
IDAHO												
BOISE						NONE						
LEWISTON						NONE						
POCATELLO						NONE						
ILLINOIS												
CAIRO U												
APR 3	*.32	*.57	*.71	.75	.78	.89	.96	1.11	1.26	1.33	1.43	1.45
MAY 15	*.37	*.58	*.76	.83	.87	.88	.90	.92	.92	.92	.92	.92
MAY 29	.17	.32	.33	.33	.33	.33	.33	.33	.33	.33	.33	.33
JUN 1	.26	.45	.55	.56	.58	.60	.62	.62	.62	.63	.68	.72
JUL 18	.23	.37	.51	.59	.67	.69	.80	1.29	1.33	1.33	1.33	1.33
AUG 13	.20	.35	.42	.42	.42	.43	.43	.43	.43	.43	.43	.43
AUG 14	.26	.35	.39	.39	.39	.40	.40	.40	.53	.55	.55	.55
SEP 4	*.42	.55	.55	.55	.55	.55	.55	.55	.55	.55	.55	.62
SEP 16	.21	.29	.31	.33	.54	.65	.71	.76	.77	.78	.79	.90
SEP 17	.25	.35	.37	.38	.43	.61	.71	.77	.79	.80	.81	.81
DEC 27	.13	.25	.35	.45	.52	.60	.77	.85	1.04	1.12	1.20	1.26
CHICAGO O HARE												
JUN 23	.32	.44	.48	.51	.53	.53	.53	.53	.53	.53	.53	.53
JUN 29	.22	.34	.37	.46	.54	.54	.54	.54	.54	.54	.54	.54
AUG 5	.24	.42	.43	.43	.44	.45	.46	.47	.48	.48	.48	.48
AUG 8	.25	.32	.33	.35	.35	.36	.37	.41	.42	.42	.42	.42
AUG 16	.38	.66	.75	.88	1.21	1.30	1.43	1.52	1.62	1.89	2.19	2.48
AUG 20	.18	.32	.43	.48	.54	.59	.60	.60	.60	.60	.60	.60
CHICAGO MIDWAY												
JUL 27	.24	.40	.42	.42	.44	.45	.45	.45	.45	.45	.45	*.65
AUG 5	.18	.28	.40	.56	.62	.70	.70	.70	.70	.70	.70	*.70
AUG 15	.19	.31	.36	.40	.40	.42	.42	.42	.44	.44	.44	.44
AUG 16	.43	.64	.80	.96	1.30	1.63	1.89	1.96	1.97	2.02	2.69	*3.17
MOLINE												
MAY 15	.18	.30	.33	.36	.36	.37	.39	.39	.39	.39	.39	.39
JUN 23	.38	.40	.40	.46	.48	.48	.48	.48	.48	.48	.48	.48
JUN 24	.32	.51	.53	.54	.54	.54	.54	.54	.54	.54	.54	.54
JUN 29	.25	.28	.29	.32	.33	.33	.33	.33	.34	.34	.35	.36
JUL 23	.36	.50	.66	.74	.88	1.22	1.28	1.34	1.37	1.38	1.38	1.38
AUG 16	.38	.55	.58	.64	.66	.69	.88	1.00	1.01	1.02	1.02	1.02
SEP 24	.15	.28	.31	.39	.55	.65	.68	.70	.76	.77	.88	1.10
PEORIA												
MAY 15	.34	.52	.64	.78	1.05	1.38	1.47	1.55	1.55	1.58	1.58	1.58
MAY 15	.22	.36	.39	.47	.49	.55	.64	.66	.67	.67	.67	.67
JUN 24	.36	.50	.51	.51	.51	.52	.55	.55	.55	.55	.55	.55
JUL 7	.34	.48	.61	.71	.79	.98	1.42	1.47	1.50	1.52	1.52	1.52
JUL 17	.30	.47	.58	.64	.72	.95	1.03	1.06	1.06	1.06	1.23	1.27
JUL 18	.21	.37	.42	.45	.50	.53	.57	.59	.59	.59	.60	.60
JUL 27	.22	.32	.35	.37	.41	.44	.48	.50	.50	.50	.52	.55
AUG 3	.34	.44	.50	.52	.60	.67	.71	.78	.80	.80	.80	.80
SEP 17	.32	.44	.51	.55	.72	.79	.84	.89	.92	.95	.96	1.27
SEP 23	.31	.41	.46	.47	.47	.48	.48	.48	.50	.54	.54	.54
ROCKFORD												
MAY 15	.44	.69	1.04	1.27	1.30	1.31	1.31	1.32	1.40	1.42	1.47	1.47
JUN 9	.40	.63	.80	.90	1.45	1.64	1.65	1.66	1.69	1.73	1.75	1.75
JUN 24	.33	.50	.57	.60	.66	.69	.74	.74	.74	.74	.75	.75
JUN 26	.18	.35	.48	.56	.58	.59	.60	.60	.65	.75	.78	.80
JUN 29	.38	.60	.68	.72	.73	.74	.75	.77	.77	.77	.78	.79
JUL 17	.33	.55	.75	.82	.84	.87	.89	.90	.91	.91	.91	.91
AUG 8	.33	.56	.63	.72	.85	.95	.95	.95	.96	.97	.97	.97
AUG 15	.25	.41	.43	.44	.45	.46	.46	.51	.51	.51	.51	.51
AUG 16	.60	.75	.90	.93	1.19	1.43	1.60	1.66	1.71	*2.20	3.10	*3.28
SEP 4	.20	.33	.43	.50	.56	.63	.69	.71	.72	.72	.72	.72
SEP 18	.25	.33	.35	.38	.49	.56	.58	.59	.63	.64	.65	.67
SEP 24	.19	.32	.38	.43	.47	.48	.54	.58	.60	.65	.68	.74
SPRINGFIELD												
JUN 14	.34	.58	.65	.68	.69	.72	.74	.77	1.06	1.10	1.13	1.13
JUL 17	.18	.30	.36	.37	.38	.39	.40	.44	.49	.61	.70	.79
SEP 17	.39	.55	.58	.60	.69	.73	.76	.79	.82	.84	.90	1.23
SEP 23	.20	.32	.38	.40	.48	.50	.54	.63	.63	.63	.65	.67
INDIANA												
EVANSVILLE												
APR 3	.18	.27	.30	.36	.49	.69	.78	.84	.94	1.04	1.13	1.15
APR 14	.28	.50	.53	.55	.57	.64	.65	.65	.65	.65	.65	.65
JUN 25	.30	.50	.60	.64	.72	.76	.80	.80	.80	.80	.80	.80
JUL 10	.16	.29	.32	.43	.52	.71	.80	.81	.82	.82	.82	.82
JUL 15	.17	.26	.35	.40	.44	.58	.59	.60	.63	.63	.63	.65
JUL 27	.46	.68	.73	.74	.76	.83	.88	.95	.96	.97	1.01	1.03
JUL 31	.26	.46	.59	.73	.92	1.13	1.17	1.22	1.30	1.41	1.50	1.53
AUG 14	.18	.33	.40	.43	.76	.88	.93	.93	.93	.93	.93	.93
AUG 21	.18	.34	.40	.42	.45	.62	.64	.64	.64	.64	.64	.64
SEP 4	.19	.28	.41	.49	.77	1.13	1.19	1.22	1.22	1.24	1.26	1.26
FORT WAYNE												
APR 4	.26	.34	.38	.42	.46	.54	.60	.68	.71	.79	.92	.96
MAY 16	.26	.38	.52	.64	.85	1.28	1.70	1.82	2.06	2.45	2.56	2.60
JUN 23	.20	.34	.40	.44	.46	.48	.56	.58	.59	.60	.65	.68
JUN 24	.24	.40	.58	.62	.64	.90	1.08	1.09	1.12	1.15	1.15	1.16
JUN 26	.30	.33	.41	.43	.44	.44	.44	.44	.44	.44	.44	.44
JUL 19	.28	.40	.66	.75	.79	.80	.80	.80	.80	.80	.80	.80
JUL 31	.22	.40	.59	.59	.60	.60	.60	.60	.60	.60	.60	.60
AUG 15	.18	.36	.40	.42	.43	.43	.43	.43	.43	.49	.50	.52
AUG 17	.22	.35	.38	.41	.45	.47	.48	.49	.49	.70	.73	.77
INDIANA												
INDIANAPOLIS												
MAR 31	.31	.54	.70	.77	.82	.90	.97	1.02	1.08	1.17	1.22	1.23
MAY 15	.34	.50	.66	.71	.94	.98	1.18	1.42	1.48	1.82	1.92	1.97
MAY 23	.16	.32	.38	.46	.51	.53	.54	.78	.94	.95	1.05	1.06
AUG 10	.21	.34	.46	.50	.67	.75	.78	.79	.83	.87	.89	.89
AUG 15	.27	.50	.69	.76	.92	.93	.93	1.08	1.33	1.43	1.57	1.72
SOUTH BEND												
JUN 23	.30	.50	.66	.71	.83	.93	1.17	1.28	1.28	1.28	1.29	1.41
JUN 25	.20	.37	.57	.72	.82	.87	1.21	1.73	2.11	2.19	2.55	2.98
JUL 23	.20	.36	.47	.50	.51	.55	.59	.59	.59	.59	.59	.59
AUG [illegible]	.60	1.20	1.35	1.55	1.80	1.92	1.96	1.99	2.00	2.00	2.03	2.03
IOWA												
DES MOINES												
JUN 24	.35	.46	.50	.59	.59	.59	.59	.59	.59	.59	.59	.60
JUL 6	.30	.32	.36	.46	.48	.49	.49	.49	.80	.81	.81	.81
JUL 8	.34	.50	.55	.68	.81	.84	.84	.84	.96	1.05	1.05	1.05
JUL 23	.34	.64	.72	.78	1.32	1.33	1.33	1.33	1.34	1.36	1.36	1.57
AUG 8	.26	.50	.54	.74	1.02	1.35	1.69	1.70	1.71	1.74	1.75	1.76
DUBUQUE												
APR 14	.25	.35	.37	.45	.69	.80	.89	.97	1.02	1.06	1.13	1.15
APR 20	.14	.25	.29	.40	.52	.59	.70	.77	.94	1.08	1.23	1.36
JUN 10	.23	.44	.45	.47	.49	.50	.56	.65	.80	.84	.91	.91
JUN 24	.34	.62	.75	1.09	1.37	1.39	1.42	1.71	2.10	2.12	2.12	2.12
JUN 29	.21	.42	.52	.59	.62	.64	.70	.74	.75	.75	.75	.75
JUL 23	.30	.60	.65	.80	1.00	1.05	1.05	1.05	1.05	1.05	1.05	1.05
AUG 4	.30	.55	.71	.83	.93	1.00	1.07	1.10	1.13	1.16	1.17	1.18
AUG [illegible]	.15	.30	.38	.48	.75	.83	.93	.94	.94	.95	.95	.95
AUG 19	.25	.25	.25	.25	.25	.25	.25	.25	.25	.26	.26	.26
SEP 1	.26	.29	.29	.29	.29	.29	.29	.30	.37	.37	.37	.37
SIOUX CITY												
JUN 10	.35	.49	.56	.66	.78	.83	.90	.91	.92	.93	.95	.99
JUN 22	.17	.24	.32	.38	.53	.71	.89	1.04	1.07	1.07	1.08	1.10
AUG 8	.41	.52	.53	.53	.53	.55	.55	.56	.57	.58	.58	.59
SEP 22	.48	.72	.98	1.00	1.02	1.14	1.26	1.36	1.41	1.41	1.41	1.46
OCT 15	.27	.40	.41	.48	.61	.80	.83	.86	.89	.90	.92	.95
WATERLOO												
MAY 28	.22	.35	.37	.38	.38	.38	.38	.38	.38	.38	.38	.38
JUN 9	.40	.56	.66	.69	.73	.93	.96	.99	1.01	1.02	1.02	1.02
JUN 9	.20	.24	.35	.39	.43	.45	.45	.45	.45	.45	.45	.45
JUN 23	.26	.46	.56	.65	.68	.69	.69	.71	.71	.72	.72	.72
JUL 16 T	.59	.92	*1.24	M	M	M	M	M	3.59	*3.59	3.59	*3.59
JUL 17 T	.33	.60	.76	.88	M	M	M	M	M	2.96	3.31	3.54
JUL 23	.44	.56	.69	.77	.85	1.04	1.08	1.52	1.88	2.11	2.23	2.23
AUG 5	.45	.71	.90	.99	1.05	1.52	1.87	2.15	2.43	2.59	2.70	2.71
AUG 7	.26	.42	.56	.69	.74	.76	.78	.91	1.15	1.18	1.18	1.18
AUG 8	*1.00	*1.60	*1.72	2.03	*2.19	2.19	*2.20	2.23	2.30	2.34	2.41	2.47
SEP 23	.27	.34	.40	.41	.43	.44	.44	.44	.44	.44	.44	.44
KANSAS												
CONCORDIA												
APR 21	.27	.40	.44	.46	.49	.61	.67	.70	.75	.76	.81	.82
MAY 13	.30	.50	.51	.52	.52	.52	.59	.62	.62	.62	.62	.62
JUN 9	.22	.43	.63	.65	.65	.65	.65	.67	.71	.72	.90	1.03
JUN 16	.20	.33	.38	.41	.42	.42	.44	.58	.73	.73	.73	.73
JUN 18	.23	.33	.34	.34	.34	.34	.34	.34	.34	.34	.34	.34
JUL 17	.25	.45	.55	.63	.75	.82	.85	.86	.87	.88	.89	.89
AUG 9	.32	.55	.75	1.02	1.40	1.58	2.03	2.15	2.17	2.20	2.22	2.23
AUG 10	.20	.40	.52	.62	.70	.76	.96	1.25	1.49	1.54	1.75	1.89
DODGE CITY												
JUN 15	.46	.90	1.04	1.24	1.34	1.38	1.62	1.68	1.77	1.77	1.77	1.77
JUN 18	.26	.46	.54	.57	.62	.68	.69	.93	1.00	1.01	1.01	1.01
JUL 4	.24	.46	.60	.78	1.10	1.46	1.86	2.20	2.27	2.36	2.40	2.41
JUL 8	.30	.52	.68	.76	.83	.86	.86	.86	.86	.86	.86	.86
AUG 29	.18	.30	.35	.40	.54	.60	.60	.61	.61	.61	.61	.61
OCT 15	.38	.57	.70	.80	1.04	1.18	1.38	1.72	1.78	1.84	1.94	2.02
OCT 16	.25	.39	.44	.52	.65	.75	.81	.83	.89	.94	1.03	1.12
GOODLAND												
JUN 15	.40	.50	.60	.62	.69	.70	.70	.70	.70	.70	.70	.70
JUN 16	.60	1.05	1.19	1.20	1.30	1.35	1.40	1.54	1.55	1.55	1.55	1.55
JUN 22	.26	.27	.27	.27	.27	.27	.28	.29	.30	.30	.30	.32
AUG 3	.18	.25	.35	.49	.52	.58	.64	.68	.70	.71	.72	.75
TOPEKA												
APR 3	.28	.30	.31	.35	.36	.43	.47	.49	.49	.49	.56	.68
APR 14	.18	.35	.50	.60	.61	.62	.66	.73	.75	.75	.75	.75
APR 16	.28	.40	.43	.50	.60	.63	.63	.63	.64	.64	.64	.64
MAY 31	.22	.41	.41	.41	.41	.41	.41	.41	.41	.41	.41	.41
JUN 10	.38	.44	.48	.56	.61	.63	.64	.86	.88	.93	.94	1.49
JUL 16	.43	.80	1.08	1.18	1.34	1.54	1.66	1.68	1.78	1.83	1.85	1.94
JUL 23	.18	.30	.38	.42	.45	.46	.47	.52	.54	.54	.54	.55
JUL 26	.22	.38	.44	.50	.54	.66	1.00	1.20	1.34	1.44	1.84	1.92
JUL 30	.50	.78	.86	1.20	1.63	1.65	1.69	1.69	1.69	1.69	1.69	1.69
AUG 9	.42	.60	.84	.94	1.06	1.18	1.32	1.41	1.45	1.76	1.84	1.89
AUG 10	.46	.60	.88	.92	.94	.96	.97	.97	.97	.97	1.16	1.22
SEP 23	.28	.36	.42	.46	.61	.85	1.12	1.15	1.16	1.20	1.22	1.26
OCT 8	.32	.62	.86	1.06	1.29	1.34	1.57	1.71	1.80	1.88	1.96	2.03
WICHITA												
APR 3	.16	.30	.37	.42	.52	.63	.64	.72	.74	.75	.75	.75
MAY 13	.25	.36	.40	.42	.53	.60	.61	.61	.67	.71	.74	.81
MAY 31	.18	.28	.36	.40	.42	.46	.47	.49	.51	.57	.59	.63
JUN 15	.20	.32	.41	.45	.52	.55	.55	.55	.58	.58	.59	.62
JUL 25	.30	.43	.51	.66	.78	.92	.95	.97	.97	.97	.97	.97
JUL 27	.33	.61	.90	1.10	1.30	1.38	1.44	1.46	1.48	1.49	1.55	1.59
AUG 16	.27	.46	.58	.74	.94	1.05	1.14	1.19	1.30	1.43	1.48	1.50
AUG 18	.20	.30	.35	.46	.51	.51	.51	.52	.52	.56	.62	.64
SEP 3	.56	.80	1.30	1.64	1.86	1.97	2.01	2.02	2.02	2.02	2.15	2.16
SEP 22	.40	.68	.86	1.16	1.32	1.53	1.91	2.10	2.21	2.24	2.24	2.44
OCT 16	.21	.32	.36	.40	.48	.62	.79	.90	.91	1.00	1.23	1.23
NOV 2	.23	.33	.40	.42	.48	.60	.69	.73	.76	.78	.81	.82

T CLOCK MALFUNCTION
M NO RECORD

Station and date	5	10	15	20	30	45	60	80	100	120	150	180
	Maximum precipitation in inches (5 to 180 minutes)											
KENTUCKY												
COVINGTON												
APR 14	.23	.40	.47	.53	.60	.67	.75	.79	.80	.80	.80	.80
APR 23	.36	.42	.42	.42	.42	.42	.42	.45	.64	.64	.64	.64
MAY 3	.28	.28	.29	.36	.43	.46	.46	.46	.46	.46	.46	.46
MAY 24	.27	.38	.47	.48	.58	.62	.65	.68	.73	.92	1.16	1.23
MAY 24	.20	.33	.37	.44	.51	.58	.62	.66	.77	.85	1.05	1.14
MAY 24	.16	.25	.40	.45	.57	.61	.65	.74	.84	.93	1.07	1.16
JUN 24	.26	.50	.63	.64	.65	.80	.81	.81	.81	.81	.81	.81
JUL 10	.23	.45	.65	.73	.93	1.16	1.16	1.16	1.16	1.16	1.16	1.16
JUL 15	.23	.46	.50	.57	.70	.70	.70	.70	.73	.79	.90	.90
JUL 15	.21	.39	.49	.53	.56	.58	.58	.59	.60	.60	.60	.60
JUL 25	.23	.42	.53	.64	.72	.89	.91	.98	.99	.99	.99	.99
JUL 31	.15	.29	.35	.38	.39	.42	.43	.44	.44	.44	.44	.44
AUG 8	.28	.40	.50	.73	.78	.78	.78	.78	.78	.78	.78	.78
LEXINGTON												
MAY 24	.18	.27	.35	.48	.57	.70	1.00	1.17	1.23	1.32	1.33	1.33
JUN 23	.21	.32	.40	.48	.57	.60	.60	.60	.60	.60	.60	.60
JUL 12	.28	.48	.64	.69	.75	.76	.78	.78	.78	.78	.78	.78
JUL 20	.29	.46	.68	.72	.80	.82	.83	.83	.83	.83	.83	.83
JUL 25	.24	.46	.52	.56	.57	.57	.57	.57	.57	.57	.57	.57
AUG 14	.24	.35	.44	.59	.74	.90	1.26	1.40	1.58	1.63	1.63	1.63
AUG 14	.29	.56	.62	.69	1.14	1.38	1.46	1.71	1.80	1.82	1.83	1.87
SEP 5	.24	.36	.49	.70	.81	.87	1.05	1.09	1.10	1.12	1.15	1.15
LOUISVILLE												
MAR 31	.14	.20	.37	.43	.45	.46	.67	.82	.90	.94	.97	1.02
APR 4	.26	.32	.48	.55	.64	.88	.97	1.10	1.26	1.36	1.47	1.61
APR 14	.39	.51	.59	.61	.64	.68	.74	.78	.79	.79	.79	.79
JUL 9	.34	.58	.64	.67	.69	.69	.69	.69	.70	.71	.71	.71
JUL 27	.23	.41	.49	.54	.60	.64	.65	.65	.65	.65	.65	.65
JUL 31	.19	.28	.38	.40	.45	.47	.47	.47	.47	.47	.47	.47
AUG 10	.20	.40	.45	.46	.47	.47	.47	.47	.47	.47	.47	.47
SEP 18	.25	.32	.36	.38	.42	.56	.63	.71	.72	.76	.84	.85
LOUISIANA												
ALEXANDRIA												
MAR 11 S	.18	.35	.50	.65	.78	.92	.93	.93	.93	.94	.94	.95
MAY 17	.30	.46	.48	.58	.71	.77	.85	.89	1.10	1.20	1.34	1.41
JUN 22	.25	.30	.34	.36	.52	.71	.96	1.01	1.02	1.02	1.02	1.03
JUL 13	.22	.33	.34	.36	.37	.37	.37	.37	.37	.37	.37	.37
AUG 9	.43	.51	.58	.61	.61	.61	.61	.61	.61	.61	.61	.61
AUG 14	.28	.43	.46	.50	.50	.50	.50	.50	.50	.50	.50	.50
AUG 20	.20	.38	.48	.56	.83	1.13	1.29	1.34	1.34	1.34	1.34	1.34
NOV 27	.15	.24	.28	.38	.52	.54	.77	.94	1.00	1.13	1.24	.16
NOV 30	.16	.30	.35	.37	.52	.60	.73	.97	1.15	1.34	1.52	1.73
DEC 12	.23	.44	.57	.65	.70	.78	.83	.87	.94	.98	1.05	1.07
BATON ROUGE												
JAN 1	.17	.30	.32	.45	.52	.56	.65	.70	.77	1.03	1.13	1.22
JAN 9	.20	.37	.46	.58	.77	.80	.90	.94	.97	1.02	1.05	1.08
JUN 5	.19	.30	.36	.37	.40	.46	.47	.47	.47	.47	.57	.57
JUN 7	.20	.32	.40	.52	.61	.65	.65	.65	.65	.65	.65	.65
JUL 12	.33	.49	.51	.52	.54	.55	.56	.56	.60	.61	.61	.61
JUL 18	.38	.48	.84	.93	1.23	1.36	1.47	1.48	1.48	1.49	1.49	1.49
AUG 5	.26	.47	.62	.71	.86	.90	.90	.90	.90	.90	.90	.90
AUG 6	.24	.38	.50	.59	.89	1.10	1.13	1.14	1.14	1.14	1.14	1.14
AUG 12	.24	.39	.44	.50	.54	.55	.56	.95	1.04	1.08	1.56	1.57
AUG 12	.29	.48	.56	.68	.87	.97	1.01	1.13	1.17	1.20	1.21	1.21
AUG 13	.29	.56	.77	.82	.97	1.14	1.21	1.23	1.27	1.32	1.40	1.45
AUG 22	.61	.90	1.12	1.39	1.90	2.26	2.31	2.36	2.37	2.37	2.37	2.37
SEP 15	.47	.56	.60	.61	.67	.70	.75	.77	.79	.84	.84	.84
DEC 1	.32	.55	.75	.95	1.12	1.38	1.57	1.80	1.90	1.97	2.05	2.09
DEC 13	.25	.40	.50	.55	.75	.95	1.17	1.30	1.40	1.48	1.60	1.71
BOOTHVILLE												
APR 5 S	*.27	*.33	*.41	.48	*.63	.69	*.76	.77	.78	*.78	.79	*.83
MAY 4	*.33	*.59	*.76	.84	*.98	1.09	*1.10	1.11	1.11	*1.11	1.11	*1.11
MAY 25	.14	.28	.32	.40	.50	.52	.53	.53	.53	.53	.53	.53
JUN 11	.27	.45	.55	.61	.82	1.14	*1.17	1.17	1.17	*1.17	1.17	*1.17
JUN 22	.26	.43	.53	.64	.72	.83	.94	1.08	1.19	*1.36	1.37	*1.37
JUN 29	.25	.36	.40	.45	.46	.48	.49	.49	.49	.49	.49	.49
JUL 6	.18	.28	.31	.40	.59	.72	.90	.92	.92	.92	.92	.92
JUL 7	.20	.39	.49	.64	.86	.87	.87	.87	.87	.87	.87	.87
JUL 18	.18	.35	.46	.47	.52	.55	.67	.70	.81	.96	1.13	1.15
AUG 2	*.34	.54	.69	.71	.72	.73	.73	.73	.73	.73	.73	.73
AUG 15	.30	.48	.64	.73	.75	.78	.80	.80	.80	.80	.80	.80
AUG 20	.25	.40	.43	.47	.50	.53	.53	.62	.67	.71	.71	.71
AUG 24	.29	.41	.42	.42	.42	.42	.42	.42	.42	.42	.42	.42
SEP 4	*.42	*.70	*.87	.95	*1.03	1.64	*1.77	1.87	1.88	*1.88	1.89	*1.90
DEC 3	.27	.35	.42	.46	.50	.52	.61	.65	.69	.82	1.08	1.25
DEC 3	.36	.68	.81	.86	.89	.92	.95	.95	.95	.95	.95	.95
DEC 13	.26	.38	.50	.63	.81	.87	.90	.92	.93	.96	.96	.96
DEC 31	.32	.39	.41	.42	.48	.51	.52	.58	.61	.65	.75	.79
LAKE CHARLES												
FEB 28	.30	.45	.50	.58	.65	.71	.71	.72	.76	.81	.86	.88
MAY 3	.20	.37	.42	.50	.56	.61	.61	.64	.66	.69	.76	.81
JUN 17	.25	.30	.33	.38	.43	.44	.45	.45	.45	.45	.45	.45
JUN 18	.16	.30	.31	.33	.37	.41	.43	.46	.49	.50	.51	.53
JUN 22	.34	.43	.44	.47	.50	.60	.60	.61	.61	.61	.61	.61
JUN 22	.45	.60	.89	1.00	1.30	1.69	1.85	2.07	2.20	2.44	2.53	2.75
JUN 26	.42	.60	.76	.81	.88	.90	.99	1.00	1.00	1.00	1.00	1.00
JUL 2	.52	.80	1.25	1.60	*2.40	2.73	2.73	2.73	2.73	2.73	2.73	2.73
JUL 19	.17	.28	.33	.50	.64	.70	.95	1.28	1.46	1.48	1.55	1.55
JUL 20	.20	.30	.38	.42	.45	.49	.49	.49	.49	.49	.49	.49
AUG 3	.50	.95	1.25	1.47	1.52	1.76	1.85	1.85	1.85	1.85	1.85	1.85
AUG 13	.40	.57	.67	.76	.77	.77	.77	.77	.77	.77	.87	.87
SEP 3	.25	.30	.30	.35	.38	.60	.62	.62	.68	.72	.95	.97
OCT 8	.27	.47	.50	.60	.75	.86	.92	.93	.94	.94	.94	.94
NOV 30	.35	.60	.65	.70	.80	.95	1.10	1.13	1.19	1.21	1.45	1.55
DEC 12	.23	.35	.43	.56	.82	.90	1.05	1.23	1.30	1.35	1.41	1.57
DEC 30	.19	.37	.42	.59	.61	.61	.61	.61	.61	.62	.62	.62
NEW ORLEANS												
APR 29	.36	.58	.70	.74	.84	.88	.90	.93	1.18	1.28	1.33	1.38
MAY 24	.28	.46	.56	.69	1.00	1.20	1.39	1.45	1.47	1.51	1.54	1.59
JUN 1	.52	.86	.94	1.16	1.35	1.45	1.52	1.59	1.63	1.63	1.63	1.63
JUN 5	.43	.75	.89	1.21	1.51	1.60	1.64	1.65	1.65	1.65	1.65	1.65
JUN 8	.31	.54	.59	.79	.90	1.00	1.05	1.05	1.05	1.05	1.05	1.05
JUN 26	.30	.46	.47	.47	.47	.47	.47	.47	.47	.47	.47	.47
JUN 30	.31	.46	.68	.82	.98	1.10	1.13	1.15	1.15	1.15	1.15	1.15
SEP 4	.22	.35	.36	.36	.43	.44	.44	.44	.45	.46	.47	.47
NOV 6	.25	.36	.42	.46	.56	.57	.66	.74	1.07	1.11	1.14	1.17
NOV 17	.26	.33	.39	.43	.53	.58	.66	.66	.66	.66	.66	.66
DEC 1	.15	.25	.28	.34	.52	.69	.74	.78	.86	1.03	1.25	1.31
SHREVEPORT												
APR 21	.22	.34	.37	.42	.50	.62	.76	.97	1.05	1.07	1.10	1.10
APR 26	.43	.82	1.13	1.35	1.56	1.84	2.01	2.09	2.10	2.10	2.10	2.10
MAY 12	.31	.43	.44	.46	.61	.65	.69	.73	.73	.74	.74	.75
MAY 25	.42	.77	.82	.85	.87	.87	.87	.87	.87	.87	.87	.87
JUN 24	.29	.41	.43	.43	.43	.43	.43	.43	.43	.43	.43	.43
JUN 26	.13	.16	.28	.35	.52	.71	.85	1.02	1.11	1.14	1.19	1.29
JUL 18	.19	.35	.43	.61	.76	.88	.98	1.00	1.00	1.00	1.00	1.00
JUL 18	.35	.56	.70	.85	.98	1.00	1.12	1.12	1.12	1.12	1.12	1.12
JUL 29	.31	.50	.70	.95	1.30	1.65	1.70	1.88	1.89	1.89	1.89	1.89
AUG 10	.22	.38	.50	.61	.66	.70	.75	.95	1.03	1.08	1.08	1.08
SEP 4	.17	.28	.36	.46	.51	.61	.68	.77	.97	1.07	1.12	1.18
SEP 15	.25	.50	.66	.77	1.06	1.34	1.71	2.00	2.16	2.23	2.38	2.53
OCT 9	.22	.32	.36	.37	.43	.68	.73	.75	.76	.80	.81	.85
NOV 15	.37	.42	.43	.44	.47	.50	.54	.61	.68	.73	.81	.92
NOV 27	.21	.29	.39	.43	.46	.51	.57	.60	.63	.65	.70	.72
DEC 12	.52	.58	.65	.76	.89	.97	1.02	1.13	1.18	1.20	1.20	1.22
MAINE												
CARIBOU												
JUL 18	.25	.43	.59	.66	.71	.72	.72	.94	.98	.99	1.00	1.00
JUL 19	.18	.32	.49	.51	.62	.67	.68	.69	.73	.74	.75	.77
JUL 28	*.35	*.64	*.84	.95	*1.06	1.08	1.08	1.09	1.09	1.09	1.09	1.20
PORTLAND												
AUG 9	.18	.32	.40	.42	.43	.43	.43	.44	.44	.44	.44	.44
MARYLAND												
BALTIMORE												
JUN 26	.42	.61	.64	.66	.70	.75	.79	.84	.88	.90	.94	.94
JUL 2	.24	.38	.52	.73	1.03	1.22	1.29	1.38	1.38	1.38	1.38	1.47
AUG 16	.44	.61	1.03	1.31	1.50	1.75	1.77	1.77	1.77	1.77	1.77	1.90
SEP 10	.33	.65	.95	1.08	1.32	1.51	1.72	1.88	1.98	2.13	2.25	2.38
BALTIMORE U												
JUN 26	.37	.51	.64	.65	.70	.84	.86	.90	.95	.96	.99	.99
AUG 2	.45	.88	1.02	1.22	1.43	2.07	2.59	2.67	2.67	2.68	2.68	2.68
AUG 16	.38	.68	.71	.81	.85	.86	.87	.88	.88	.88	.90	1.01
SEP 10	.32	.47	.57	.64	.86	1.18	1.46	1.63	1.87	2.00	2.16	2.23
MASSACHUSETTS												
BLUE HILL R												
AUG 7	*.28	*.46	*.58	.86	*.97	1.05	*1.09	1.09	1.09	1.09	1.09	1.09
AUG 9	.27	.27	.27	.27	.27	.27	.27	.27	.27	.27	.27	.27
BOSTON						NONE						
NANTUCKET												
JUN 13	.18	.23	.34	.42	.55	.57	.62	.76	.79	.94	1.01	1.14
AUG 2	.21	.37	.51	.52	.52	.61	.63	.63	.63	.63	.63	.63
AUG 3 T	M	M	M	M	M	M	M	M	M	M	M	M
DEC 4	.17	.26	.38	.50	.68	.79	.85	.93	1.00	1.04	1.11	1.17
DEC 28	.18	.27	.35	.42	.54	.71	.81	.84	.86	.89	.92	.94
MICHIGAN												
PITTSFIELD												
JUN 3	.20	.33	.42	.54	.65	.70	.77	.78	.83	.94	.94	.95
JUN 15	.12	.22	.27	.34	.50	.55	.56	.57	.57	.57	.57	.57
JUN 19	.18	.27	.35	.48	.57	.62	.64	.66	.66	.66	.67	.67
AUG 20 C	.37	.72	.72	.72	.73	.76	.78	.78	.78	.78	.78	.78
ALPENA												
JUN 11	.26	.37	.40	.40	.41	.43	.43	.43	.43	.43	.45	.45
JUL 15	.20	.39	.53	.65	.88	1.00	1.01	1.01	1.01	1.02	1.02	1.02
AUG 6	.23	.32	.37	.45	.68	.73	.94	.99	1.01	1.01	1.01	1.01
AUG 20	.45	.75	1.00	1.10	1.18	1.19	1.20	1.48	1.60	1.73	1.74	1.74
AUG 22	.28	.30	.30	.30	.30	.30	.30	.30	.44	.44	.44	.44
SEP 19	.25	.47	.51	.53	.73	.76	.80	.86	.90	.92	.93	.93
SEP 24	*.65	.81	.84	.90	.93	.97	1.02	1.04	1.11	1.13	1.16	1.16
DETROIT												
JUN 29	.37	.46	.51	.54	.54	.54	.54	.54	.54	.54	.54	.54
JUL 27	.27	.45	.52	.60	.85	1.20	1.50	1.55	1.57	1.59	1.67	1.67
JUL 31	.38	.51	.52	.52	.52	.52	.52	.52	.52	.52	.52	.52
AUG 16	.34	.66	.78	.84	.86	.91	1.26	1.31	1.35	1.45	1.97	2.20
DETROIT M WAYNE CO												
JUN 21	.27	.43	.46	.49	.60	.69	.72	.76	.88	1.23	1.23	1.23
JUN 25	.20	.31	.32	.33	.39	.49	.56	.60	.64	.71	.92	1.05
JUL 9	.30	.33	.34	.36	.38	.38	.38	.39	.39	.39	.46	.59
JUL 23	.30	.53	.59	.80	.91	1.00	1.06	1.09	1.11	1.12	1.12	1.12
JUL 24	.24	.35	.38	.41	.52	.57	.63	.71	.84	.86	.90	.91
JUL 31	.35	.60	.65	.73	.94	1.00	1.01	1.01	1.01	1.01	1.01	1.01
AUG 16	.15	.27	.32	.42	.50	.52	.53	.56	.62	.66	.69	.69
DETROIT WILLOW RUN												
APR 23	.25	.35	.45	.53	.61	.75	.84	.86	.86	.86	.86	.87
JUN 21	.35	.60	.70	.85	1.00	1.05	1.10	1.30	1.60	1.81	1.83	1.83
JUN 25	.14	.27	.37	.40	.63	.80	1.04	1.25	1.50	1.68	1.78	1.88
JUL 23	.35	.60	.65	.75	.85	.92	1.01	1.10	1.10	1.10	1.10	1.10
JUL 27	.35	.47	.53	.55	.55	.55	.55	.55	.55	.55	.55	.55
JUL 31	.26	.27	.28	.29	.31	.32	.32	.32	.32	.32	.32	.32
AUG 8 C	.21	.36	.40	.47	.51	.53	.58	.64	.72	.77	.86	.86
FLINT												
APR 14	.37	.41	.42	.47	.60	.66	.76	.89	.92	.92	.92	.92
JUN 7	.32	.40	.50	.68	.98	1.08	1.14	1.18	1.20	1.20	1.20	1.20
JUN 29	.36	.48	.50	.51	.54	.55	.57	.58	.62	.65	.67	.67
JUL 27	.30	.58	.78	.86	1.02	1.04	1.18	1.23	1.23	1.23	1.23	1.23
JUL 31	.30	.44	.45	.52	.58	.66	.71	.72	.72	.72	.72	.72
AUG 16	.44	.52	.90	1.08	*1.40	1.70	*2.31	3.04	3.54	*3.90	4.34	*4.36

S RECORD BEGAN MARCH 1, ALEXANDRIA.

S RECORD BEGAN MARCH 6, BOOTHVILLE.

T CLOCK MALFUNCTION

M NO RECORD

C RECORD ENDED AUGUST 31, PITTSFIELD.

C RECORD ENDED SEPTEMBER 30, DETROIT WILLOW RUN.

EXCESSIVE SHORT DURATION RAINFALL

Station and date	Maximum precipitation in inches (5 to 180 minutes)											
	5	10	15	20	30	45	60	80	100	120	150	180
MICHIGAN												
GRAND RAPIDS												
JUN 21	.36	.44	.44	.44	.49	.49	.49	.49	.49	.49	.49	.49
JUN 29	.23	.45	.52	.67	.77	.86	.89	.91	.96	.98	1.01	1.01
AUG 7	.28	.38	.54	.58	.61	.61	.61	.62	.62	.62	.62	.62
AUG 19	.22	.36	.43	.44	.45	.58	.61	.83	.83	.83	.83	.83
SEP 10	.15	.28	.33	.34	.50	.53	.53	.54	.55	.57	.68	.68
SEP 22	.33	.54	.60	.62	.63	.63	.63	.64	.64	.64	.65	.65
OCT 2	.29	.39	.41	.43	.46	.46	.46	.48	.50	.50	.50	.50
HOUGHTON LAKE												
MAY 12	.25	.40	.43	.44	.50	.51	.52	.52	.52	.55	.59	.59
AUG 19	.18	.30	.43	.46	.55	.65	.80	.83	.86	.86	.88	.89
SEP 24	.20	.35	.39	.49	.69	.75	.77	.83	.88	.92	.92	.92
LANSING												
APR 14	.30	.40	.50	.64	.76	.79	.87	.99	1.11	1.22	1.28	1.29
JUN 21	.35	.38	.45	.56	.60	.80	.90	.92	.92	1.11	1.45	1.48
JUN 23	.59	.74	.84	.86	.87	.90	1.05	1.45	1.65	1.66	1.69	1.69
JUL 18	.25	.50	.52	.57	.68	.70	.74	.75	.75	.75	.75	.75
JUL 23	.18	.35	.39	.48	.61	.64	.70	.73	.74	.74	.77	.77
JUL 27	.34	.51	.54	.62	.64	.64	.64	.64	.64	.64	.64	.64
AUG 5	.30	.40	.42	.43	.47	.51	.57	.60	.61	.61	.61	.61
AUG 19	.20	.32	.47	.50	.66	.70	.74	.75	.75	.75	.75	.75
MARQUETTE U												
JUN 6	.32	.41	.43	.50	.53	.59	.60	.60	.95	1.09	1.10	1.13
JUN 11	.23	.33	.39	.41	.44	.51	.51	.52	.52	.54	.57	.58
JUL 21	.26	.36	.39	.40	.41	.42	.44	.44	.45	.46	.46	.46
MUSKEGON												
JUL 17	.36	.52	.68	.80	1.03	1.10	1.10	1.10	1.10	1.10	1.10	1.21
AUG 5	.25	.34	.43	.46	.53	.53	.56	.57	.57	.57	.57	.58
AUG 7	.23	.40	.42	.42	.44	.44	.44	.44	.44	.46	.46	.46
SEP 24	.20	.34	.40	.42	.44	.48	.52	.58	.60	.64	.65	.69
OCT 17	.18	.30	.44	.47	.52	.57	.57	.58	.58	.60	.61	.61
SAULT STE MARIE												
JUL 21	.18	.32	.35	.36	.36	.37	.37	.37	.43	.43	.44	.45
AUG 22	.22	.34	.36	.43	.58	.72	.91	1.06	1.30	1.36	1.64	1.79
MINNESOTA												
DULUTH												
JUN 5	.28	.46	.52	.64	.72	.76	.83	1.00	1.24	1.31	1.52	1.64
JUN 18	.26	.34	.34	.34	.34	.34	.34	.34	.34	.34	.34	.34
JUL 13	.45	.90	.97	1.12	1.31	1.63	1.74	1.80	1.81	1.87	1.91	1.94
JUL 16	.28	.28	.28	.28	.28	.29	.29	.29	.29	.29	.29	.29
JUL 16	.32	.36	.36	.36	.36	.36	.36	.36	.36	.36	.36	.36
INTERNATIONAL FALLS												
JUN 5	.23	.32	.39	.40	.40	.43	.44	.45	.50	.52	.54	.56
JUN 8	.25	.30	.36	.38	.41	.45	.46	.47	.49	.50	.52	.53
JUL 8	.26	.27	.29	.36	.47	.49	.50	.53	.58	.58	.58	.58
JUL 13	.23	.31	.34	.35	.38	.41	.45	.45	.45	.45	.45	.45
JUL 15	.37	.74	.90	1.17	1.33	1.42	1.45	1.47	1.49	1.52	1.52	1.52
MINNEAPOLIS												
MAR 18	.17	.34	.39	.44	.61	.65	.65	.65	.65	.65	.65	.65
JUN 11	.19	.26	.34	.43	.52	.60	.65	.82	1.09	1.14	1.17	1.17
JUN 13	.20	.38	.48	.51	.58	.81	.82	.96	1.07	1.22	1.32	1.32
JUN 20	.30	.57	.65	.67	.70	.80	.80	.89	.90	.90	.91	.97
JUL 12	.09	.99	1.11	1.22	1.32	1.40	1.46	1.53	1.61	1.66	1.70	1.71
JUL 14	.42	.62	.73	.79	.84	.85	.86	.88	.91	.93	.98	1.02
JUL 30	.32	.40	.74	.82	.98	1.13	1.15	1.16	1.18	1.19	1.19	1.19
SEP 22	.26	.41	.48	.53	.54	.55	.55	.56	.56	.56	.56	.56
SEP 22	.28	.43	.60	.69	.83	1.01	1.27	1.29	1.29	1.29	1.29	1.30
ROCHESTER												
MAY 28	.17	.24	.35	.39	.45	.49	.59	.62	.66	.67	.67	.67
JUN 13	.25	.34	.41	.52	.71	.95	.97	.97	.97	.97	.97	.97
JUN 18	.27	.34	.35	.35	.38	.54	.59	.62	.64	.66	.68	.70
JUL 12	.46	.57	.58	.64	.70	.70	.70	.75	.78	.79	.84	.90
JUL 23	.28	.43	.56	.77	.78	.84	1.00	1.06	1.11	1.19	1.38	1.48
AUG 6	.16	.30	.37	.43	.50	.58	.59	.59	.59	.62	.62	.62
AUG 16	.26	.46	.67	.73	.73	.73	.73	.73	.73	.73	.73	.73
ST CLOUD												
JUN 8	.25	.49	.54	.60	.63	.66	.69	.69	.70	.70	.85	.96
JUN 10	.20	.30	.32	.32	.32	.32	.32	.32	.32	.32	.32	.32
JUN 10	.21	.32	.35	.46	.70	.73	1.00	1.04	1.04	1.08	1.16	1.33
JUN 30	.32	.52	.65	.82	1.23	1.37	1.48	1.52	1.58	1.60	1.62	1.77
JUL 20	.16	.26	.31	.43	.53	.60	.62	.72	.72	.73	.76	.80
JUL 30	.25	.31	.31	.32	.33	.33	.36	.44	.47	.47	.47	.47
AUG 6	.23	.42	.49	.51	.58	.77	.82	.83	.83	.83	.83	.83
AUG 6	.26	.35	.36	.39	.41	.42	.42	.42	.42	.42	.42	.42
MISSISSIPPI												
JACKSON												
MAR 11	.20	.30	.34	.39	.40	.40	.40	.40	.40	.40	.40	.40
APR 4	.20	.30	.36	.43	.55	.66	.88	1.04	1.16	1.22	1.37	1.50
APR 6	.20	.30	.37	.47	.64	.68	.72	.78	.82	.83	.89	.98
APR 28	.16	.27	.37	.40	.62	.67	.73	.75	.75	.78	.80	.80
APR 28	.18	.32	.43	.60	.70	.76	.76	.76	.76	.76	.76	.76
MAY 10	.20	.27	.37	.38	.61	.70	.75	.82	.90	.93	1.00	1.05
MAY 11	.26	.35	.40	.45	.60	.80	1.10	1.25	1.25	1.25	1.25	1.28
MAY 25	.29	.55	.65	.80	.82	.82	.82	.82	.82	.82	.82	.82
MAY 26	.18	.32	.49	.62	.93	1.18	1.25	1.35	1.38	1.40	1.41	1.41
JUL 22	.20	.30	.39	.51	.64	.83	.87	.91	.92	.92	.94	.94
AUG 13	.15	.30	.35	.40	.45	.46	.46	.46	.46	.46	.46	.46
AUG 19	.29	.46	.75	.91	.96	.97	.98	.98	1.01	1.02	1.02	1.02
AUG 22	.25	.37	.50	.74	.77	.77	.78	.80	.80	.80	.80	.80
NOV 3	.35	.67	.69	.71	.71	.71	.71	.71	.71	.71	.71	.71
DEC 12	.20	.35	.39	.41	.44	.48	.56	.63	.65	.67	.77	.86
MERIDIAN												
JAN 23	.18	.31	.35	.40	.43	.45	.45	.46	.49	.49	.49*	.49
MAR 21	.18	.31	.38	.41	.47	.57	.63	.69	.73	.74	.76*	.82
APR 14	.20	.36	.40	.45	.45	.45	.45	.45	.45	.45	.45	.45
APR 23	.26	.43	.46	.48	.49	.49	.49	.56	.59	.59	.59	.59
APR 27	.25	.32	.39	.42	.44	.45	.45	.45	.45	.45	.45	.45
APR 29	.28	.38	.59	.75	1.02	1.20	1.25	1.40	1.49	1.49	1.49*	1.49
MAY 12	.30	.53	.54	.54	.55	.55	.55	1.06	1.08	1.09	1.10	1.11
JUN 11	.19	.32	.33	.34	.35	.36	.36	.36	.40	.42	.42	.42
MISSISSIPPI												
MERIDIAN												
JUL 2	.28	.40	.45	.55	.67	.70	.75	.76	.76	.76	.76	.76
JUL 8	.15	.27	.30	.40	.60	.60	.60	.60	.60	.60	.60	.60
AUG 2	.35	.60	.70	.82	.96	.98	1.00	1.00	1.00	1.00	1.00	1.00
AUG 11	.25	.32	.37	.38	.40	.40	.40	.46	.49	.51	.52	.53
AUG 13	.38	.63	.75	1.08	1.37	1.60	1.72	1.72	1.73	1.73	1.75*	1.75
AUG 24	.30	.50	.55	.65	.81	.97	1.02	1.05	1.07	1.14	1.19	1.28
SEP 3	.20	.35	.37	.47	.50	.63	.77	1.04	1.05	1.07	1.07	1.07
OCT 6	.26	.30	.35	.40	.40	.66	.78	.81	.81	.81	.81	.83
OCT 9	.28	.49	.52	.57	.75	.78	.80	.82	.93	.94	.94	.98
NOV 3	.40	.54	.56	.58	.60	.61	.64	.64	.64	.64	.64	.64
NOV 17	.33	.43	.52	.57	.63	.64	.64	.65	.66	.66	.66	.67
DEC 21	.20	.37	.40	.41	.42	.44	.50	.56	.68	.73	.83	.86
MISSOURI												
COLUMBIA												
FEB 1	.26	.28	.35	.40	.44	.45	.50	.53	.62	.63	.63	.63
MAY 23	.17	.27	.32	.43	.52	.60	.73	.84	.87	.87	.89	.89
JUN 22	.43	.58	.61	.69	.74	.75	.75	.75	.75	.75	.75	.75
JUN 25	.19	.33	.37	.56	.66	.86	1.03	1.47	1.69	2.00	2.65	2.88
JUL 1	.30	.46	.60	.77	.81	1.00	1.15	1.15	1.17	1.22	1.30	1.78
SEP 16	.42	.61	.75	.95	1.19	1.28	1.35	1.48	1.53	1.55	1.56	1.56
KANSAS CITY												
APR 22	.26	.50	.57	.72	.87	.93	.98	1.07	1.17	1.21	1.24	1.32
JUN 14	.37	.44	.54	.58	.94	.96	.98	1.00	1.01	1.01	1.01	1.01
AUG 8	.22	.36	.54	.68	.84	.96	.99	1.00	1.00	1.00	1.05	1.07
OCT 9	.20	.36	.42	.51	.57	.61	.64	.70	.75	.80	.87	.91
OCT 21	.28	.56	.62	.66	.82	.91	1.02	1.22	1.26	1.27	1.32	1.45
ST LOUIS												
AUG 3	.31	.40	.41	.42	.43	.60	.63	.70	.74	.75	.75	.75
SEP 17	.16	.28	.42	.52	.65	.81	1.04	1.20	1.25	1.26	1.27	1.34
SPRINGFIELD												
MAY 9	.18	.36	.42	.51	.65	.81	.87	.94	.96	.96	.96	.96
MAY 25	.22	.33	.36	.37	.41	.73	.81	1.04	1.16	1.19	1.25	1.35
JUL 27	.20	.34	.42	.43	.43	.43	.43	.43	.43	.43	.43	.43
JUL 30	.19	.36	.42	.45	.62	.84	1.05	1.06	1.13	1.13	1.13	1.13
AUG 11	.09	.18	.26	.34	.51	.73	.86	.96	1.03	1.04	1.08	1.08
AUG 24	.21	.31	.41	.50	.54	.62	.63	.67	.71	.73	.78	.78
SEP 16	.20	.38	.54	.64	.84	.95	.99	1.02	1.03	1.09	1.17	1.31
OCT 9	.18	.36	.48	.59	.91	.94	1.02	1.08	1.16	1.27	1.40	1.41
MONTANA												
BILLINGS												
SEP 12	.40	.45	.49	.49	.49	.49	.49	.49	.49	.49	.49	.69
GLASGOW						NONE						
GREAT FALLS						NONE						
HAVRE						NONE						
HELENA												
AUG 4	.36*	.69*	.76	.78	.79	.79	.79	.79	.79	.79	.79	.79
KALISPELL												
JUN 23	.23	.32	.34	.36	.36	.37	.37	.37	.37	.37	.38	.38
MISSOULA						NONE						
NEBRASKA												
GRAND ISLAND												
JUN 10	.25	.34	.39	.44	.50	.54	.60	.67	.67	.67	.67	.67
JUN 23	*1.05	*1.44	*1.69	1.84	*2.54	2.80	*2.88	2.91	2.93	2.94	2.98	3.01
JUN 24	.28	.35	.36	.37	.38	.44	.45	.48	.49	.49	.50	.54
JUL 29	.51	.86	1.07	1.38	1.42	1.69	1.78	2.16	2.31	2.41	2.42	2.48
AUG 7	.33	.45	.52	.55	.57	.58	.60	.61	.61	.61	.68	.70
SEP 15	.21	.30	.34	.42	.64	.69	.73	.78	.80	.87	.93	1.00
OCT 15	.21	.32	.38	.42	.55	.63	.69	.83	.88	.94	1.16	1.26
LINCOLN U												
JUN 8	.24	.39	.45	.49	.53	.54	.61	.63	.67	.70	.71	.73
JUN 10	.34	.54	.58	.64	.74	.78	.78	.97	1.00	1.02	1.04	1.06
JUL 23	.28	.38	.43	.46	.59	.62	.63	.53	.75	.76	.79	.80
JUL 30	.31	.51	.70	.70	.70	.71	.71	1.01	1.01	1.01	1.01	1.01
SEP 3	.16	.31	.37	.48	.65	1.02	1.18	1.49	1.58	1.61	1.62	1.68
SEP 16	.40	.55	.57	.59	.64	.74	.85	1.20	1.33	1.48	1.64	1.81
NORFOLK												
MAY 7	.27	.32	.32	.32	.32	.32	.32	.32	.32	.32	.32	.32
AUG 8	.16	.32	.33	.34	.42	.49	.50	.54	.58	.59	.64	.64
AUG 9	.27	.49	.54	.64	.77	.87	1.02	1.10	1.13	1.16	1.19	1.20
SEP 15	.17	.30	.45	.54	.75	.82	.88	.94	.95	.99	.99	1.00
NORTH PLATTE												
MAY 6 T	M	M	M	M	.52	.63	.68	.75	.78	.80	.80	.80
JUN 24	.18	.27	.36	.43	.47	.52	.56	.56	.56	.59	.61	.63
AUG 27	.21	.38	.43	.44	.46	.52	.59	.70	.74	.78	.84	.94
OMAHA												
APR 3	.16	.23	.31	.42	.54	.58	.63	.66	.71	.73	.75	.75
APR 17	.26	.45	.49	.55	.71	.75	.80	.88	.92	.97	1.02	1.02
MAY 7	.16	.32	.34	.36	.47	.51	.57	.64	.66	.68	.70	.71
MAY 15	.49	.71	.73	.73	.75	.78	.79	.79	.79	.79	.80	.82
JUN 10	.44	.73	.77	.82	.90	.94	1.04	1.05	1.06	1.06	1.06	1.06
JUN 10	.24	.42	.43	.43	.43	.44	.57	.59	.60	.63	.65	.71
JUN 13	.63	1.00	1.04	1.09	1.12	1.12	1.12	1.12	1.12	1.12	1.12	1.12
JUL 17	.21	.32	.35	.39	.40	.40	.40	.40	.40	.40	.40	.40
JUL 30	.30	.46	.50	.55	.93	1.00	1.02	1.08	1.10	1.10	1.10	1.10
AUG 18	.24	.35	.40	.42	.44	.45	.47	.48	.49	.49	.49	.49
SEP 3	.25	.47	.51	.57	.65	.70	.88	.91	.96	.99	1.55	1.64
SCOTTSBLUFF												
JUN 6	.27	.31	.32	.33	.33	.33	.36	.38	.38	.38	.38	.38
JUN 16	.23	.55	.58	.60	.62	.63	.64	.64	.64	.64	.64	.64
JUL 17	.29	.48	.58	.61	.62	.62	.62	.62	62	.62	.62	.62

T CLOCK MALFUNCTION
M NO RECORD

EXCESSIVE SHORT DURATION RAINFALL

Station and date	Maximum precipitation in inches (5 to 180 minutes)											
	5	10	15	20	30	45	60	80	100	120	150	180
NEBRASKA												
VALENTINE												
MAY 30	.22	.40	.46	.48	.53	.55	.60	.65	.72	.77	.85	.90
JUN 24	.45	[illegible]	.90	1.19	1.26	1.26	1.26	1.26	1.26	1.26	1.26	1.26
JUN 29	.45	.65	.77	.83	1.29	1.29	1.29	1.29	1.29	1.29	1.29	1.29
JUL 11	.30	.49	.50	.55	.65	.69	.70	.70	.70	.70	.70	.70
JUL 16	.23	.32	.32	.32	.33	.33	.33	.33	.33	.33	.33	.33
AUG 14	.32	.46	.48	.50	.51	.52	.52	.52	.52	.52	.52	.52
AUG 27	.23	.38	.43	.48	.56	.56	.58	.58	.60	.63	.63	.63
NEVADA												
ELKO						NONE						
ELY						NONE						
LAS VEGAS						NONE						
RENO						NONE						
WINNEMUCCA						NONE						
NEW HAMPSHIRE												
CONCORD												
MAY 31	.40	.72	1.06	1.21	1.42	1.48	1.50	1.51	1.51	1.51	1.51	1.51
JUN 30	.27	.32	.34	.35	.35	.35	.36	.36	.39	.39	.39	.39
JUL 17	.35	.62	.76	.84	.90	.96	.99	1.02	1.04	1.04	1.04	1.04
AUG 9	.27	.50	.65	.68	.68	.73	.77	.77	.77	.77	.77	.77
AUG 17	.26	.34	.34	.34	.34	.36	.36	.36	.36	.36	.36	.36
NEW JERSEY												
ATLANTIC CITY												
MAY 29	.17	.33	.40	.52	.65	.81	1.06	1.19	1.27	1.49	1.64	1.84
JUN 27	.27	.47	.49	.50	.51	.52	.56	.58	.59	.59	.59	.59
JUL 23	.26	.34	.34	.35	.35	.36	.36	.36	.36	.36	.36	.36
JUL 24	.22	.32	.36	.38	.58	.72	.73	.73	.73	.73	.73	.73
AUG 3	.26	.40	.40	.54	.71	1.06	1.39	1.41	1.41	1.41	1.41	1.42
NEWARK												
JUN 19	.24	.35	.44	.51	.63	.80	.86	1.22	1.24	1.24	1.24	1.38
JUN 24	.25	.38	.41	.42	.44	.44	.44	.44	.44	.44	.44	.44
AUG 9	.30	.33	.35	.35	.35	.35	.35	.35	.35	.35	.35	.35
AUG 16	.23	.32	.37	.45	.46	.50	.54	.55	.55	.56	.58	.58
SEP 2	.20	.39	.50	.63	.67	.80	.95	.96	.96	1.02	1.02	1.02
TRENTON J												
MAR 12	.19	.27	.40	.42	.42	.43	.47	.60	.63	.69	.95	1.07
JUN 12	.23	.37	.53	.65	.82	1.03	1.14	1.23	1.26	1.29	1.32	1.40
JUN 12	.21	.33	.46	.62	.82	.94	1.12	1.34	1.52	1.82	2.34	2.41
JUN 19	.21	.30	.40	.42	.64	.74	.76	.76	.76	.76	.76	.76
JUL 24	.28	.33	.35	.39	.42	.58	.65	.70	.70	.70	.70	.71
AUG 3	.25	.45	.57	.69	1.08	1.34	1.39	1.40	1.43	1.43	1.43	1.43
SEP 2	.31	.39	.39	.44	.47	.47	.49	.49	.49	.49	.49	.49
NEW MEXICO												
ALBUQUERQUE												
JUL 3	.15	.30	.42	.47	.71	.88	.88	.88	.88	.88	.88	.88
AUG 10	.17	.26	.43	.45	.48	.49	.50	.50	.50	.50	.50	.50
CLAYTON												
JUN 4	.35	.48	.63	.68	1.10	1.17	1.30	1.33	1.35	1.36	1.40	1.40
JUN 15	.33	.42	.42	.55	.61	.62	.62	.62	.62	.62	.62	.62
JUL 27	.27	.42	.45	.51	.55	.62	.63	.63	.63	.63	.63	.63
RATON												
JUL 3	.33	.46	.51	.54	.61	.65	.66	.66	.66	.66	.66	.66
JUL 3	.29	.52	.58	.66	.78	.84	.85	.87	.88	.88	.88	.88
JUL 16	.22	.39	.45	.57	.69	.74	.77	.80	.80	.80	.81	.82
JUL 24	.25	.32	.33	.43	.62	.63	.65	.67	.67	.67	.70	.71
AUG 1	.46	.86	.93	1.12	1.60	1.86	*2.07	2.12	2.30	2.36	2.44	2.48
AUG 17 C	.35	.53	.55	.64	.69	.71	.71	.71	.71	.71	.73	.73
ROSWELL												
JUN 19	.19	.30	.34	.36	.44	.48	.49	.53	.54	.54	.54	.54
JUL 31	.16	.32	.34	.40	.44	.48	.48	.48	.48	.48	.48	.48
AUG 16	.22	.34	.40	.45	.55	.57	.58	.59	.59	.59	.59	.59
AUG 22	.17	.21	.28	.42	.56	.56	.58	.58	.58	.58	.58	.58
AUG 31	.23	.35	.36	.40	.44	.45	.45	.45	.45	.45	.45	.45
SILVER CITY												
JUL 24 C	*.35	*.65	*.87	1.10	*1.28	1.30	1.31	1.31	1.31	1.32	1.34	1.34
NEW YORK												
ALBANY												
JUN 15	.15	.28	.37	.42	.46	.46	.47	.47	.47	.47	.47	.47
BINGHAMTON												
JUN 10	.30	.49	.56	.69	.84	1.08	1.40	1.50	1.55	1.56	1.56	1.56
JUN 19	.22	.36	.40	.41	.41	.41	.41	.42	.42	.47	.56	.56
JUL 24	.16	.30	.34	.35	.36	.59	.63	.64	.64	.64	.64	.64
AUG 23	.22	.30	.31	.31	.31	.33	.39	.43	.43	.43	.45	.46
BUFFALO												
JUN 15	.25	.31	.35	.36	.38	.41	.43	.43	.43	.43	.45	.45
AUG 6	.26	.32	.34	.41	.49	.52	.60	.68	.72	.78	.83	.90
AUG 22	.23	.39	.53	.66	1.07	1.20	1.55	1.66	1.69	1.71	1.75	1.77
SEP 3	.17	.34	.37	.45	.70	.85	1.15	1.18	1.18	1.19	1.20	1.27
SEP 11	.17	.30	.37	.43	.62	.69	.75	.90	.96	.98	1.01	1.05
OCT 3	.17	.30	.37	.45	.52	.57	.61	.61	.61	.61	.61	.61
NEW YORK CENT PK												
JUN 12	.35	.44	.47	.52	.55	.56	.57	.63	.64	.66	.69	.73
JUN 19	.20	.35	.41	.53	.61	.82	.90	1.08	1.22	1.32	1.32	1.32
JUN 25	.35	.52	.60	.68	.79	.93	1.00	1.02	1.09	1.09	1.13	1.13
JUL 24	.58	.72	.75	.80	1.13	1.26	1.31	1.45	1.73	1.76	1.90	1.90
AUG 25	.22	.35	.42	.49	.57	.57	.57	.57	.57	.57	.57	.57

C RECORD ENDED DECEMBER 3, RATON.
C RECORD ENDED AUGUST 31, SILVER CITY.

Station and date	Maximum precipitation in inches (5 to 180 minutes)											
	5	10	15	20	30	45	60	80	100	120	150	180
NEW YORK												
NEW YORK LA GUARDIA												
JUN 19	.25	.42	.50	.66	.80	1.15	1.24	1.32	1.36	1.39	1.40	1.40
JUN 25	.29	.35	.37	.41	.47	.68	.82	.96	1.00	1.00	1.00	1.00
JUL 24	.29	.38	.50	.65	.85	1.06	1.09	1.42	1.61	1.67	1.71	1.71
AUG 1	.44	.45	.45	.45	.48	.53	.54	.55	.56	.57	.60	.61
AUG 7	.19	.32	.40	.59	.69	.71	.72	.72	.72	.72	.72	.72
AUG 25	.30	.47	.48	.48	.48	.48	.48	.48	.48	.48	.48	.48
SEP 2	.16	.22	.33	.40	.48	.54	.58	.65	.68	.69	.69	.69
ROCHESTER												
AUG 6	.15	.28	.37	.39	.55	.66	.95	1.01	1.07	1.11	1.13	1.17
AUG 9	.28	.45	.54	.56	.64	.72	.72	.72	.72	.81	.87	.87
AUG 24	.30	.45	.60	.74	.90	1.10	1.12	1.31	1.84	1.86	1.89	1.92
SYRACUSE												
JUN 24	.13	.26	.37	.42	.48	.49	.49	.49	.49	.49	.49	.49
JUN 25	.18	.27	.36	.48	.66	.87	1.05	1.18	1.34	1.45	1.52	1.74
JUL 5	.33	.42	.43	.44	.44	.44	.44	.44	.46	.50	.60	.60
JUL 9	.23	.39	.62	.74	.86	1.07	1.28	1.29	1.29	1.39	1.39	1.54
AUG 22	.31	.46	.58	.66	.70	.71	.83	.84	.84	.85	.86	.91
AUG 24	.23	.46	.67	.68	.68	.68	.68	.68	.68	.68	.68	.68
NORTH CAROLINA												
ASHEVILLE												
MAR 12	.38	.58	.65	.72	.90	.90	.90	.90	.97	.97	1.12	1.20
MAR 12	.20	.37	.39	.43	.62	.75	.88	1.00	1.10	1.16	1.25	1.47
APR 4	.26	.31	.36	.38	.39	.39	.42	.47	.52	.53	.57	.64
JUN 2	.30	.42	.50	.56	.56	.56	.56	.77	.95	.96	1.12	1.12
JUN 8	.15	.23	.30	.39	.51	.53	.57	.59	.63	.64	.64	.83
JUN 24	.30	.51	.52	.53	.53	.53	.54	.54	.54	.54	.54	.58
JUL 2	*.00	.85	*1.07	1.18	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25
JUL 19	.45	.56	.58	.65	.67	.68	.68	.68	.68	.68	.82	.84
JUL 26	*.70	*1.07	*1.14	1.30	*1.78	2.17	*2.37	2.39	2.45	*2.56	2.58	*2.58
JUL 27	.30	.47	.49	.50	.54	.54	.54	.54	.54	.54	.54	.54
JUL 29	.30	.45	.46	.47	.47	.47	.47	.47	.47	.47	.47	.47
AUG 9	.20	.40	.40	.40	.50	.60	.70	.70	.70	.70	.70	.70
AUG 9	.35	.45	.47	.55	.90	1.02	1.03	1.03	1.03	1.03	1.03	1.03
AUG 15	.20	.31	.37	.46	.52	.53	.72	.72	.72	.72	.72	.72
CAPE HATTERAS R												
JAN 14	.40	.63	.69	.76	.78	.82	.86	.87	.98	1.02	1.04	1.10
MAR 12	.24	.32	.35	.38	.43	.49	.58	.63	.67	.69	.71	.81
APR 27	.45	.60	.92	1.01	1.08	1.09	1.10	1.10	1.10	1.10	1.10	1.10
MAY 4	.45	.65	.73	.75	.80	.81	1.14	1.19	1.20	1.20	1.20	1.20
JUN 3	.42	.73	.77	.78	.83	.85	.87	.87	.87	.87	.87	.87
JUN 20	.26	.35	.49	.60	.90	1.12	1.15	1.15	1.15	1.15	1.15	1.15
JUN 28	.34	.55	.57	.62	.67	.72	.73	.75	.75	.75	.75	.75
JUN 28	.25	.30	.36	.37	.38	.40	.46	.48	.55	.55	.55	.55
JUL 10	.20	.32	.42	.50	.75	.85	1.00	1.11	1.16	1.23	1.23	1.36
AUG 14	.40	.60	.65	.78	.93	.96	.97	.97	.99	1.00	1.01	1.03
SEP 9	.36	.47	.68	.78	.94	1.24	1.52	1.54	1.58	1.60	1.60	1.60
SEP 10	.24	.38	.40	.48	.51	.55	.58	.60	.76	.94	1.06	1.09
OCT 7	.50	.69	.70	.95	1.35	1.65	1.90	2.00	2.10	2.28	2.29	2.30
OCT 15	.29	.40	.43	.49	.52	.57	.85	1.14	1.17	1.17	1.17	1.17
OCT 20	.18	.30	.35	.46	.70	.91	1.02	1.27	1.47	1.52	1.65	1.73
OCT 25	.40	.75	.80	.80	.80	.80	.80	.80	.80	.80	.80	.80
CHARLOTTE												
APR 5	.22	.40	.47	.50	.67	.95	.96	.96	.99	1.00	1.01	1.01
JUN 2	.15	.22	.32	.41	.47	.48	.50	.51	.51	.51	.51	.51
JUN 9	.21	.41	.55	.60	.75	.90	.96	1.11	1.25	1.30	1.36	1.47
JUN 9	.40	.59	.90	1.03	1.13	1.22	1.28	1.30	1.31	1.31	1.34	1.34
JUN 10	.30	.59	.69	.71	.72	.72	.72	.72	.72	.72	.72	.72
JUL 26	.40	.52	.60	.65	1.03	1.09	1.11	1.11	1.11	1.11	1.11	1.11
AUG 4	.22	.36	.48	.62	.70	.70	.70	.70	.70	.70	.70	.70
SEP 9	.18	.34	.46	.60	.77	.79	.79	.79	.79	.79	.79	.79
OCT 13	.24	.33	.35	.37	.50	.53	.54	.54	.54	.54	.54	.54
NOV 17	.28	.40	.44	.50	.53	.60	.70	.74	.76	.83	.86	.90
GREENSBORO												
MAR 16	.28	.34	.37	.38	.40	.45	.49	.60	.68	.70	.72	.76
MAY 24	.34	.42	.47	.47	.47	.47	.47	.47	.47	.47	.47	.47
JUN 16	.19	.35	.35	.35	.36	.36	.36	.43	.44	.51	.52	.53
JUL 12	.22	.32	.36	.39	.39	.39	.40	.40	.40	.40	.54	.66
AUG 4	.20	.32	.48	.62	.86	.87	.87	.87	.87	.87	.87	.87
AUG 15	.21	.36	.48	.60	.76	.84	.86	.86	.87	.88	.92	.92
OCT 13	.21	.34	.38	.44	.47	.47	.47	.47	.47	.47	.47	.47
OCT 13	.18	.27	.37	.47	.65	.69	.69	.69	.69	.69	.69	.69
RALEIGH												
MAY 24	.35	.61	.65	.77	.81	.83	.84	.85	.85	.85	.85	.85
JUN 12	.37	.65	.82	.86	.86	.86	.86	.86	.86	.86	.86	.86
JUL 3	.30	.60	.60	.74	.99	1.17	1.19	1.19	1.20	1.20	1.20	1.28
JUL 11	.17	.30	.35	.40	.46	.52	.72	.77	.82	.82	.82	1.07
AUG 9	.29	.58	.70	.85	1.00	1.02	1.06	1.07	1.09	1.09	1.11	1.11
AUG 15	.17	.33	.41	.41	.41	.41	.41	.41	.41	.41	.41	.41
AUG 16	.23	.33	.35	.36	.37	.38	.38	.45	.71	.71	.71	.71
SEP 6	.35	.70	.90	.95	.99	1.45	1.54	1.54	1.54	1.54	1.54	1.54
OCT 13	.41	.74	.90	1.05	1.19	1.53	1.56	1.60	1.61	1.62	1.62	1.62
OCT 19	.25	.38	.48	.52	.57	.59	.59	.59	.59	.59	.59	.59
WILMINGTON												
APR 10	.34	.52	.59	.72	.78	.88	.95	1.17	1.30	1.45	1.58	1.63
JUN 19	.32	.49	.50	.50	.55	.58	.59	.60	.62	.64	.74	.78
JUL 9	.23	.38	.41	.48	.61	.68	.74	.83	.85	.92	.96	1.04
JUL 11	.26	.36	.40	.52	.63	.68	.90	1.05	1.16	1.20	1.26	1.27
JUL 11	.25	.46	.63	.70	.91	1.00	1.25	1.31	1.33	1.39	1.42	1.43
JUL 19	.23	.44	.50	.54	.81	.95	1.00	1.05	1.09	1.12	1.42	1.48
OCT 15	.20	.36	.41	.45	.47	.49	.56	.60	.62	.76	.78	.81
NORTH DAKOTA												
BISMARCK												
MAY 13	.24	.30	.42	.46	.47	.48	.48	.48	.48	.48	.48	.48
JUN 10	.40	.41	.73	.80	.85	.87	.93	1.02	1.06	1.07	1.07	1.07
JUN 17	.44	.60	.70	.84	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02
AUG 18	.29	.33	.37	.38	.38	.39	.39	.39	.39	.39	.39	.39
AUG 23	.30	.60	.78	.89	.91	.92	.92	1.13	1.13	1.24	1.35	1.41
AUG 23	.30	.46	.62	.63	.64	.64	.64	.64	.84	1.01	1.06	1.06

EXCESSIVE SHORT DURATION RAINFALL

YEAR 1968

Station and date	5	10	15	20	30	45	60	80	100	120	150	180
	Maximum precipitation in inches (5 to 180 minutes)											
NORTH DAKOTA												
FARGO												
JUN 5	.22	.40	.44	.48	.68	.76	.76	.76	.76	.76	.76	.76
JUL 13	.31	.51	.52	.65	.70	.70	.70	.70	.70	.70	.70	.70
WILLISTON						NONE						
OHIO												
AKRON												
APR 23	.33	.47	.55	.66	.71	.75	.78	.81	.82	.82	.82	.82
MAY 8	.20	.34	.42	.47	.58	.67	.68	.69	.70	.70	.70	.70
MAY 15	.22	.36	.38	.40	.41	.46	.50	.54	.55	.55	.55	.55
JUL 17	.18	.30	.40	.48	.57	.71	.77	.81	.83	.87	.94	1.01
JUL 18	.26	.50	.54	.55	.57	.57	.57	.57	.58	.73	.80	.83
JUL 24	.22	.42	.58	.66	.67	.68	.68	.68	.70	.72	.76	.76
SEP 6	.17	.22	.36	.42	.48	.55	.57	.59	.67	.68	.71	.78
SEP 23	.35	.43	.46	.47	.50	.71	.76	.77	.77	.77	.77	.77
CINCINNATI OBS												
APR 14	.26	.43	.50	.52	.57	.65	.73	.77	.79	.79	.79	.79
APR 23	.28	.30	.30	.30	.34	.36	.36	.66	.66	.66	.66	.66
MAY 9	.29	.42	.53	.56	.59	.63	.65	.67	.68	.79	.81	.88
MAY 24	.20	.39	.40	.42	.63	.80	1.08	1.15	1.21	1.31	1.69	1.78
JUL 10	.15	.26	.31	.40	.50	.70	.80	.91	.91	.91	.92	.92
JUL 11	.19	.32	.46	.48	.48	.48	.48	.48	.48	.48	.48	.48
JUL 12	.30	.60	.75	.85	1.15	1.18	1.18	1.18	1.18	1.18	1.18	1.18
JUL 15	.21	.32	.37	.42	.52	.52	.52	.52	.54	.57	.57	.57
JUL 18	.34	.61	.75	.89	.94	.95	.96	.97	.99	1.00	1.00	1.00
JUL 31	.26	.46	.54	.61	.63	.65	.65	.65	.65	.65	.65	.65
AUG 4	.34	.46	.49	.54	.60	.65	.67	.67	.67	.68	.69	.69
AUG 15	.15	.25	.32	.40	.48	.48	.48	.48	.48	.48	.48	.48
SEP 5	.28	.40	.46	.47	.47	.49	.49	.49	.49	.49	.49	.49
SEP 9	.17	.27	.37	.45	.47	.52	.61	.66	.68	.69	.71	.73
CINCINNATI U												
APR 14	.25	.35	.43	.48	.53	.62	.67	.75	.77	.79	.79	.79
APR 23	.32	.48	.50	.63	.65	.65	.65	.94	.97	.97	.97	.97
MAY 24	.20	.37	.40	.50	.69	.95	1.15	1.23	1.30	1.36	1.68	*1.77
JUL 14	.20	.34	.45	.54	.75	.76	.80	.84	.90	.91	.92	.92
JUL 15	.25	.45	.65	.82	.92	.93	.93	.94	.97	.98	.99	.99
JUL 25	.30	.35	.37	.44	.45	.45	.45	.47	.47	.50	.61	.79
AUG 4	.30	.60	.82	.88	.95	.95	.95	1.14	1.21	1.21	1.21	1.21
AUG 15	.25	.34	.35	.35	.35	.35	.35	.35	.35	.35	.35	.35
SEP 9	.30	.35	.38	.42	.46	.49	.56	.62	.63	.63	.63	.67
CLEVELAND												
APR 23	.28	.46	.47	.50	.54	.60	.61	.62	.64	.64	.64	.64
JUL 16	.19	.31	.34	.43	.67	.79	.86	.90	1.09	1.13	1.16	1.25
JUL 22	.26	.31	.35	.38	.43	.44	.47	.52	.52	.52	.52	.52
SEP 1	.14	.24	.27	.40	.53	.57	.58	.59	.60	.60	.60	.60
SEP 22	.18	.34	.35	.36	.38	.39	.40	.41	.42	.42	.42	.42
COLUMBUS												
APR 23	.37	.60	.70	.74	.76	.77	.77	.77	.77	.77	.77	.77
MAY 26	.17	.34	.48	.56	.64	.71	.74	.76	.86	.91	1.03	1.08
JUL 16	.16	.30	.42	.51	.56	.56	.58	.59	.59	.59	.59	.59
AUG 1	.19	.33	.37	.42	.57	.87	1.07	1.31	1.38	1.43	1.48	1.49
OCT 2	.27	.44	.49	.54	.61	.75	.81	.83	.88	.96	.96	.96
DAYTON												
MAY 15	.29	.44	.55	.60	.65	.68	.70	.70	.70	.70	.71	.74
MAY 23	.35	.44	.45	.50	.59	.67	.71	.77	1.05	1.30	1.37	1.48
JUN 15	.23	.35	.45	.48	.53	.57	.59	.61	.63	.64	.74	.85
JUL 24	.35	.58	.63	.64	.64	.64	.65	.77	.79	.82	.84	.87
JUL 31	.22	.35	.48	.56	.75	.87	.95	1.05	1.10	1.16	1.18	1.21
AUG 7	.22	.31	.35	.37	.37	.37	.37	.37	.37	.37	.37	.37
AUG 8	.18	.35	.36	.38	.38	.39	.39	.62	.65	.67	.86	.87
MANSFIELD												
JUN 11	*.50	.78	.85	.92	1.25	1.32	1.32	1.32	1.32	1.32	1.32	1.32
JUL 16	.43	.44	.45	.46	.47	.48	.50	.50	.50	.50	.50	.50
JUL 24	.31	.38	.40	.43	.55	.57	.58	.58	.58	.58	.58	.58
JUL 24	.43	.48	.50	.68	.69	.91	.94	.94	.94	.94	.94	.94
SEP 23	.27	.33	.35	.36	.36	.36	.36	.39	.45	.46	.46	.46
TOLEDO												
MAY 16	.20	.30	.37	.42	.72	.78	.88	.94	.99	1.03	1.10	1.21
JUL 5	.23	.32	.36	.46	.49	.50	.50	.50	.50	.50	.50	.50
JUL 9	.30	.40	.42	.45	.60	.64	.67	.69	.71	.71	.84	.87
JUL 23	.18	.28	.35	.48	.57	.58	.80	.86	.95	1.02	1.10	1.11
JUL 27	.47	.56	.56	.56	.56	.56	.56	.56	.56	.56	.56	.56
YOUNGSTOWN												
APR 23	.27	.33	.35	.38	.43	.52	.59	.60	.60	.60	.60	.60
JUN 17	.31	.42	.50	.54	.58	.58	.58	.58	.58	.58	.58	.58
JUL 5	.30	.50	.57	.59	.62	.79	.79	.79	.79	.79	.82	.82
AUG 7	.31	.59	.65	.76	.91	1.07	1.36	1.55	1.66	1.68	1.80	1.86
AUG 17	.18	.36	.37	.37	.37	.37	.37	.37	.37	.38	.40	.43
SEP 23	.24	.31	.32	.32	.32	.33	.34	.35	.35	.35	.35	.36
OKLAHOMA												
OKLAHOMA CITY												
MAR 9	.25	.32	.32	.37	.39	.39	.39	.40	.40	.40	.40	.40
APR 18	.18	.30	.35	.41	.50	.53	.61	.70	.85	.87	.89	.91
APR 19	.26	.28	.28	.28	.28	.28	.28	.28	.28	.28	.28	.28
APR 21	.25	.35	.38	.44	.47	.48	.48	.48	.48	.48	.48	.48
MAY 7	.27	.40	.42	.48	.48	.48	.48	.48	.48	.48	.48	.48
MAY 7	.60	.91	.95	1.06	1.08	1.10	1.17	1.20	1.20	1.20	1.20	1.30
MAY 10	.19	.38	.39	.41	.44	.45	.45	.45	.45	.45	.45	.45
MAY 25	.20	.39	.44	.55	.70	.77	.78	.86	.88	.89	.94	1.22
MAY 31	.30	.60	.69	.75	.84	.86	.87	1.10	1.34	1.37	1.40	1.42
JUN 16	.19	.32	.35	.37	.42	.45	.53	.57	.57	.57	.57	.57
AUG 13	.24	.34	.36	.44	.50	.54	.58	.75	.80	.85	.90	.95
AUG 15	.22	.30	.42	.53	.62	.70	.74	.77	.92	1.14	1.40	1.48
SEP 3	.30	.45	.50	.51	.53	.56	.57	.60	.60	.60	.60	.60
OCT 9	.26	.47	.50	.55	.71	.78	.87	.96	1.04	1.08	1.17	1.19
TULSA												
MAR 19	.32	.57	.57	.57	.58	.60	.61	.73	.84	.87	.88	.88
APR 17	.27	.53	.57	.71	.81	.85	1.17	1.38	1.38	1.38	1.84	1.84
MAY 13	.25	.41	.45	.46	.47	.48	.50	.53	.53	.53	.55	.58
MAY 25	.30	.52	.54	.55	.55	.55	.55	.55	.55	.57	.59	.59
JUN 25	.30	.55	.63	.67	.75	.82	.93	1.00	1.05	1.05	1.37	1.42

Station and date	5	10	15	20	30	45	60	80	100	120	150	180
	Maximum precipitation in inches (5 to 180 minutes)											
OKLAHOMA												
TULSA												
OCT 9	.30	.37	.39	.44	.51	.54	.56	.62	.69	.76	.88	.91
OREGON												
ASTORIA						NONE						
BURNS U						NONE						
EUGENE												
AUG 16	.21	.39	.49	.66	*.86	1.09	*1.14	1.17	1.19	*1.19	1.19	*1.19
MEACHAM						NONE						
MEDFORD						NONE						
PENDLETON						NONE						
PORTLAND U												
MAY 19	.30	.42	.52	.55	.62	.64	.67	.73	.76	.82	.88	.94
AUG 19	.30	.52	.61	.66	.82	.89	.89	.89	.89	.89	.89	.89
SALEM						NONE						
SEXTON SUMMIT R						NONE						
PACIFIC AREA												
GUAM												
FEB 13 5	*.28	*.38	*.45	.45	*.45	.50	*.56	.56	.56	*.59	.59	*.75
MAY 14	.20	*.38	*.45	.55	*.61	.63	*.63	.63	.65	*.65	.65	.65
MAY 29	.20	.33	.34	.35	.35	.36	.39	.41	.41	.41	.41	.41
JUN 11	.18	.30	.37	.43	.50	.61	.61	.61	.66	*.66	.79	*.97
JUL 7	.17	.22	.39	.43	.46	.46	.46	.46	.48	.48	.48	.48
JUL 10	.27	*.40	*.47	.47	.47	.47	.47	.47	.47	.59	.60	.60
JUL 12	*.28	.30	.30	.30	.30	.32	.32	.32	.32	.32	.32	.32
JUL 21	*.31	*.58	*.68	.72	*.73	.74	*.96	1.02	1.04	*1.14	1.16	*1.16
JUL 31	*.32	.56	.60	.61	*.74	.83	.83	.84	.91	.99	1.15	*1.23
AUG 11	.20	.36	.48	.53	.54	.54	.54	.54	.54	.54	.54	.54
AUG 12	.28	.55	.59	.60	*.81	.99	*1.00	1.22	1.25	*1.26	1.26	*1.74
AUG 13	*.35	.57	*.90	1.05	*1.40	1.68	*1.85	1.96	2.11	*2.19	2.19	*2.19
AUG 15	.17	.31	.41	.45	.48	.54	.56	.57	.61	.61	.65	.68
AUG 19	.14	.22	.35	.38	.38	.39	.53	.53	.55	.55	.55	.55
AUG 23	.32	.53	.70	.92	1.12	1.25	1.26	1.28	1.28	1.28	1.28	1.28
AUG 25	.29	.38	.50	.52	.54	.54	.54	.54	.54	.54	.54	.56
SEP 2	*.35	.50	.65	.70	.79	.84	.85	.85	.85	.85	.85	.85
SEP 3	.23	.35	.35	.35	.35	.35	.37	.37	.37	.37	.38	.49
SEP 9	.24	.30	.32	.34	.36	.37	.38	.41	.44	.49	.57	.64
SEP 13	.25	.36	.42	.46	.50	.52	.52	.52	.52	.52	.52	.52
SEP 17	.20	.33	.37	.39	.58	.59	.59	.65	.72	.74	.74	.81
SEP 25	.26	.36	.41	.45	.46	.47	.50	.50	.50	.50	.50	.50
OCT 11	.32	.42	.44	.45	.47	.55	.58	.58	.58	.58	.58	.58
OCT 15	*.40	*.62	.78	1.00	1.25	1.41	1.49	1.60	1.61	1.62	1.66	1.75
OCT 22	.21	.28	.32	.40	.47	.61	.85	.93	.98	1.02	1.25	1.29
NOV 8	.19	.32	.44	.60	.85	1.13	1.14	1.19	1.20	1.21	1.30	1.37
NOV 23	.25	.35	.54	.64	.80	1.25	1.46	1.64	1.75	1.85	2.09	*2.19
NOV 30	.20	.35	.45	.53	.75	.90	1.05	1.08	1.10	1.13	1.20	1.38
DEC 4	.23	.35	.44	.52	.75	.80	.84	.87	.90	.94	.96	.97
JOHNSTON ISLAND												
MAR 22	.20	.32	.43	.53	.72	1.05	1.29	1.60	1.70	1.76	1.81	1.83
MAR 26	*.37	*.62	*.90	1.05	*1.31	1.55	*1.73	1.99	2.50	*2.84	2.98	*3.04
APR 5	.20	.35	.40	.41	.43	.43	.43	.43	.43	.43	.43	.43
MAY 5	.34	.46	.57	.62	.70	.78	.85	.94	.99	1.01	1.05	1.10
AUG 7	.27	.28	.28	.28	.28	.28	.28	.28	.28	.28	.28	.38
AUG 8	.29	.48	.60	.60	.67	.87	1.17	1.48	1.56	1.68	1.76	1.76
DEC 23	.15	.30	.39	.45	.52	.62	.69	.69	.71	.81	.87	1.10
DEC 23	.20	.34	.40	.42	.44	.60	.63	.90	1.10	1.16	1.31	1.57
KOROR												
JAN [illegible]	.21	.37	.50	.63	.70	.71	.74	.88	.91	.91	.93	1.00
JAN 17	.12	.20	.30	.40	.50	.60	.69	.75	.79	.91	1.04	1.09
FEB 10	.32	.61	.81	1.05	1.39	1.64	1.70	1.78	1.86	1.94	2.03	2.08
FEB 12	.23	.35	.37	.38	.39	.40	.40	.41	.50	.51	.51	.51
FEB 14	.19	.30	.42	.56	.80	1.07	1.25	1.61	1.93	2.04	2.20	2.50
FEB 19	.26	.41	.53	.59	.61	.61	.61	.61	.61	.61	.61	.61
FEB 27	.38	.48	.52	.56	.57	.58	.59	.60	.60	.60	.62	.72
MAR 4	.19	.30	.40	.50	.53	.53	.54	.54	.54	.54	.54	.54
MAR 10	.21	.36	.46	.50	.63	.67	.77	.82	1.21	1.39	1.54	1.60
MAR 17	.34	.51	.62	.65	.70	.72	.72	.72	.72	.72	.72	.72
APR 24	.20	.30	.38	.48	.58	.68	.77	.96	1.15	1.42	1.65	1.78
APR 28	.31	.49	.58	.67	.70	.76	.79	.84	.84	.84	.87	.87
APR 29	.13	.23	.34	.43	.54	.57	.61	.66	.70	.78	.84	.87
APR 30	.17	.28	.36	.45	.50	.51	.51	.51	.56	.56	.56	.56
MAY 1	.21	.39	.55	.65	.78	1.00	1.16	1.32	1.54	1.72	1.97	2.10
MAY 30	.27	.46	.58	.66	.69	.84	.87	.92	.95	1.02	1.03	1.04
JUN 11	.31	.35	.35	.35	.35	.35	.35	.35	.35	.35	.35	.35
JUN 20	.39	.76	.97	1.03	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10
JUN 21	.20	.35	.44	.48	.64	.66	.69	.73	.89	.91	.93	.98
JUL 5	.19	.27	.37	.42	.53	.57	.58	.58	.61	.65	.65	.65
JUL 9	.21	.39	.49	.52	.52	.52	.52	.52	.52	.52	.52	.52
JUL 17	.17	.33	.38	.43	.46	.47	.49	.52	.52	.54	.54	.54
JUL 21	.30	.55	.79	1.01	1.21	1.34	1.34	1.36	1.39	1.41	1.41	1.41
JUL 23	.32	.55	.70	.81	.85	.86	.86	.86	.86	.86	.87	1.16
JUL 23	.23	.40	.53	.60	.65	.69	.73	.75	.78	.78	.79	.85
JUL 24	.20	.32	.48	.52	.62	.74	.81	.91	.91	.91	.91	.91
JUL 29	.20	.37	.48	.51	.51	.52	.52	.52	.54	.56	.57	.57
AUG 9	.13	.23	.33	.44	.61	.85	.93	.94	1.00	1.01	1.03	1.03
AUG 11	.18	.26	.38	.39	.44	.50	.57	.69	.75	.77	.77	.78
AUG 17	.42	.73	.99	1.15	1.46	1.64	1.87	1.95	2.02	2.20	2.66	2.89
AUG 19	.11	.21	.31	.39	.51	.62	.67	.72	.75	.78	.86	.90
SEP 4	.43	.75	*1.16	1.39	1.45	1.45	1.45	1.45	1.45	1.45	1.45	1.45
SEP 6	.43	.60	.62	.62	.62	.62	.62	.62	.62	.62	.62	.62
SEP 8	.27	.47	.65	.73	1.03	1.39	1.66	1.89	2.00	2.13	2.26	2.28
SEP 19	.21	.34	.41	.47	.48	.64	.70	.71	.71	.71	.72	.72
SEP 24	.30	.42	.51	.56	.59	.61	.65	.79	1.01	1.04	1.14	1.16
SEP 30	.21	.31	.35	.36	.37	.37	.41	.53	.53	.53	.53	.53
OCT 13	.17	.26	.31	.37	.47	.72	.81	.89	.99	1.06	1.18	1.30
OCT 14	.25	.35	.38	.42	.46	.67	.87	.98	1.02	1.08	1.25	1.35
OCT 16	.27	.38	.42	.43	.53	.65	.66	.70	.71	.72	.72	.73
OCT 19	.45	.57	.62	.67	.83	1.15	1.24	1.26	1.27	1.31	1.38	1.41
NOV 7	.21	.31	.45	.49	.59	.62	.62	.62	.62	.63	.79	.82
NOV 8	.27	.45	.70	.89	1.04	1.14	1.29	1.69	1.72	1.75	1.76	1.94
DEC 5	.36	.42	.45	.47	.47	.54	.90	.91	.91	.91	.91	.91

5 RECORD BEGAN FEBRUARY 1.

EXCESSIVE SHORT DURATION RAINFALL

Station and date	Maximum precipitation in inches (5 to 180 minutes) 5	10	15	20	30	45	60	80	100	120	150	180
PACIFIC AREA												
KOROR												
DEC 6	.33	.62	.70	.70	.73	.82	.83	.91	.91	.91	.92	1.17
DEC 15	.36	.46	.50	.54	.55	.57	.57	.57	.59	.59	.59	.81
DEC 17	.44	.70	1.05	1.25	1.34	1.45	1.49	1.52	1.56	1.60	1.67	1.74
DEC 24	.21	.36	.40	.47	.49	.51	.53	.57	.69	.72	.77	.81
DEC 26	.20	.32	.34	.34	.44	.44	.44	.44	.44	.44	.57	.57
MAJURO												
FEB 22	.26	.39	.57	.68	.76	.88	1.11	1.20	1.22	1.25	1.26	1.26
FEB 23	.22	.27	.43	.51	.66	.72	.88	.88	.88	.88	.88	.88
MAR 27	.24	.42	.58	.68	.80	.98	1.03	1.12	1.16	1.20	1.27	1.41
MAR 28	.19	.27	.34	.39	.44	.72	.85	.94	.95	.96	1.00	1.02
APR 13	.25	.35	.47	.60	.75	.76	.82	1.01	1.22	1.24	1.30	1.32
APR 13	.24	.41	.53	.59	.64	.70	.82	.96	.98	1.00	1.01	1.05
APR 16	.16	.29	.37	.41	.47	.52	.53	.55	.55	.55	.55	.55
APR 26	.28	.44	.50	.51	.59	.59	.59	.59	.59	.59	.59	.62
APR 28	.26	.38	.54	.69	.72	.72	.73	.74	.74	.74	.74	.74
MAY 4	.27	.47	.61	.68	.86	1.07	1.28	1.39	1.43	1.44	1.46	1.49
MAY 11 *	.31	.41	.56	.58	.62	.63	.63	.63	.63	.63	.63	.63
MAY 30 *	.33	.42	.44	.48	.63	.70	.70	.72	.72	.72	.72	.73
JUN 5	.17	.30	.35	.40	.43	.46	.52	.73	.79	.88	.98	.99
JUN 12 *	.37	.73	1.01	1.28	1.72	1.93	1.99	2.06	2.19	2.23	2.34	2.38
JUN 17 *	.38	.40	.40	.40	.40	.40	.40	.40	.40	.40	.40	.40
JUN 19	.29	.38	.42	.42	.42	.43	.44	.44	.44	.44	.44	.44
JUN 23	.29	.49	.53	.55	.66	.78	.90	.90	.91	.92	1.22	1.31
JUN 23	.29	.37	.42	.44	.52	.55	.55	.71	.71	.86	.92	.93
JUN 28 *	.40	.58	.65	.90	1.22	1.37	1.80	2.08	2.14	2.14	2.14	2.14
JUN 29	.21	.33	.47	.60	.82	.93	.99	1.04	1.11	1.20	1.51	1.67
JUL 4	.28	.39	.47	.54	.60	.62	.62	.62	.62	.63	.64	.64
JUL 8	.16	.30	.41	.50	.52	.52	.53	.53	.53	.53	.53	.77
JUL 27	.17	.27	.33	.38	.43	.67	.81	.86	.91	.97	1.02	1.04
AUG 14	.32	.47	.52	.54	.69	.77	.83	.86	.92	1.11	1.14	1.19
AUG 15	.36	.58	.77	.86	1.02	1.23	1.41	1.46	1.46	1.46	1.49	1.76
AUG 17	.32	.41	.53	.53	.53	.53	.53	.53	.84	.84	.84	.84
AUG 28	.23	.34	.39	.42	.46	.49	.50	.50	.52	.54	.58	.67
SEP 1	.17	.28	.36	.45	.53	.56	.61	.63	.65	.68	.68	.68
SEP 9	.23	.41	.41	.41	.41	.41	.41	.41	.42	.44	.48	.53
SEP 19	.35	.50	.52	.60	.65	.72	.80	.84	.90	.93	.94	.95
SEP 23	.20	.32	.36	.36	.36	.45	.62	.62	.62	.62	.62	.62
SEP 28	.27	.46	.56	.65	.82	1.02	1.14	1.28	1.32	1.34	1.39	1.52
OCT 2	.23	.30	.32	.36	.40	.45	.69	.82	.86	.90	1.02	1.14
OCT 19	.28	.39	.50	.61	.73	.83	.88	1.01	1.12	1.20	1.30	1.39
OCT 19 *	.43	.64	.76	.83	.98	1.09	1.19	1.26	1.26	1.26	1.26	1.39
OCT 20	.28	.29	.33	.36	.42	.44	.44	.44	.53	.61	.73	.82
OCT 22	.19	.29	.41	.51	.68	.80	.82	.82	.82	.84	.84	.84
OCT 31	.25	.39	.56	.63	.75	.82	.87	.94	1.01	1.01	1.02	1.03
NOV 1	.28	.42	.51	.55	.63	.68	.76	.87	.92	.96	1.00	1.06
NOV 14	.33	.64	.90	1.14	1.56	1.71	1.71	1.71	1.71	1.71	1.72	1.72
NOV 15	.29	.43	.45	.45	.47	.57	.82	.92	.92	.98	.98	1.01
NOV 18	.27	.33	.33	.33	.35	.39	.39	.39	.39	.39	.39	.39
DEC 9	.27	.37	.44	.55	.64	.66	.68	.72	.73	.73	.76	.86
DEC 9	.20	.32	.39	.42	.43	.43	.43	.44	.45	.45	.45	.45
DEC 10	.32	.50	.55	.57	.57	.57	.57	.57	.57	.58	.61	.61
DEC 11	.21	.30	.30	.30	.30	.31	.31	.32	.34	.34	.36	.36
DEC 11	.23	.39	.46	.52	.70	.75	.77	.77	.77	.78	.81	.82
DEC 12	.25	.41	.47	.51	.51	.53	.53	.53	.53	.53	.53	.54
DEC 16	.29	.46	.67	.80	1.02	1.33	1.46	1.54	1.62	1.67	1.69	1.69
DEC 16	.22	.33	.43	.52	.80	.95	.97	.97	1.13	1.13	1.13	1.27
DEC 17	.35	.59	.79	1.05	1.43	1.75	2.67	2.58	2.72	3.10	3.50	3.55
DEC 20	.34	.60	.91	1.12	1.38	1.74	1.97	2.13	2.33	2.47	2.51	2.94
DEC 20	.26	.37	.50	.57	.66	.74	.79	.81	.86	.89	.89	.89
DEC 21	.25	.37	.49	.59	.70	.94	1.05	1.14	1.42	1.69	2.05	2.11
MARCUS ISLAND												
MAR 10	.41	.47	.50	.52	.53	.54	.54	.54	.54	.54	.54	.54
MAR 19	.51	.78	.89	.94	1.02	1.06	1.06	1.06	1.06	1.06	1.07	1.07
APR 5	.22	.30	.47	.50	.54	.57	.62	.75	.81	.82	.83	.84
MAY 8 C	.30	.47	.59	.65	.72	.73	.73	.74	.74	.74	.74	.74
PAGO PAGO, A.S.												
FEB 4	.24	.39	.52	.65	.94	1.22	1.33	1.45	1.48	1.51	2.22	2.56
FEB 5	.38	.66	.91	1.12	1.50	2.10	2.71	3.00	3.07	3.13	3.19	3.29
FEB 5	.42	.69	1.01	1.22	1.42	1.49	1.59	1.68	1.73	1.80	1.86	1.88
FEB 6	.27	.42	.58	.66	.81	.93	1.01	1.07	1.13	1.20	1.25	1.25
FEB 7	.35	.58	.78	.88	1.00	1.13	1.32	1.55	1.78	2.00	2.34	2.50
FEB 9	.33	.48	.57	.71	.82	1.15	1.48	1.74	1.89	1.95	1.95	2.06
FEB 10	.10	.18	.27	.34	.50	.66	.86	.98	1.10	1.25	1.42	1.51
FEB 11	.37	.57	.71	.98	1.01	1.01	1.01	1.04	1.05	1.14	1.14	1.18
FEB 16	.36	.63	.72	.75	.75	.75	.75	.75	.75	.78	.78	.78
FEB 18	.27	.28	.28	.28	.28	.28	.28	.47	.47	.47	.47	.47
FEB 24	.21	.29	.31	.38	.48	.60	.82	.83	.85	.85	.85	.85
FEB 25	.20	.33	.44	.55	.75	1.00	1.19	1.38	1.39	1.41	1.44	1.44
MAR 10	.30	.41	.58	.65	.92	1.05	1.08	1.08	1.09	1.14	1.14	1.14
MAR 11	.28	.41	.46	.52	.72	.75	.88	1.01	1.44	1.62	1.84	2.05
MAR 16	.32	.51	.61	.65	.68	.69	.73	.82	.82	.85	.87	.87
APR 5	.18	.32	.40	.44	.47	.54	.55	.55	.55	.55	.56	.56
APR 19	.35	.56	.73	.99	1.39	2.06	2.16	2.21	2.23	2.29	2.37	2.45
APR 22	.22	.40	.50	.55	.59	.64	.65	.66	.66	.70	.76	.78
APR 28 T	M	M	M	M	M	M	1.97	2.02	2.07	2.10	2.12	2.12
APR 29	.14	.26	.37	.49	.60	.73	.89	.99	1.06	1.06	1.09	1.09
MAY 10	.34	.45	.48	.48	.50	.57	.65	.69	.71	.84	1.16	1.17
MAY 11	.26	.40	.45	.45	.45	.45	.45	.46	.46	.46	.46	.46
MAY 12	.23	.42	.57	.70	.75	.79	.81	.81	.81	.82	.82	.82
JUL 19	.20	.34	.44	.52	.66	.91	1.01	1.02	1.10	1.22	1.27	1.28
SEP 3	.21	.36	.48	.62	.79	.96	1.16	1.75	2.02	2.22	2.51	2.75
SEP 3	.19	.35	.43	.49	.59	.68	.77	.98	1.11	1.26	1.29	1.35
OCT 3	.28	.36	.39	.43	.47	.49	.49	.49	.49	.49	.49	.54
OCT 4	.18	.31	.38	.52	.67	.82	.93	.96	.96	.96	1.01	1.01
OCT 22	.28	.36	.41	.46	.66	1.01	1.08	1.30	1.48	1.58	1.78	1.82
OCT 24	.17	.28	.35	.43	.50	.55	.65	.70	.74	.77	.82	.91
OCT 25	.26	.52	.68	.82	.96	1.01	1.03	1.05	1.10	1.12	1.21	1.26
OCT 26	.20	.33	.47	.60	.74	.81	.84	.87	.88	.88	.89	.91
OCT 27	.17	.29	.32	.36	.46	.69	.92	1.01	1.32	1.35	1.51	1.68
NOV 17	.28	.49	.64	.69	.74	.81	.84	.84	.84	.84	.84	.84
DEC 10	.33	.58	.73	.83	.91	1.34	1.75	2.10	2.26	2.36	2.51	2.73
DEC 11	.24	.32	.38	.39	.39	.39	.39	.39	.40	.51	.59	.60
PONAPE												
JAN 22	.16	.31	.40	.49	.56	.64	.65	.66	.66	.67	.68*	.69
JAN 22	.23	.37	.42	.49	.52	.53	.53	.53	.54	.55	.71*	.72
FEB 11	.41	.56	.64	.82	1.04	1.44	1.85	2.20	2.50	3.07	3.31	*3.70
FEB 11	.35	.45	.53	.66	.73	.81	.93	1.02	1.18	1.24	1.36	1.68
MAR 2	.47	.50	.93	1.01	1.06	1.08	1.08	1.11	1.11	1.12	1.14	1.17
MAR 3	.38	.55	.75	.89	1.02	1.28	1.51	1.59	1.59	1.59	1.65	1.85
MAR 6	.29	.36	.36	.36	.36	.41	.41	.41	.43	.56	.61	.61
MAR 6	.29	.52	.68	.69	.74	1.16	1.43	1.46	1.79	1.87	1.88	1.89

T CLOCK MALFUNCTION
M NO RECORD
C RECORD ENDED JUNE 30.

Station and date	Maximum precipitation in inches (5 to 180 minutes) 5	10	15	20	30	45	60	80	100	120	150	180
PACIFIC AREA												
PONAPE												
MAR 7	.35	.45	.54	.60	.61	.63	.65	.66	.68	.70	.73	.73
MAR 8	.49	.67	.86	.90	1.12	1.22	1.31	1.41	1.46	1.80	1.93	1.95
MAR 13	.42	.52	.63	.73	.86	1.00	1.00	1.23	1.32	1.35	1.44	1.50
MAR 31	.25	.38	.44	.47	.51	.57	.62	.68	.74	.80	.89	.97
APR 1	.12	.20	.27	.36	.50	.59	.62	.65	.70	.70	.72	.74
APR 2	.28	.45	.61	.63	.68	.77	.88	.94	1.04	1.12	1.19	1.29
APR 3	.23	.30	.39	.43	.55	.70	.89	1.05	1.36	1.37	1.54	1.54
APR 6	.22	.32	.41	.45	.49	.57	.60	.68	.75	.86	.92	.96
APR 7	.18	.30	.33	.33	.45	.55	.60	.63	.70	.75	.75	.96
APR 26	.19	.28	.39	.43	.46	.51	.54	.55	.56	.57	.64	.67
APR 26	.32	.56	.70	.77	.83	.83	.83	.98	.98	.98	.98	1.00
APR 27	.35	.61	.71	.86	1.10	1.36	1.82	2.14	2.46	2.69	2.76	2.89
APR 28	.18	.35	.50	.64	.83	1.20	1.22	1.23	1.23	1.23	1.23	1.23
MAY 1	.27	.39	.43	.48	.52	.54	.59	.76	.84	.86	.90	1.02
MAY 1	.14	.25	.30	.34	.50	.59	.63	.64	.64	.64	.64	.69
MAY 3	.19	.32	.43	.54	.69	.90	1.08	1.22	1.22	1.22	1.22	1.22
MAY 3	.32	.55	.69	.80	1.07	1.24	1.32	1.41	1.43	1.43	1.43	1.43
MAY 8	.30	.50	.64	.72	.84	.95	.98	1.03	1.08	1.08	1.14	1.14
MAY 13 T	M	M	M	M	M	.93	.95	.96	.97	.98	.98	.98
MAY 27	.27	.51	.64	.66	.68	.69	1.11	1.34	1.35	1.37	1.45	1.46
MAY 30	.19	.31	.37	.45	.51	.53	.54	.59	.60	.60	.60	.61
JUN 1	.23	.43	.55	.61	.64	.67	.67	.67	.67	.67	.67	.68
JUN 5	.34	.59	.69	.72	.81	.92	1.11	1.22	1.36	1.37	1.42	1.42
JUN 21	.22	.36	.45	.51	.56	.67	.92	1.07	1.21	1.29	1.37	1.52
JUL 2	.29	.40	.47	.49	.50	.50	.50	.50	.50	.50	.50	.50
JUL 4	.26	.48	.59	.60	.89	.95	1.11	1.21	1.23	1.29	1.38	1.43
JUL 6	.20	.31	.32	.32	.32	.32	.32	.37	.44	.44	.49	.54
JUL 6	.33	.37	.37	.39	.39	.41	.47	.56	.63	.69	.73	.73
JUL 11	.28	.43	.47	.51	.52	.52	.52	.52	.52	.59	.62	.62
JUL 11	.29	.48	.65	.78	.98	1.12	1.12	1.13	1.16	1.17	1.46	1.83
JUL 12	.36	.53	.62	.69	.79	.85	.93	1.00	1.14	1.22	1.25	1.25
JUL 15	.35	.48	.57	.63	.68	.68	.68	.68	.68	.68	.70	.71
JUL 16	.25	.36	.55	.65	.86	1.16	1.22	1.29	1.33	1.35	1.39	1.48
JUL 23	.31	.49	.61	.64	.71	.78	.78	.78	.78	.78	.78	.78
JUL 31	.15	.29	.40	.53	.61	.67	.76	.77	.77	.77	.77	.77
AUG 1	.34	.66	.95	1.15	1.33	1.54	1.67	1.75	1.82	1.86	1.96	2.01
AUG 3	.22	.40	.47	.47	.47	.47	.47	.47	.47	.47	.47	.47
AUG 9	.25	.31	.33	.34	.34	.34	.34	.34	.34	.34	.34	.34
AUG 11	.38	.59	.67	.71	.73	.75	.76	.76	.78	.80	.85	.87
AUG 13	.28	.54	.67	.90	1.08	1.48	1.73	2.12	2.23	2.28	2.29	2.30
AUG 19	.17	.26	.30	.34	.54	.64	.67	.80	1.01	1.05	1.31	1.32
AUG 20	.22	.32	.40	.47	.58	.62	.63	.66	.71	.75	1.01	1.07
AUG 30	.28	.48	.66	.75	.85	.98	1.21	1.41	1.48	1.56	1.65	1.65
AUG 30	.25	.40	.54	.64	.68	.77	.80	.82	.83	.83	.83	.83
SEP 2	.30	.52	.66	.81	.87	.87	.87	.88	.89	.89	.89	.89
SEP 2	.27	.42	.62	.75	.90	1.06	1.06	1.07	1.07	1.07	1.07	1.07
SEP 2	.18	.30	.46	.52	.60	.71	.74	.78	.78	.78	.78	.78
SEP 3	.30	.53	.69	.76	.95	.99	1.00	1.02	1.02	1.05	1.07	1.09
SEP 10	.22	.33	.42	.54	.81	.90	.96	1.04	1.14	1.21	1.25	1.33
SEP 19	.32	.53	.72	.89	1.15	1.19	1.22	1.26	1.36	1.40	1.44	1.80
SEP 24	.47	.69	.89	1.07	1.37	1.68	1.85	2.16	2.26	2.37	2.56	2.67
SEP 29	.29	.39	.42	.43	.44	.53	.54	.56	.56	.56	.57	.61
OCT 17	.39	.64	.73	.75	.76	.78	.78	.78	.78	.78	.78	.78
OCT 17	.28	.46	.60	.64	.83	.93	.93	.93	.93	.93	1.03	1.04
OCT 27	.30	.54	.73	.86	.97	1.05	1.17	1.19	1.19	1.19	1.19	1.19
OCT 29	.26	.35	.41	.49	.64	.88	1.08	1.36	1.68	1.88	2.21	2.45
NOV 6	.30	.45	.62	.72	.99	1.38	1.55	1.67	1.74	1.80	1.84	1.87
NOV 8	.20	.26	.33	.50	.57	.60	.66	.66	.66	.66	.66	.68
NOV 20	.11	.22	.30	.38	.55	.75	.82	.93	1.01	1.09	1.17	1.26
DEC 7	.30	.40	.44	.49	.63	.92	1.06	1.16	1.16	1.22	1.23	1.25
DEC 9	.15	.21	.32	.38	.44	.60	.83	.99	1.09	1.13	1.26	1.38
DEC 15	.27	.31	.32	.32	.32	.33	.34	.34	.37	.37	.39	.41
DEC 17	.19	.33	.34	.51	.66	.74	.75	.75	.75	.75	.75	.82
DEC 19	.23	.35	.46	.60	.87	1.06	1.07	1.09	1.10	1.10	1.10	1.11
DEC 21	.20	.30	.40	.47	.53	.60	.66	.73	.81	.81	.81	.81
TRUK												
JAN 12	.26	.32	.35	.35	.36	.37	.40	.44	.49	.52	.53	.53
JAN 17	.43	.66	.71	.80	.97	1.02	1.02	1.02	1.03	1.08	1.38	1.41
FEB 1	.32	.58	.73	1.00	1.37	1.76	1.92	2.05	2.42	2.53	2.58	2.72
FEB 24	.27	.44	.61	.72	.97	.98	1.09	1.16	1.19	1.22	1.25	1.41
MAR 4	.31	.42	.51	.59	.69	.79	.79	.79	.80	1.06	1.06	1.08
MAR 5	.50	.67	.78	1.06	1.21	1.30	1.58	1.69	1.75	1.81	1.92	1.98
MAR 11	.24	.37	.47	.56	.65	.65	.65	.75	.84	.89	.95	.98
MAR 30	.13	.24	.33	.42	.57	.71	.75	.81	.96	1.05	1.09	1.22
APR 1	.30	.45	.54	.57	.66	.76	.77	.78	.82	.83	.85	.85
APR 4	.19	.28	.36	.44	.57	.83	.92	.96	1.00	1.03	1.07	1.10
APR 4	.27	.35	.35	.35	.36	.37	.38	.56	.63	.75	.89	.89
APR 5	.20	.30	.45	.49	.51	.67	.72	.83	.99	1.06	1.42	1.42
APR 6	.37	.52	.55	.57	.69	.75	.79	.86	.91	.94	1.18	1.24
APR 8	.18	.25	.32	.40	.45	.53	.55	.70	.72	.72	.74	.77
APR 8	.18	.28	.41	.48	.60	.78	.93	1.05	1.11	1.20	1.54	2.00
MAY 4	.28	.42	.50	.60	.82	1.02	1.18	1.27	1.29	1.41	1.66	1.75
MAY 11	.36	.49	.54	.56	.81	.91	.91	.91	.91	.91	.91	.92
MAY 18	.40	.69	.80	.82	.84	1.11	1.43	1.48	1.49	1.49	1.50	1.50
JUN 1	.17	.26	.37	.46	.55	.59	.66	.72	.72	.73	.75	.75
JUN 5	.44	.73	.95	.97	1.01	1.05	1.06	1.06	1.06	1.06	1.06	1.06
JUN 10	.30	.50	.56	.63	.68	.79	.96	1.30	1.33	1.35	1.37	1.37
JUN 12	.30	.52	.72	.89	1.12	1.46	2.10	2.30	2.53	2.69	3.01	*3.04
JUN 13	.31	.49	.68	.78	.87	.89	.89	.89	.95	.98	.98	.98
JUN 20	.26	.39	.43	.43	.43	.43	.45	.45	.47	.50	.51	.53
JUN 21	.23	.36	.52	.61	.74	.79	.83	.89	.96	1.12	1.21	1.26
JUN 25	.32	.47	.52	.57	.66	.71	.71	.71	.71	.71	.71	.86
JUN 28	.26	.36	.40	.40	.42	.43	.43	.43	.43	.49	.50	.50
JUL 6	.46	.86	1.30	1.51	1.71	1.71	1.71	1.71	1.71	1.71	1.71	1.71
JUL 7	.22	.42	.50	.52	.57	.63	.68	.74	.80	.84	.93	1.03
JUL 8	.38	.50	.58	.68	.81	.89	.89	1.03	1.10	1.11	1.12	1.15
JUL 28	.31	.40	.43	.46	.49	.52	.56	.59	.63	.64	.64	.64
JUL 30	.26	.45	.62	.79	.95	1.07	1.23	1.38	1.39	1.40	1.44	1.45
JUL 30	.23	.40	.54	.57	.63	.68	.71	.75	.79	.81	.84	.85
AUG 2	.18	.27	.43	.52	.67	.81	.88	1.06	1.12	1.13	1.13	1.13
AUG 9	.28	.43	.51	.59	.64	.66	.67	.67	.68	.68	.68	.68
AUG 19	.30	.38	.42	.43	.47	.47	.47	.47	.58	.58	.58	.58
SEP 12	.20	.32	.34	.35	.36	.36	.36	.36	.36	.36	.36	.36
SEP 16	.31	.36	.39	.39	.40	.40	.40	.40	.44	.44	.44	.44
SEP 16	.47	.85	1.24	1.48	1.71	1.93	1.98	2.00	2.02	2.02	2.02	2.02
SEP 24	.25	.45	.49	.50	.50	.50	.51	.51	.51	.51	.51	.51
SEP 24	.29	.48	.58	.58	.58	.59	.64	.66	.66	.66	.69	.70
SEP 25	.25	.46	.64	.69	.78	.84	.86	.90	.95	1.15	1.24	1.34
SEP 30	.33	.60	.62	.63	.72	.82	.82	.82	.82	.82	.82	.82
OCT 30	.27	.38	.41	.59	.80	.90	.92	1.06	1.11	1.17	1.38	1.38
OCT 31	.38	.63	.65	.66	.68	.69	.72	.74	.81	1.01	1.10	1.11
OCT 31	.29	.49	.60	.65	.69	.80	.87	.97	1.14	1.19	1.21	1.80
NOV 6	.35	.50	.51	.51	.51	.51	.51	.51	.51	.51	.51	.51
NOV 26	.31	.53	.66	.77	.89	.90	.91	.93	.95	.97	.98	.99

T CLOCK MALFUNCTION
M NO RECORD

EXCESSIVE SHORT DURATION RAINFALL

Station and date	Maximum precipitation in inches (5 to 180 minutes)											
	5	10	15	20	30	45	60	80	100	120	150	180
PACIFIC AREA												
TRUK												
DEC 9	.60	.45	1.05	1.17	1.29	1.35	1.61	1.71	1.90	2.10	2.14	2.31
DEC 15	.29	.56	.72	.77	.79	.80	.80	.82	.84	.85	.94	.94
DEC 19	.29	.45	.47	.47	.47	.48	.48	.49	.49	.49	.50	.51
DEC 19	.55	.77	.93	1.08	1.50	1.72	1.93	2.20	2.29	2.63	2.80	2.91
DEC 21	.30	.53	.66	.80	1.00	1.05	1.06	1.07	1.07	1.07	1.07	1.07
DEC 22	.28	.37	.47	.63	.73	.79	.80	.81	.81	.81	.81	.81
DEC 24	.20	.36	.48	.66	.76	1.03	1.24	1.26	1.26	1.27	1.35	1.35
WAKE												
APR 10	.24	.40	.55	.67	.86	1.15	1.28	1.34	1.41	1.62	1.96	2.67
APR 29	.23	.33	.37	.40	.41	.41	.41	.41	.41	.42	.42	.53
APR 30	.27	.29	.32	.33	.36	.37	.44	.47	.47	.47	.47	.47
MAY 10	.14	.25	.34	.41	.52	.71	.86	1.08	1.19	1.24	1.28	1.29
JUN 15	.29	.38	.39	.39	.41	.46	.46	.46	.46	.46	.46	.49
JUN 29	.33	.48	.58	.60	.64	.69	.69	.69	.69	.69	.69	.69
JUL 24	.25	.31	.34	.35	.35	.35	.35	.35	.35	.35	.35	.35
AUG 24	.19	.34	.40	.46	.51	.54	.54	.54	.54	.54	.54	.54
AUG 30	.29	.31	.31	.31	.31	.31	.36	.37	.37	.37	.45	.46
OCT 5	.24	.33	.34	.35	.35	.35	.36	.36	.36	.37	.37	.37
OCT 6	.25	.26	.27	.27	.27	.27	.27	.31	.31	.31	.31	.31
OCT 6	.23	.35	.38	.42	.45	.47	.50	.51	.52	.55	.55	.57
OCT 7	.17	.25	.36	.48	.52	.57	.64	.67	.67	.69	.72	.72
OCT 7	.20	.36	.46	.50	.57	.59	.59	.63	.72	.73	.74	.77
OCT 13	.26	.28	.28	.28	.28	.28	.28	.28	.28	.28	.28	.28
NOV 2	.34	.54	.68	.71	.72	.73	.90	.92	.92	.92	.92	.93
NOV 8	.22	.36	.40	.54	.76	1.13	1.30	1.35	1.35	1.45	1.65	1.65
YAP R												
JAN 19	.14	.24	.35	.45	.48	.52	.71	.73	.77	.84	.98	.99
FEB 11	.16	.31	.45	.59	.74	.83	.83	.83	.83	.83	.83	.84
FEB 25	.28	.40	.45	.48	.49	.50	.54	.56	.56	.56	.58	.58
MAY 2 T	M	M	M	M	M	M	.99	M	M	1.67	M	1.76
JUN 22	.29	.45	.51	.54	.61	.66	.67	.70	.74	.77	.82	.84
JUN 25	.16	.30	.32	.32	.33	.34	.36	.39	.40	.43	.46	.66
JUL 5	.22	.27	.45	.52	.74	.96	1.11	1.27	1.56	1.74	1.94	2.22
JUL 10	.28	.53	.75	.90	1.02	1.03	1.06	1.13	1.13	1.14	1.14	1.14
JUL 19	.27	.42	.63	.77	.90	.94	.94	.94	.95	.96	1.03	1.17
JUL 22	.15	.30	.38	.42	.44	.53	.61	.74	.76	.76	.76	.76
JUL 28	.33	.61	.68	.78	.90	.92	.95	.95	.95	.95	.96	1.25
JUL 29	.29	.58	.84	.98	1.12	1.17	1.33	1.55	1.60	1.64	1.66	1.70
AUG 4	.25	.35	.49	.69	.85	.95	1.42	1.44	1.44	1.44	1.44	1.44
AUG 9	.19	.33	.44	.50	.58	.67	.75	.86	.97	1.03	1.11	1.26
AUG 16	.18	.34	.45	.54	.67	.78	.84	.87	.88	.89	.93	.93
SEP 1	.22	.42	.49	.53	.69	.80	1.00	1.25	1.30	1.30	1.30	1.31
SEP 20	.21	.39	.39	.39	.39	.39	.40	.43	.43	.43	.43	.43
SEP 22	.31	.58	.71	.86	1.17	1.45	1.53	1.57	1.61	1.66	1.88	1.94
SEP 29	.22	.30	.31	.31	.31	.31	.31	.31	.31	.31	.31	.31
OCT 13	.27	.47	.61	.71	.81	.98	1.12	1.31	1.43	1.78	2.16	2.29
OCT 16	.20	.36	.42	.50	.61	.68	.81	.86	.86	.94	.95	.95
OCT 18	.18	.26	.29	.34	.50	.78	.92	.92	.94	.95	.98	.99
DEC 1	*.46	*.76	.90	.94	1.01	1.09	1.18	1.28	1.57	1.45	1.54	1.64
DEC 3	.32	.59	.72	.78	.83	.84	.84	.84	.84	.85	.85	.88
DEC 17	.23	.35	.43	.51	.58	.62	.65	.66	.68	.68	.70	.70
PENNSYLVANIA												
ALLENTOWN												
MAY 30	.16	.32	.47	.57	.68	.86	.92	1.00	1.10	1.17	1.36	1.45
JUL 19	.16	.27	.38	.45	.60	.64	.76	.82	.85	.85	.85	.88
AUG 6	.35	.57	.60	.62	.63	.64	.64	.64	.64	.64	.64	.64
AUG 24	.20	.35	.45	.46	.46	.46	.46	.46	.46	.46	.46	.46
SEP 2	.30	.39	.43	.47	.53	.61	.63	.64	.64	.64	.64	.64
OCT 24	.21	.30	.36	.42	.46	.57	.66	.67	.67	.67	.68	.80
NOV 29	.30	.35	.36	.37	.37	.37	.37	.37	.37	.37	.37	.37
ERIE												
JUN 29	.20	.31	.40	.44	.47	.50	.50	.50	.50	.50	.50	.50
JUL 18	.20	.30	.46	.53	.62	.65	.66	.77	.78	.81	.84	.84
AUG 19	.19	.23	.31	.42	.53	.57	.59	.61	.62	.62	.62	.94
OCT 3	.14	.24	.35	.37	.51	.55	.55	.55	.55	.55	.55	.55
HARRISBURG												
JUN 24	.28	.33	.33	.33	.33	.33	.33	.33	.33	.33	.33	.33
JUL 15	.25	.38	.48	.62	.94	1.11	1.12	1.12	1.12	1.12	1.12	1.12
SEP 10	.22	.36	.42	.45	.51	.61	.83	1.01	1.13	1.21	1.50	1.81
PHILADELPHIA												
JUN 12	.23	.46	.55	.69	.89	1.08	1.24	1.51	1.66	1.77	1.79	1.85
JUN 12	.16	.30	.34	.42	.51	.53	.55	.57	.64	.72	.81	.84
JUN 16	*1.30	*1.70	*1.83	1.85	1.87	1.96	1.96	1.96	1.96	1.96	1.96	1.96
JUL 24	.19	.36	.46	.51	.55	.57	.61	.61	.61	.62	.85	1.11
AUG 17	.36	.72	.74	.75	.75	.76	.77	.77	.77	.77	.77	.77
OCT 19	.15	.28	.34	.48	.54	.59	.59	.62	.64	.64	.65	.67
PITTSBURGH												
JUN 24	.35	.48	.51	.52	.52	.54	.55	.55	.55	.55	.93	.94
JUL 24	.38	.74	.82	.84	.95	.96	.96	.96	.96	.96	.96	.96
JUL 24	.25	.41	.41	.42	.45	.51	.57	.62	.65	.66	.66	.68
AUG 7	.40	.60	.70	1.00	1.40	1.54	1.68	1.76	1.82	1.82	1.82	1.82
AUG 7	.18	.30	.32	.33	.34	.34	.34	.34	.34	.34	.34	.34
AUG 10	.28	.56	.68	.92	1.15	1.20	1.21	1.21	1.23	1.23	1.24	1.24
PITTSBURGH U												
JUN 15	.24	.39	.44	.51	.55	.57	.58	.58	.58	.58	.58	.58
JUN 24	.49	.52	.52	.52	.53	.54	.55	.55	.55	.57	.63	.64
JUL 24	.20	.35	.38	.43	.47	.50	.55	.56	.56	.57	.58	.58
READING U												
MAY 16	.27	.41	.49	.53	.64	.65	.65	.65	.65	.65	.65	.65
JUN 22	.21	.30	.32	.34	.34	.34	.35	.37	.37	.38	.38	.38
JUN 27	.20	.36	.53	.59	.62	.74	.77	.77	.78	.78	.79	.79
AUG 6	.26	.32	.34	.40	.42	.43	.43	.43	.43	.43	.43	.43
AUG 7	.34	.43	.63	.67	.78	1.06	1.07	1.07	1.07	1.07	1.07	1.07
SEP 10	.26	.47	.59	.72	.91	1.05	1.12	1.16	1.23	1.28	1.62	1.85
WILKES BARRE												
JUN 12	.20	.40	.52	.60	.71	.80	.92	.93	.96	.97	1.00	1.00
JUN 27	.20	.35	.46	.53	.63	.68	.74	.81	.83	.83	.87	.95
SEP 6	.21	.34	.47	.63	.86	1.12	1.42	1.54	1.64	1.71	1.78	1.82
RHODE ISLAND												
BLOCK ISLAND												
JUN 25	.23	.45	.46	.50	.55	.64	.90	.91	1.04	1.17	1.28	1.33
PROVIDENCE						NONE						
SOUTH CAROLINA												
CHARLESTON												
JUN 7	.26	.33	.36	.37	.47	.52	.53	.58	.62	.66	.72	.78
JUN 7	.35	.52	.57	.60	.73	.76	.76	.76	.76	.78	.78	.78
JUN 8	.50	.60	.65	.83	.84	.85	.87	.88	.95	.99	1.03	1.06
JUN 10	.47	.65	.83	1.00	1.09	1.15	1.50	1.80	1.85	1.97	2.09	2.25
JUN 12	.60	*1.10	1.15	1.30	1.46	1.47	1.50	1.54	1.56	1.56	1.58	1.58
JUL 4	.34	.40	.41	.44	.44	.45	.46	.47	.47	.48	.48	.48
JUL 4	.32	.52	.60	.78	1.00	1.03	1.04	1.04	1.07	1.08	1.08	1.09
JUL 6	.25	.38	.45	.58	.89	1.01	1.03	1.06	1.06	1.06	1.06	1.06
JUL 11	.23	.40	.40	.43	.43	.43	.43	.43	.43	.43	.43	.43
JUL 16	.32	.52	.61	.74	.91	.97	.98	.99	1.00	1.00	1.01	1.03
JUL 25	.40	.75	.87	1.00	1.10	1.20	1.24	1.27	1.28	1.28	1.28	1.28
AUG 3	.25	.43	.48	.57	.66	.71	.72	.73	.73	.74	.75	.75
AUG 8	.35	.60	.62	.70	.88	.98	1.07	1.08	1.08	1.09	1.16	1.39
AUG 16	.33	.40	.42	.45	.46	.47	.49	.50	.50	.50	.54	.57
AUG 24	.30	.38	.38	.38	.38	.38	.38	.38	.38	.38	.38	.38
SEP 11	.31	.34	.40	.55	.63	.63	.68	.77	.92	.97	.98	.98
OCT 17	.36	.37	.43	.47	.51	.53	.54	.71	.74	.74	.76	.78
OCT 19	.18	.30	.35	.42	.61	.82	.96	1.11	1.11	1.18	1.31	1.35
NOV 11	.30	.50	.70	.80	.90	1.00	1.12	1.22	1.30	1.36	1.42	1.46
CHARLESTON C												
APR 29	.25	.39	.43	.45	.47	.48	.51	.51	.51	.51	.51	.54
MAY 13	.43	.86	1.18	1.36	1.56	1.79	1.79	1.79	1.79	1.88	1.94	2.02
MAY 18	.22	.33	.40	.41	.41	.46	.47	.48	.51	.54	.62	.66
MAY 26	.26	.31	.37	.40	.42	.44	.46	.49	.51	.51	.58	.62
JUN 7	.16	.27	.36	.41	.47	.57	.62	.64	.67	.71	.75	.82
JUN 7	.38	.54	.76	.98	1.34	1.96	2.42	2.88	2.92	2.95	3.22	3.24
JUN 10	.41	.64	.78	.97	1.55	1.73	1.91	2.08	2.16	2.18	2.21	2.26
JUN 11	.29	.45	.51	.66	.69	.69	.69	.74	.90	.91	.92	.94
JUL 5	.21	.30	.31	.32	.32	.32	.32	.32	.32	.32	.32	.32
AUG 16	.43	.42	.69	.74	.86	.95	1.02	1.06	1.07	1.07	1.07	1.07
SEP 11	.51	.71	.87	1.08	1.18	1.18	1.18	1.27	1.45	1.68	2.29	2.31
OCT 9	.29	.51	.66	.84	1.18	1.46	1.60	1.84	1.90	1.93	1.95	1.97
OCT 16	.26	.36	.38	.39	.40	.41	.41	.42	.42	.42	.42	.51
OCT 16	.32	.53	.60	.67	.77	.79	.81	.82	.86	.87	1.00	1.01
OCT 19	.17	.25	.34	.40	.46	.52	.56	.62	.75	.77	.85	.91
NOV 11	.27	.47	.57	.65	.78	.91	1.03	1.22	1.29	1.39	1.44	1.53
COLUMBIA												
APR 29	.18	.35	.42	.52	.77	.90	.96	1.01	1.05	1.17	1.22	1.28
MAY 13	.29	.56	.77	.98	1.47	1.75	1.97	2.07	2.08	2.08	2.08	2.08
JUN 9	.15	.29	.30	.38	.50	.74	.81	.85	.88	.89	.91	.91
JUN 12	.39	.67	.79	.93	1.07	1.12	1.17	1.17	1.17	1.17	1.17	1.17
JUL 3	.25	.49	.68	.82	.90	1.19	1.32	1.35	1.42	1.45	1.49	1.57
JUL 4	.21	.41	.54	.61	.83	1.00	1.08	1.21	1.24	1.27	1.32	1.37
JUL 5	.12	.20	.31	.39	.50	.65	.70	.74	.88	.96	.98	.98
JUL 9	.35	.43	.71	.78	.81	.85	.88	.93	.94	.95	1.00	1.01
JUL 10	.25	.40	.47	.50	.51	.51	.51	.51	.51	.51	.51	.51
JUL 18	.16	.25	.38	.43	.53	.66	.72	.73	.74	.75	.75	.75
JUL 19	.29	.34	.39	.44	.45	.45	.46	.47	.48	.48	.48	.48
SEP 6	.48	.65	.93	1.30	1.41	1.52	1.52	1.52	1.52	1.52	1.52	1.52
OCT 6	.32	.56	.59	.69	.80	.83	.87	.91	.98	1.00	1.03	1.05
OCT 19	.21	.35	.43	.50	.61	.78	1.02	1.05	1.08	1.28	1.33	1.35
NOV 4	.14	.25	.29	.35	.57	.70	.93	1.06	1.08	1.08	1.08	1.08
GNVLE SPARTANBURG												
MAY 16	.19	.35	.40	.44	.47	.50	.52	.52	.52	.52	.52	.52
JUN 7	.27	.49	.65	.73	.80	1.00	1.11	1.41	1.93	2.08	2.17	2.45
JUN 17	.42	.54	.55	.56	.56	.58	.63	.63	.63	.63	.63	.63
JUL 11	.26	.40	.57	.72	.90	1.15	1.22	1.26	1.28	1.32	1.38	1.38
JUL 27	.26	.36	.42	.44	.44	.44	.44	.44	.44	.44	.44	.44
AUG 2	.30	.43	.59	.63	.68	.72	.75	.75	.75	.75	.75	.75
SEP 26	.25	.42	.57	.64	.81	.86	.86	.86	.86	.86	.86	.86
NOV 18	.30	.35	.38	.40	.48	.50	.61	.70	.75	.76	.80	.85
SOUTH DAKOTA												
ABERDEEN												
MAR 18	.27	.51	.54	.60	.75	.82	.90	.91	.93	1.17	1.32	1.49
JUN 20	.18	.34	.38	.43	.44	.45	.45	.65	.45	.45	.45	.56
JUL 23	.21	.40	.47	.47	.47	.47	.47	.47	.47	.47	.47	.67
SEP 22	.20	.32	.34	.40	.49	.56	.61	.64	.70	.71	.71	.71
HURON												
JUN 24	.23	.34	.42	.51	.67	.86	.96	1.01	1.30	1.36	1.51	1.57
JUN 30	.45	.88	1.07	1.33	1.47	1.54	1.69	1.73	1.88	2.08	2.25	2.26
JUL 25	.20	.35	.47	.59	.70	.76	.77	.77	.77	.77	.77	.77
AUG 5	.20	.33	.38	.39	.44	.45	.45	.45	.45	.45	.45	.45
AUG 7	.75	1.35	1.50	1.70	1.95	2.04	2.08	2.10	2.10	2.10	2.10	2.10
SEP 15	.20	.35	.45	.50	.56	.64	.68	.72	.73	.73	.73	.74
RAPID CITY												
JUN 6	.50	.88	.96	1.05	1.09	1.11	1.13	1.15	1.22	1.35	1.43	1.45
JUN 24	.15	.27	.37	.48	.65	.73	.79	1.07	1.35	1.39	1.44	1.47
JUL 10	.17	.30	.34	.50	.56	.57	.57	.57	.57	.57	.57	.57
JUL 17	.30	.44	.46	.46	.46	.46	.46	.46	.46	.46	.46	.46
JUL 24	.37	.52	.53	.53	.53	.53	.53	.53	.53	.53	.53	.53
SIOUX FALLS												
MAR 18	.23	.32	.32	.33	.33	.33	.33	.33	.33	.33	.33	.33
JUN 24	.17	.22	.26	.32	.52	.58	.78	1.08	1.18	1.19	1.19	1.19
JUL 20	.34	.49	.63	.73	.84	.89	.92	.97	.99	.99	.99	.99
AUG 16	.23	.38	.47	.48	.74	.82	.83	.83	.83	.83	.83	.83
SEP 22	.24	.34	.38	.39	.40	.40	.48	.49	.50	.52	.76	.83
TENNESSEE												
BRISTOL												
APR 23	.28	.35	.36	.40	.43	.47	.59	.60	.60	.61	.68	.69
MAY 29	.24	.33	.37	.41	.47	.48	.50	.51	.51	.52	.52	.52
JUN 1	.34	.40	.40	.41	.42	.42	.42	.42	.42	.42	.43	.43
JUN 8	.38	.53	.53	.54	.58	.69	.70	.70	.70	.70	.70	.71
JUL 31	.20	.33	.42	.50	.81	.93	.98	1.05	1.08	1.10	1.15	1.24
AUG 3	.24	.43	.44	.45	.46	.46	.53	.53	.53	.53	.53	.53
AUG 10	.42	.58	.60	.65	.66	.67	.68	.72	.78	.82	.83	.83

T CLOCK MALFUNCTION
M NO RECORD

EXCESSIVE SHORT DURATION RAINFALL

Station and date	Maximum precipitation in inches (5 to 180 minutes)											
	5	10	15	20	30	45	60	80	100	120	150	180
TENNESSEE												
CHATTANOOGA												
APR 14	.25	.39	.52	.56	.59	.65	.66	.93	1.05	1.11	1.12	1.12
MAY 14	.19	.26	.35	.48	.54	.57	.62	.83	.90	.94	1.20	1.27
AUG 2	.19	.31	.42	.47	.49	.51	.52	.52	.52	.54	.55	.56
AUG 20	.23	.37	.50	.60	.71	.76	.77	.77	.77	.77	.77	.77
KNOXVILLE												
APR 23	.24	.41	.46	.53	.69	.69	.69	.69	.69	.70	.70	.70
JUN 9	.32	.53	.56	.60	.63	.63	.68	.68	.68	.68	.68	.68
JUN 12	.20	.36	.39	.39	.40	.40	.40	.40	.41	.41	.41	.41
JUN 25	.13	.24	.36	.40	.40	.40	.40	.40	.40	.40	.40	.40
JUL 19	.28	.31	.38	.45	.45	.45	.45	.45	.45	.45	.45	.45
SEP 9	.25	.50	.60	.66	.66	.66	.84	1.24	1.24	1.24	1.24	1.24
OCT 3	.38	.73	.75	.79	.79	.79	.79	.79	.79	.79	.82	.90
MEMPHIS												
FEB 1	.23	.32	.39	.44	.51	.64	.72	.83	.92	1.03	1.11	1.13
APR 3	.26	.41	.49	.55	.67	.68	.68	.81	1.00	1.02	1.03	1.03
APR 14	.21	.41	.52	.59	.65	.66	.66	.66	.66	.66	.66	.66
MAY 13	.19	.37	.52	.61	.73	.86	.93	.96	1.01	1.02	1.03	1.03
MAY 25	.25	.34	.44	.59	.71	.74	.75	.75	.78	.82	.88	.92
JUN 24	.32	.50	.54	.54	.55	.56	.57	.57	.57	.57	.57	.57
JUN 25	.42	.69	.80	1.05	1.26	1.52	1.70	2.04	2.11	2.13	2.18	2.21
JUL 1	.37	.67	.90	1.10	1.26	1.33	1.34	1.35	1.35	1.35	1.35	1.35
JUL 19	.30	.47	.62	.69	.79	.90	.93	1.02	1.10	1.13	1.14	1.15
AUG 1	.24	.41	.51	.55	.77	.84	.89	.94	.94	.95	.96	.96
AUG 12	.28	.39	.44	.47	.51	.53	.53	.54	.55	.59	.60	.62
SEP 17	.51	.78	.84	.89	.99	1.07	1.21	1.40	1.46	1.50	1.54	1.54
OCT 6	.16	.24	.34	.38	.55	.66	.74	.83	.98	1.10	1.22	1.38
DEC 27	.39	.64	.83	.96	1.14	1.43	1.45	1.47	1.47	1.47	1.50	1.61
NASHVILLE												
JUL 1	.25	.34	.50	.65	.76	.80	.81	.84	.84	.84	.87	.87
JUL 6	.18	.34	.43	.59	.67	.73	.97	1.08	1.24	1.35	1.42	1.53
JUL 16	.44	.81	.95	1.12	1.42	1.83	2.15	2.22	2.22	2.24	2.24	2.24
TEXAS												
ABILENE												
APR 8	.55	.75	.85	.95	1.08	1.15	1.20	1.25	1.25	1.25	1.25	1.25
MAY 10	.41	.58	.58	.58	.58	.58	.58	.58	.58	.58	.58	.58
MAY 24	.35	.50	.51	.57	.63	.65	.65	.65	.65	.65	.65	.65
JUL 3	.25	.45	.50	.60	.65	.67	.76	.82	.82	.82	.82	.82
JUL 8	.25	.30	.38	.44	.50	.54	.55	.56	.56	.56	.56	.56
JUL 18	.40	.55	.62	.65	1.15	1.20	1.20	1.20	1.20	1.20	1.20	1.20
JUL 19	.30	.55	.65	.75	1.00	1.07	1.11	1.17	1.18	1.19	1.42	1.45
AMARILLO												
JUL 1	.20	.30	.33	.35	.35	.37	.38	.42	.45	.48	.57	.60
JUL 12	.19	.37	.46	.55	.70	.87	.93	1.11	1.13	1.16	1.21	1.31
AUG 28	.35	.52	.85	.93	1.07	1.09	1.25	1.37	1.40	1.40	1.40	1.40
AUG 29	.24	.29	.34	.41	.43	.43	.43	.43	.43	.43	.46	.48
SEP 23	.28	.32	.33	.35	.37	.40	.48	.48	.48	.46	.48	.48
AUSTIN												
JAN 18	.18	.33	.42	.51	.64	.86	.95	1.01	1.08	1.16	1.22	1.30
APR 12	.31	.38	.39	.39	.45	.49	.51	.51	.51	.52	.52	.52
MAY 3	.32	.55	.69	.77	.83	.85	.85	.85	.88	.89	.89	.89
MAY 5	.18	.29	.43	.48	.52	.58	.59	.59	.59	.59	.59	.59
MAY 10	.28	.52	.68	.75	.86	1.00	1.11	1.20	1.24	1.32	1.36	1.36
MAY 17	.21	.40	.50	.60	.86	1.07	1.19	1.42	1.47	1.57	1.86	1.89
MAY 27	.42	.68	1.02	1.27	1.45	1.47	1.48	1.48	1.49	1.55	1.56	1.56
JUN 25	.21	.30	.35	.40	.47	.50	.51	.52	.52	.53	.53	.53
JUL 9	.24	.45	.61	.83	1.11	1.36	1.62	1.80	1.89	1.91	1.93	2.01
SEP 4	.27	.45	.58	.61	.62	.66	.66	.68	.74	.75	.77	.77
NOV 15	.23	.35	.42	.44	.45	.46	.46	.46	.46	.46	.46	.46
BROWNSVILLE												
APR 9	.32	.53	.61	.64	.67	.71	.75	.76	.82	.87	.94	.98
MAY 4	M	M	M	1.15	1.42	1.49	1.50	1.51	1.51	1.51	1.51	1.51
MAY 18	.68	1.23	1.40	1.46	1.51	1.56	1.58	1.59	1.59	1.59	1.59	1.59
MAY 20	.36	.67	.82	1.17	1.18	1.39	1.42	1.50	1.55	1.55	1.57	1.58
JUN 17	.36	.49	.61	.71	.80	.89	.89	.89	.89	.89	.89	.89
JUN 18	.35	.55	.75	1.02	1.33	1.42	1.44	1.51	1.52	1.53	1.53	1.57
AUG 28	.26	.44	.65	.86	1.06	1.23	1.25	1.25	1.25	1.25	1.25	1.25
SEP 7	.51	.68	.75	.91	1.12	1.50	1.65	1.66	1.66	1.66	1.66	1.66
SEP 10	.21	.33	.45	.55	.64	.68	.68	.70	.70	.71	.73	.76
SEP 30	.22	.36	.37	.38	.39	.40	.40	.40	.40	.41	.49	.49
OCT 4	.27	.46	.70	.85	.98	1.25	1.39	2.00	2.14	2.22	2.43	2.43
CORPUS CHRISTI												
MAY 7	.31	.50	.63	.65	.80	1.02	1.16	1.26	1.28	1.28	1.28	1.28
MAY 8	.34	.68	.81	1.01	1.12	1.53	1.77	2.22	2.26	2.47	2.63	2.63
MAY 9	.34	.64	.85	1.03	1.53	1.90	2.02	2.15	2.27	2.32	2.49	2.53
MAY 10	.20	.31	.33	.33	.34	.37	.40	.41	.44	.46	.46	.47
JUN 3	.39	.64	.81	1.02	1.55	1.97	2.70	3.09	3.10	3.17	3.40	3.40
JUN 23	.17	.25	.37	.47	.59	.71	.90	1.02	1.10	1.18	1.28	1.32
JUL 4	.18	.31	.42	.51	.64	.71	.73	.73	.74	.74	.74	.74
JUL 6	.33	.58	.80	.91	1.08	1.23	1.29	1.34	1.34	1.34	1.35	1.35
JUL 12	.22	.39	.47	.48	.53	.81	.90	.95	1.01	1.16	1.34	1.52
SEP 2	.27	.42	.55	.60	.61	.64	.96	1.15	1.16	1.35	1.35	1.35
SEP 5	.25	.31	.34	.46	.61	.73	.77	.80	.81	.81	.82	.82
SEP 13	.28	.31	.34	.44	.47	.53	.60	.75	.96	1.06	1.06	1.06
SEP 14	.34	.59	.76	.86	.89	.89	.91	.91	.91	.91	.91	1.15
SEP 16	.20	.35	.38	.38	.39	.39	.39	.39	.39	.39	.39	.52
SEP 20	.18	.30	.38	.39	.39	.40	.40	.40	.40	.40	.40	.40
OCT 7	.24	.40	.44	.45	.45	.52	.53	.55	.56	.56	.56	.56
DALLAS												
APR 22	.44	.57	.58	.59	.65	.70	.74	.74	.74	.74	.74	.74
APR 26	.46	.58	.64	.66	.67	.69	.71	.72	.72	.72	.72	.72
MAY 13	.33	.58	.67	.72	.85	1.01	1.31	1.56	1.61	1.63	1.63	1.66
JUN 15	.33	.55	.80	.95	1.26	1.50	1.64	1.66	1.68	1.68	1.68	1.73
JUN 25	.30	.37	.39	.39	.39	.39	.40	.40	.40	.40	.40	.40
AUG 13	.45	.83	1.09	1.25	1.63	1.73	1.81	1.83	1.85	1.90	1.91	1.92
OCT 9	.42	.76	1.05	1.34	1.77	2.13	2.35	2.38	2.40	2.41	2.42	2.42
NOV 2	.17	.32	.40	.51	.64	.88	.97	1.00	1.03	1.04	1.04	1.04
DEL RIO												
APR 18	.60	.87	1.12	1.36	1.74	1.96	1.99	2.00	2.01	2.01	2.01	2.02
JUN 17	.40	.66	.71	.82	.91	.94	.95	.96	1.00	1.09	1.22	1.32
JUL 2	.20	.30	.34	.35	.54	.66	.74	.76	.78	.78	.86	1.09
JUL 3	.25	.43	.48	.55	.60	.67	.70	.71	.72	.73	.74	.74
OCT 3	.30	.55	.66	.79	.90	.96	1.08	1.11	1.17	1.31	1.39	1.45

M NO RECORD.

Station and date	Maximum precipitation in inches (5 to 180 minutes)											
	5	10	15	20	30	45	60	80	100	120	150	180
TEXAS												
EL PASO												
JUL 5	.25	.42	.61	.78	.89	1.01	1.22	1.28	1.30	1.30	1.31	1.31
JUL 6	.14	.24	.36	.45	.68	.76	.84	.92	.97	1.01	1.11	1.28
JUL 22	.22	.30	.30	.30	.31	.31	.32	.32	.32	.32	.32	.32
AUG 22	.18	.28	.36	.46	.56	.66	.66	.67	.67	.67	.67	.67
FORT WORTH												
APR 22	.25	.33	.36	.37	.38	.38	.38	.38	.38	.38	.39	.39
APR 28	.37	.57	.65	.69	.72	.73	.75	.77	.77	.77	.77	.77
MAY 7	.43	.73	.86	1.10	1.50	1.97	2.47	2.85	3.05	3.17	3.17	3.17
MAY 11	.30	.35	.35	.35	.35	.47	.51	.58	.58	.58	.58	.58
JUN 16	.40	.75	.82	1.05	1.16	1.23	1.24	1.24	1.25	1.26	1.29	1.30
AUG 13	.32	.64	.75	.94	1.42	1.62	1.93	2.09	2.11	2.12	2.12	2.15
OCT 9	.35	.68	.80	.95	1.40	1.60	1.78	1.86	1.87	1.88	1.92	1.92
NOV 26	.15	.30	.34	.40	.60	.84	1.05	1.16	1.20	1.22	1.24	1.29
DEC 18	.20	.20	.25	.30	.50	.51	.51	.51	.51	.51	.51	.51
GALVESTON U												
JAN 21	.24	.44	.59	.70	.98	1.23	1.52	1.62	1.66	1.67	1.95	2.12
APR 9	.17	.28	.40	.48	.70	.94	1.18	1.34	1.56	1.83	1.92	1.97
APR 28	.33	.57	.75	.85	.92	.94	.98	.98	.98	.99	.99	.99
MAY 10	.46	.79	1.04	1.16	1.26	1.27	1.27	1.34	1.34	1.34	1.34	1.34
MAY 17	.17	.28	.35	.39	.41	.41	.41	.41	.41	.41	.41	.61
MAY 27	.27	.47	.56	.64	.77	.79	.81	.82	.82	.82	.91	1.03
JUN 17	.29	.42	.51	.58	.66	.66	.66	.66	.66	.83	1.25	1.26
JUN 19	.37	.60	.83	.88	.90	.92	.92	.97	1.02	1.07	1.10	1.10
JUN 20	.36	.64	.89	1.11	1.23	1.27	1.31	1.32	1.33	1.35	1.37	1.37
JUN 21	.39	.68	1.01	1.28	1.56	2.00	2.53	2.78	3.54	3.81	3.88	4.06
JUN 23	.28	.51	.66	.85	1.02	1.43	1.54	1.57	1.58	1.59	1.62	1.63
JUL 11	.20	.34	.42	.47	.51	.53	.54	.56	.58	.58	.58	.58
JUL 21	.28	.50	.62	.69	.78	.83	.83	.83	.83	.84	.85	.86
AUG 23	.45	.76	.83	.99	1.11	1.18	1.19	1.19	1.21	1.36	1.38	1.40
AUG 30	.23	.36	.55	.74	1.03	1.20	1.25	1.26	1.26	1.27	1.27	1.27
SEP 5	.13	.23	.31	.41	.59	.70	.72	.75	.76	.80	.83	.83
SEP 15	.30	.52	.77	.87	.92	.93	.94	.94	.94	.94	.94	.94
SEP 17	.33	.48	.64	.75	.89	.94	.94	.94	.94	.94	.94	.95
OCT 5	.20	.31	.40	.41	.42	.42	.43	.43	.45	.50	.51	.51
OCT 6	.16	.26	.37	.49	.60	.71	.77	.78	.78	.86	.86	.87
NOV 15	.22	.33	.36	.43	.50	.63	.63	.64	.64	.65	.65	.65
NOV 27	.22	.32	.48	.63	.86	1.05	1.43	1.55	1.68	1.80	2.12	2.26
DEC 12	.27	.50	.69	.86	1.01	1.50	1.84	2.18	2.18	2.18	2.18	2.19
DEC 12	.20	.36	.47	.54	.67	.68	.69	.69	.69	.69	.69	.69
HOUSTON U												
APR 9	.18	.32	.39	.43	.45	.51	.54	.58	.62	.67	.69	.70
MAY 4	.40	.65	.78	.86	.93	.97	1.02	1.03	1.03	1.04	1.04	1.04
MAY 10	.55	.95	1.35	1.70	2.08	2.39	2.44	2.48	2.52	2.52	2.52	2.53
MAY 17	.28	.34	.35	.36	.37	.37	.38	.39	.40	.50	.55	.55
MAY 17	.18	.33	.43	.53	.60	.66	.66	.66	.66	.66	.66	.67
MAY 27	.33	.57	.75	.79	.82	.83	.83	.84	.84	.84	.85	.97
JUN 16	.32	.47	.63	.78	.89	1.10	1.11	1.11	1.12	1.14	1.14	1.14
JUN 17	.55	.86	1.06	1.28	1.48	1.50	1.51	1.51	1.51	1.51	1.51	1.51
JUN 18	.26	.43	.49	.54	.67	.70	.72	.76	.77	.78	.79	.80
JUL 21	.15	.25	.33	.36	.55	.73	.83	1.06	1.26	1.40	1.51	1.64
AUG 20	.39	.48	.54	.54	.59	.59	.59	.59	.59	.59	.59	.59
SEP 14	.14	.26	.32	.40	.54	.66	.90	1.01	1.06	1.09	1.09	1.09
SEP 17	.41	.74	.89	1.03	1.43	1.84	1.85	1.85	1.85	1.85	1.85	1.85
OCT 6	.24	.45	.57	.62	.62	.80	.83	.85	.85	.85	.85	.85
OCT 9	.22	.41	.53	.62	.69	.75	.85	.88	.88	.89	.91	.93
OCT 23	.33	.62	.86	.98	.99	.99	.99	1.02	1.03	1.03	1.03	1.03
NOV 5	.35	.46	.52	.61	.81	.96	1.06	1.07	1.09	1.10	1.13	1.13
LUBBOCK												
JUN 13	.30	.52	.64	.68	.75	.83	.98	.99	1.01	1.01	1.01	1.01
JUL 31	.35	.55	.70	.79	.82	.85	.95	.95	.95	.96	.97	.98
NOV 2	.32	.35	.39	.40	.40	.40	.40	.40	.40	.40	.40	.40
NOV 14	* .62	1.00	1.21	1.22	1.24	1.24	1.25	1.28	1.30	1.38	1.48	1.50
MIDLAND												
MAY 9	.55	.94	1.31	1.50	1.78	2.11	*2.51	2.54	2.57	2.61	3.49	*4.36
PORT ARTHUR												
FEB 21	.22	.33	.40	.48	.70	.85	.89	.89	.89	.90	.90	.90
APR 9	.47	.92	1.37	1.83	2.42	3.47	4.25	4.60	4.74	4.90	5.06	5.17
MAY 3	.26	.40	.49	.52	.70	.75	.76	.77	.77	.77	.77	.77
JUN 2	.27	.39	.40	.47	.48	.50	.60	.61	.62	.64	.73	.79
JUN 16	.41	.55	.64	.69	.77	.78	.78	.78	1.18	1.47	1.48	1.48
JUN 17	.18	.34	.41	.44	.49	.52	.53	.53	.53	.53	.53	.53
JUN 20	.21	.31	.36	.38	.39	.45	.46	.62	.67	.69	.84	.85
JUN 26	.12	.23	.35	.38	.38	.39	.39	.39	.39	.39	.39	.39
JUL 2	.21	.35	.46	.53	.72	.75	.75	.75	.75	.75	.75	.75
JUL 10	.36	.67	.83	1.02	1.10	1.21	1.24	1.26	1.28	1.28	1.28	1.28
JUL 19	.45	.75	.87	.94	.99	1.00	1.00	1.00	1.00	1.00	1.00	1.01
JUL 23	.16	.26	.32	.48	.60	.69	.71	.72	.74	.80	.84	.88
JUL 25	.30	.47	.60	.63	.66	.66	.77	.78	.80	.81	.87	.89
SEP 5	.52	.84	1.16	1.38	1.55	1.65	1.69	1.72	1.74	1.77	1.79	1.82
SEP 15	.35	.40	.41	.42	.43	.46	.49	.54	.59	.59	.64	.65
SEP 17	.36	.64	.85	1.02	1.26	1.36	1.36	1.36	1.36	1.36	1.36	1.36
OCT 9	.27	.46	.67	.79	1.01	1.23	1.27	1.28	1.29	1.32	1.38	1.41
NOV 15	.23	.34	.39	.47	.70	.90	.91	.92	.92	.92	.92	.92
NOV 27	.29	.40	.43	.47	.60	.60	.61	.99	1.12	1.13	1.13	1.13
DEC 12	.32	.45	.54	.63	.67	.70	.75	.98	1.33	1.37	1.48	1.48
SAN ANGELO												
FEB 1	.29	.32	.32	.33	.40	.45	.47	.47	.47	.47	.47	.47
MAR 20	.26	.40	.46	.48	.50	.51	.51	.51	.52	.52	.52	.52
APR 9	.22	.42	.53	.55	.67	.70	.71	.71	.72	.72	.74	1.03
MAY 9	.23	.43	.65	.70	.79	.86	.87	.87	.88	.89	.90	.90
JUN 5	.40	.76	.86	1.19	1.28	1.28	1.28	1.28	1.28	1.28	1.28	1.28
JUN 17	.29	.47	.50	.58	.64	.65	.70	.83	.89	.91	1.00	1.08
AUG 12	.29	.53	.65	.83	1.18	1.24	1.33	1.34	1.34	1.35	1.35	1.38
SAN ANTONIO												
JAN 18	.34	.64	.80	1.04	1.35	1.47	1.60	1.97	2.18	2.32	2.43	2.47
JAN 19	.31	.44	.54	.57	.65	.77	.78	.92	.94	.95	.98	1.01
JUN 19	.25	.39	.43	.45	.45	.45	.45	.45	.45	.45	.45	.45
JUL 11	.32	.56	.81	.89	.89	.90	.90	.90	1.06	1.26	1.30	1.30
AUG 20	.36	.43	.53	.53	.53	.53	.53	.53	.53	.56	.65	.65
SEP 4	.16	.28	.39	.46	.52	.62	.72	.76	.78	.80	.82	.91
VICTORIA												
MAY 8	.54	.66	.98	1.16	1.75	2.35	*3.30	4.02	4.15	4.22	4.32	4.37
MAY 11	.53	.90	.92	1.15	1.80	1.90	2.15	2.15	2.16	2.16	2.16	2.16
MAY 11	.20	.30	.35	.40	.50	.65	.86	.86	.86	.86	.86	.86
MAY 12	.35	.55	.85	1.00	1.50	1.70	1.99	2.05	2.09	2.38	2.45	2.45
MAY 17	.39	.47	.50	.58	.77	.81	.81	.83	.83	.83	.83	.83

EXCESSIVE SHORT DURATION RAINFALL

Station and date	5	10	15	20	30	45	60	80	100	120	150	180
	Maximum precipitation in inches (5 to 180 minutes)											
TEXAS												
VICTORIA												
MAY 26	.30	.36	.36	.36	.36	.36	.36	.36	.36	.36	.36	.36
JUN 4	.33	.52	.55	.60	.85	.98	1.14	1.73	1.98	2.06	2.10	2.10
JUN 5	*.85	*1.19	1.19	1.19	1.19	1.19	1.19	1.23	1.24	1.27	1.28	1.28
JUN 19	.30	.55	.60	.75	1.13	1.23	1.28	1.41	1.43	1.43	1.43	1.46
JUN 23	.25	.43	.60	.72	.78	.87	.95	1.00	1.10	1.17	1.32	1.43
JUL 10	.25	.41	.46	.54	.62	.63	.66	.66	.66	.66	.66	.66
JUL 18	.15	.28	.32	.43	.45	.47	.47	.47	.47	.47	.47	.47
JUL 25	.25	.35	.38	.43	.57	.60	.62	.63	.65	.65	.65	.65
AUG 5	.27	.34	.35	.53	.54	.54	.54	.54	.54	.54	.54	.54
SEP 17	.21	.33	.40	.43	.49	.58	.59	.59	.59	.59	.59	.59
SEP 24	.31	.50	.61	.62	.70	.71	.73	.73	.73	.73	.73	.73
SEP 25	.20	.40	.42	.43	.43	.45	.45	.47	.48	.49	.49	.49
OCT 9	.40	.55	.70	.75	.90	1.05	1.08	1.08	1.08	1.08	1.08	1.08
NOV 5	.55	.96	1.02	1.06	1.12	1.22	1.28	1.28	1.28	1.28	1.29	1.28
NOV 15	.25	.30	.31	.32	.32	.32	.32	.32	.32	.32	.32	.32
WACO												
APR 12	.20	.30	.38	.53	.63	.73	.83	.88	.88	.93	1.04	1.14
MAY 9	.27	.50	.68	.92	1.09	1.30	1.70	1.97	2.05	2.09	2.23	2.28
MAY 17	.25	.42	.43	.45	.51	.53	.53	.54	.57	.58	.65	.81
MAY 25	.42	.77	.82	.85	.87	.87	.87	.87	.87	.87	.87	.87
JUN 2	.22	.30	.30	.40	.45	.48	.52	.60	.64	.68	.73	.78
AUG 12	.25	.30	.33	.40	.44	.45	.47	.50	.51	.52	.55	.56
SEP 4	.34	.58	.65	.78	1.02	1.25	1.26	1.33	1.33	1.33	1.33	1.33
SEP 17	.32	.46	.49	.55	.68	.70	.72	.75	.75	.78	.80	.80
SEP 24	.20	.38	.43	.50	.55	.57	.84	1.07	1.14	1.18	1.22	1.23
OCT 9	.35	.51	.57	.87	1.06	1.30	1.35	1.40	1.40	1.40	1.40	1.40
NOV 2	.30	.38	.40	.40	.46	.50	.52	.54	.54	.54	.54	.54
NOV 27	.25	.25	.25	.25	.25	.29	.31	.32	.44	.45	.46	.46
WICHITA FALLS												
APR 18	.29*	.52*	.72	.75*	.75	.75*	.75	.75	.75*	.75	.75*	.75
MAY 9	.15	.25	.32	.39	.53	.72*	.78	.80	.84*	.85	.87*	.87
SEP 21	.19	.36	.46	.52	.54	.54	.55	.62	.62	.62	.62	.62
OCT 9	.19	.32	.44	.52	.53	.54	.55	.55	.55	.56	.58	.58
UTAH												
MILFORD												
JUL 24	.20	.40	.45	.56*	.64	.66	.67	.67	.67	.67	.68	.68
SALT LAKE CITY												
AUG 8	.16	.25	.34	.45	.62	.82	.83	.89	.91	.92	.92	.92
AUG 14	.32	.40	.42	.42	.42	.42	.42	.42	.42	.42	.44	.45
WENDOVER						NONE						
VERMONT												
BURLINGTON												
JUN 30	.26	.33	.35	.36	.38	.40	.42	.45	.47	.47	.47	.47
AUG 9	.49	.53	.58	.60	.60	.61	.62	.62	.62	.52	.62	.62
VIRGINIA												
LYNCHBURG												
JUL 2	.12	.23	.35	.39	.43	.55	.57	.59	.61	.62	.62	.62
JUL 25	.30	.58	.75	.80	.80	.80	.80	.80	.80	.80	.80	.88
AUG 14	.25	.39	.47	.49	.55	.61	.64	.66	.66	.66	.66	.66
SEP 6	.18	.33	.36	.37	.38	.38	.38	.40	.40	.42	.62	.63
SEP 10	.27	.30	.34	.37	.40	.50	.52	.52	.52	.52	.52	.52
NORFOLK												
JUN 17	.31	.57	.60	.60	.61	.76	.80	.87	.92	.92	.92	.92
JUL 3	.42	.75	.93	1.07	1.10	1.12	1.38	1.46	1.49	1.51	1.56	1.57
AUG 9	.18	.36	.38	.38	.38	.38	.38	.38	.38	.38	.38	.38
SEP 26	.27	.27	.43	.52	.62	.73	.89	.97	1.00	1.03	1.05	1.06
OCT 19	.17	.27	.41	.49	.49	.49	.61	.76	1.03	1.17	1.25	1.34
RICHMOND												
JUN 6	.21	.36	.44	.45	.45	.45	.45	.45	.45	.45	.45	.45
JUN 17	.17	.29	.38	.49	.54	.57	.70	.74	.81	.84	.84	.85
JUN 27	.25	.30	.30	.30	.30	.30	.30	.30	.30	.30	.30	.30
JUL 19	.40	.68	.83	.91	1.03	1.09	1.10	1.11	1.12	1.12	1.12	1.12
AUG 2	.20	.34	.36	.37	.39	.40	.40	.40	.42	.42	.48	.50
AUG 19	.27	.48	.61	.66	.78	.81	.83	.83	.83	.93	.83	.83
SEP 6	.46	.75	.95	.97	.98	1.00	1.00	1.00	1.00	1.00	1.00	1.00
ROANOKE												
AUG 3	.20	.36	.47	.53	.68	.75	.80	1.05	1.31	1.36	1.38	1.42
AUG 10	.28	.52	.59	.59	.59	.58	.62	.64	.65	.66	.66	.66
OCT 18	.36	.46	.48	.56	.76	.86	1.16	1.20	1.24	1.32	1.44	1.46
OCT 19	.25	.38	.38	.50	.74	.90	1.22	1.46	1.46	1.58	2.02	2.18
WALLOPS ISLAND												
MAY 29	.15	.22	.28	.35	.55	.70	.61	.91	.98	1.06	1.09	1.10
JUL 10	.16	.30	.35	.52	.70	.80	.86	.96	1.10	1.12	1.12	1.12
JUL 25	.25	.36	.36	.60	.70	.76	1.03	1.05	1.05	1.05	1.05	1.05
SEP 6	.14	.26	.31	.42	.57	.69	.80	.85	.91	1.02	1.10	1.12
SEP 26	.30	.45	.57	.73	.90	.92	.96	.97	.99	1.00	1.00	1.00
OCT 7	.27	.38	.42	.43	.46	.47	.47	.48	.50	.51	.53	.57
WASH NATL AP												
JUN 12	.34	.39	.40	.41	.62	.72	1.04	1.15	1.26	1.30	1.32	1.32
JUN 19	.38	.50	.57	.62	.78	.98	.98	.98	.98	.98	.98	.98
JUN 24	.42	.58	.61	.67	.70	.70	.70	.70	.70	.70	.70	.70
JUN 26	.18	.28	.32	.41	.42	.44	.47	.52	.61	.66	.71	.72
JUN 27	.30	.56	.64	.79	.87	.88	.94	.95	.95	.95	.95	.95
AUG 1	.34	.42	.44	.45	.47	.47	.47	.47	.47	.47	.47	.47
AUG 10	.22	.26	.36	.47	.56	.68	.71	.85	.85	.85	.86	.86
AUG 19	.38	.47	.50	.53	.68	.70	.70	.70	.70	.70	.70	.70
SEP 2	.26	.29	.45	.50	.52	.52	.52	.52	.52	.52	.52	.52
SEP 10	.25	.39	.45	.51	.60	.67	.90	.97	1.15	1.19	1.25	1.32
WASHINGTON												
OLYMPIA												
AUG 26	.17	.30	.35	.37	.40	.41	.41	.41	.41	.41	.41	.41
WASHINGTON												
QUILLAYUTE						NONE						
SEATTLE TACOMA						NONE						
SPOKANE						NONE						
STAMPEDE PASS						NONE						
WALLA WALLA U						NONE						
YAKIMA						NONE						
WEST INDIES												
SAN JUAN P.R.												
MAY 10	.26	.38	.56	.66	.85	1.00	1.03	1.04	1.04	1.04	1.04	1.04
JUN 10	.30	.36	.37	.37	.63	.66	.68	.71	.71	.71	.71	.94
AUG 2	.26	.41	.48	.52	.59	.61	.63	.63	.63	.63	.63	.63
AUG 4	.21	.31	.31	.37	.38	.38	.38	.38	.38	.38	.53	.53
AUG 7	.15	.28	.37	.49	.68	.74	.77	.80	.85	.85	1.06	1.37
AUG 30	.22	.37	.50	.55	.59	.60	.60	.60	.60	.60	.60	.60
SEP 14	.24	.40	.55	.76	1.10	1.16	1.16	1.16	1.16	1.17	1.18	1.18
SEP 24	.20	.31	.33	.33	.33	.33	.33	.33	.33	.33	.33	.33
SEP 25	.23	.44	.52	.55	.63	.70	.73	.88	.89	.89	.89	.89
OCT 10	.20	.33	.39	.42	.45	.45	.45	.45	.45	.45	.45	.45
NOV 4	.15	.28	.41	.44	.51	.53	.53	.53	.53	.53	.53	.53
NOV 15	.34	.53	.75	.80	.87	1.05	1.05	1.05	1.11	1.28	1.38	1.42
NOV 27	.27	.45	.53	.69	.79	.84	.96	1.02	1.09	1.19	1.39	1.46
NOV 27	.19	.32	.39	.45	.67	.86	.98	1.05	1.06	1.11	1.18	1.35
NOV 29	.30	.34	.44	.55	.62	.62	.62	.66	.69	.80	.87	.79
WEST VIRGINIA												
BECKLEY												
MAY 27	.17	.32	.45	.54	.73	.87	1.00	1.14	1.25	1.32	1.39	1.43
JUN 9	.31	.42	.61	.64	.64	.64	.75	.77	.77	.95	1.09	1.12
JUL 12	.26	.39	.50	.52	.55	.56	.56	.57	.59	.62	.64	.67
JUL 22	.32	.45	.56	.60	.63	.71	.79	.89	.93	.98	1.03	1.08
AUG 10	.25	.30	.33	.34	.35	.36	.36	.36	.37	.38	.40	.40
AUG 15	.18	.32	.32	.32	.32	.32	.32	.32	.34	.37	.38	.38
CHARLESTON												
MAY 18	.20	.30	.32	.39	.49	.55	.61	.65	.66	.70	.86	.95
MAY 30	.29	.30	.31	.31	.33	.34	.35	.35	.35	.35	.35	.35
JUN 22	.18	.36	.37	.47	.65	.66	.66	.86	.91	.93	.94	.94
JUN 26	.45	.49	.49	.50	.50	.50	.50	.50	.50	.50	.50	.50
JUL 19	.26	.42	.46	.52	.52	.52	.52	.52	.52	.52	.62	.62
JUL 22	.38	.65	.65	.65	.73	.74	.74	.75	.75	.77	1.02	1.04
AUG 4	.40	.64	.64	.66	.66	.66	.66	.66	.66	.66	.66	.66
AUG 7	.37	.60	.65	.80	.85	.88	.88	.88	.88	.88	.88	.88
AUG 10	.45	.66	.69	.73	.76	.76	.76	.76	.76	.76	.76	.76
AUG 18	.31	.60	.66	.69	.69	.70	.70	.70	.70	.70	.70	.70
SEP 9	.45	.64	.73	.87	1.00	1.23	1.27	1.29	1.30	1.32	1.35	1.37
ELKINS												
MAY 15	.22	.40	.45	.55	.75	.85	.92	.94	.95	.95	.95	.95
JUN 3	.23	.31	.34	.35	.35	.35	.35	.37	.37	.37	.37	.37
JUL 25	.25	.33	.35	.40	.60	.70	.74	.75	.77	.89	.89	.89
AUG 7	.35	.66	.90	1.00	1.05	1.06	1.11	1.16	1.20	1.21	1.24	1.24
AUG 9	.23	.35	.39	.42	.43	.45	.47	.49	.50	.51	.51	.51
AUG 17	.31	.42	.45	.47	.50	.52	.53	.54	.54	.54	.54	.54
HUNTINGTON												
MAY 18	.25	.30	.33	.35	.35	.35	.39	.47	.53	.55	.55	.56
AUG 9	.30	.52	.57	.65	.75	.75	.75	.75	.75	.75	.75	.75
AUG 13	.33	.45	.45	.45	.45	.45	.45	.46	.48	.49	.50	.50
AUG 14	.17	.33	.37	.43	.62	.70	.82	.86	.86	.86	.86	.86
AUG 14	.28	.43	.47	.54	.77	.82	.87	.93	.97	.97	.97	.97
AUG 18	.27	.50	.52	.55	.58	.58	.58	.58	.58	.58	.58	.58
PARKERSBURG U												
APR 23	.40	.48	.53	.58	.64	.67	.75	.79	.84	.85	.87	1.19
JUN 22	.18	.35	.41	.42	.43	.43	.43	.43	.43	.43	.56	.59
JUN 24	.33	.48	.60	.61	.62	.63	.65	.65	.65	.65	.65	.65
JUN 25	.30	.43	.48	.49	.49	.49	.49	.49	.49	.49	.49	.69
JUN 26	.16	.26	.34	.45	.62	.70	.78	.78	.78	.78	.78	.78
JUL 17	.15	.30	.40	.45	.55	.63	.64	.68	.68	.70	.73	.73
JUL 22	.38	.66	1.03	1.28	1.56	1.70	1.73	1.75	1.77	1.78	1.78	1.80
AUG 7	.20	.32	.38	.43	.48	.57	.63	.64	.64	.64	.64	.64
AUG 10	.15	.27	.34	.49	.61	.69	.72	.75	.77	.77	.79	.79
AUG 16	.22	.43	.47	.53	.55	.55	.55	.55	.55	.55	.55	.55
SEP 2	.39	.40	.43	.45	.47	.47	.48	.52	.72	.86	.88	.88
WISCONSIN												
GREEN BAY												
JUN 10	.20	.30	.31	.33	.34	.34	.58	.62	.64	.64	.64	.72
JUN 21	.27	.53	.60	.72	.84	.85	.88	.88	.92	.93	.93	.93
AUG 5	.28	.54	.55	.55	.55	.55	.55	.55	.55	.55	.55	.55
AUG 16	.35	.59	.65	.77	.92	.93	.93	.93	.93	.93	.93	.93
LA CROSSE												
MAY 15	.24	.35	.38	.43	.47	.53	.54	.56	.74	.79	.81	.83
JUN 13	.29	.41	.46	.53	.62	.64	.65	.65	.65	.65	.65	.65
JUN 21	.64	.99	1.01	1.02	1.04	1.38	1.46	1.95	2.46	2.49	2.51	2.51
JUN 21	.28	.30	.32	.33	.33	.33	.33	.33	.33	.33	.33	.33
JUN 23	.28	.40	.41	.43	.43	.43	.43	.43	.43	.43	.43	.53
JUL 21	.23	.30	.39	.47	.55	.56	.57	.57	.57	.57	.57	.57
JUL 23	.15	.24	.33	.45	.64	.79	.88	1.07	1.21	1.26	1.43	1.55
JUL 26	.18	.34	.50	.51	.51	.51	.51	.51	.51	.51	.51	.51
AUG 6	.20	.36	.40	.43	.45	.46	.51	.52	.53	.56	.58	.60
SEP 7	.26	.35	.36	.38	.39	.40	.57	.70	.71	.74	.75	.75
SEP 8	.26	.31	.36	.49	.56	.63	.65	.65	.65	.71	.71	.71
SEP 8 C	.27	.42	.43	.55	.67	.68	.68	.68	.76	.76	.77	.79
MADISON												
JUN 21	.19	.30	.37	.47	.61	.72	.80	.84	.84	.96	1.03	1.33
JUN 23	.37	.63	.71	.72	.73	.74	.74	.75	.75	.75	.75	.75
JUN 26	.12	.23	.28	.37	.53	.75	1.02	1.19	1.28	1.39	1.65	1.89
AUG 19	.26	.41	.42	.47	.55	.65	.70	.80	.80	.80	.80	.80

C RECORD ENDED SEPTEMBER 30.

Station and date	Maximum precipitation in inches (5 to 180 minutes)											
	5	10	15	20	30	45	60	80	100	120	150	180
WISCONSIN												
MILWAUKEE												
JUN 18	.32	.54	.60	.62	.67	.68	.68	.68	.68	.68	.68	.68
JUL 21	.26	.29	.31	.32	.32	.32	.32	.32	.32	.32	.32	.32
JUL 23	.28	.50	.65	.74	.80	.83	.85	.85	.85	.85	.85	.85
AUG 20	.18	.30	.46	.58	.62	.70	1.01	1.03	1.04	1.04	1.20	1.24
SEP 24	.28	.44	.50	.54	.66	.85	.90	.94	.96	.96	1.02	1.02
WYOMING												
CASPER												
JUL 6	.20	.31	.33	.33	.33	.33	.33	.34	.34	.34	.34	.34
CHEYENNE						NONE						
LANDER						NONE						
SHERIDAN												
MAY 22	.20	.36	.52	.56	.57	.58	.58	.58	.58	.58	.58	.58

Data from airport unless otherwise specified.
U indicates Urban, R indicates Rural, sites.

* Maximum of record for this duration and station. Period of record is that compiled in Weather Bureau Technical Paper No. 2, revised, plus 1962 and 1963 data. New records are denoted only for 5, 10, 15, 30, 60, 120, and 180 minutes. The continuity of record at stations that have changed location is described on page 2 of the above reference.

SUNSHINE, AMOUNT AND PERCENT

Station	January		February		March		April		May		June		July		August		September		October		November		December		Annual	
	Hours	Percent of possible	Hours	Percent of possible	Hours	Percent of possible	Hours	Percent of possible	Hours	Percent of possible	Hours	Percent of possible	Hours	Percent of possible	Hours	Percent of possible	Hours	Percent of possible	Hours	Percent of possible	Hours	Percent of possible	Hours	Percent of possible	Hours	Percent of possible
ALABAMA																										
BIRMINGHAM	125	39	174	55	257	69	241	62	316	73	355	83	271	62	312	75	270	73	240	68	165	53	178	58	2903	65
MONTGOMERY	107	33	172	54	248	67	228	59	310	72	334	78	296	68	229	55	252	68	220	62	157	50	178	57	2730	61
ALASKA																										
ANCHORAGE	92	45	57	22	214	58	203	46	245	45	290	50	266	47	245	50	207	54	85	27	54	24	68	39	2026	45
JUNEAU	99	44	95	35	133	36	126	29	265	51	224	41	220	41	230	48	34	9	80	25	47	20	85	42	1639	36
NOME	43	26	180	72	166	45	208	46	285	49	355	56	261	43	154	30	182	47	89	30	63	33	38	29	2025	44
ARIZONA																										
PHOENIX	264	83	259	81	292	79	360	92	413	96	419	97	370	85	360	87	367	99	320	91	236	75	271	87	3931	88
TUCSON	232	72	230	72	285	77	360	93	418	98	418	98	346	79	335	81	341	92	332	94	267	85	266	85	3830	86
YUMA	290	91	264	83	336	90	382	98	419	98	419	98	378	87	385	93	370	100	329	93	273	87	263	84	4107	92
ARKANSAS																										
FORT SMITH	99	32	197	62	217	58	258	66	232	53	306	70	336	76	294	70	289	78	269	77	107	35	183	60	2787	62
LITTLE ROCK	147	47	233	73	247	67	280	72	315	73	352	81	328	74	302	72	259	70	241	69	120	39	171	56	2996	67
CALIFORNIA																										
EUREKA U	174	58	109	35	222	60	285	71	300	67	299	66	193	42	189	44	201	54	201	58	92	31	110	38	2374	53
FRESNO	146	47	126	40	267	72	356	90	365	83	398	91	396	89	386	92	369	99	287	82	137	45	92	31	3325	75
LOS ANGELES U	205	65	148	46	312	84	-	-	-	-	209	48	303	69	317	76	254	68	-	-	211	68	254	82		
RED BLUFF	151	50	147	47	251	68	359	91	384	86	412	92	425	93	357	84	359	96	282	82	140	47	130	45	3395	76
SACRAMENTO	169	55	162	52	292	79	354	89	409	92	428	96	429	95	387	92	367	98	300	87	165	54	153	52	3614	81
SAN DIEGO	267	84	201	63	274	74	290	74	269	63	240	56	306	70	315	76	239	64	222	63	254	81	242	78	3118	70
SAN FRANCISCO U	194	63	173	55	303	82	375	95	318	72	340	77	297	66	279	66	277	74	245	71	180	59	158	53	3138	70
COLORADO																										
DENVER	241	80	228	73	292	79	287	72	287	64	316	70	263	58	292	69	297	80	246	71	186	62	203	69	3136	70
GRAND JUNCTION	209	69	144	46	275	74	206	52	285	64	363	81	317	70	279	66	287	77	219	63	172	57	122	42	2879	64
PUEBLO	224	73	206	66	291	79	307	77	347	79	386	87	343	76	321	76	322	86	288	83	191	63	214	72	3439	77
CONNECTICUT																										
HARTFORD	182	62	235	76	188	51	303	76	249	55	215	47	334	72	324	76	282	75	207	60	84	28	151	53	2753	62
NEW HAVEN	183	61	227	73	199	54	299	75	255	57	234	52	352	77	300	70	296	79	247	72	117	39	166	58	2874	64
FLORIDA																										
APALACHICOLA U	155	48	200	62	291	78	287	74	368	87	357	85	313	73	224	55	257	69	234	66	176	55	202	63	3062	69
JACKSONVILLE	160	50	200	62	292	79	275	71	306	72	277	66	279	65	263	64	218	59	209	59	207	65	212	67	2897	65
KEY WEST	272	81	245	74	282	76	337	88	270	65	320	78	352	84	326	81	288	78	226	63	235	71	229	69	3382	76
LAKELAND U	257	78	206	63	286	77	260	67	346	82	204	49	229	54	275	68	245	66	226	63	222	69	224	69	2978	67
PENSACOLA	177	55	217	67	254	68	229	59	274	65	325	77	286	66	256	62	253	68	263	74	191	60	201	63	2926	66
TAMPA	232	71	225	69	320	86	343	89	328	78	230	55	258	61	219	54	233	63	249	70	240	74	236	73	3113	70
GEORGIA																										
ATLANTA	166	52	225	71	282	76	243	62	319	74	336	78	272	62	307	74	239	64	210	60	192	61	203	66	2995	67
MACON	145	45	217	68	302	81	238	61	306	71	313	73	292	67	313	76	253	68	219	62	163	52	192	62	2952	66
SAVANNAH	174	54	200	62	258	69	241	62	267	62	286	67	303	70	264	64	275	74	247	70	214	68	214	69	2942	66
HAWAII																										
HILO	125	36	140	42	90	24	103	27	191	47	142	36	158	39	150	38	150	41	182	50	168	50	85	25	1684	38
HONOLULU	220	65	249	75	187	50	152	40	236	58	272	68	291	71	294	74	286	78	232	64	210	63	180	53	2810	63
KAHULUI	198	58	199	60	150	40	180	48	253	62	291	73	287	70	309	78	285	78	285	79	245	73	186	55	2869	65
LIHUE	188	55	210	63	149	40	216	57	262	64	282	70	266	64	281	70	260	71	217	60	180	54	131	39	2640	59
IDAHO																										
BOISE	154	53	182	60	261	71	303	75	336	74	363	79	431	92	259	60	296	79	220	64	105	36	65	23	2975	67
POCATELLO	162	55	172	56	275	74	272	68	319	70	348	76	402	86	270	63	281	75	237	69	95	33	58	21	2890	65
ILLINOIS																										
CAIRO U	115	37	172	55	228	61	259	66	259	59	339	77	322	72	319	76	277	74	229	66	84	27	141	47	2744	61
CHICAGO MIDWAY	117	40	200	65	237	64	215	54	243	54	257	57	309	67	294	69	224	60	200	58	74	25	68	24	2439	55
MOLINE	136	46	220	71	253	68	223	56	215	48	296	65	348	76	308	72	225	60	215	62	107	36	112	39	2657	59
PEORIA	142	48	210	68	238	64	243	61	197	44	301	67	331	72	304	71	228	61	224	65	89	30	90	31	2596	58
SPRINGFIELD	153	51	205	66	221	60	241	61	234	53	331	74	314	69	301	71	247	66	245	71	90	30	111	38	2692	60
INDIANA																										
EVANSVILLE	133	43	204	65	223	60	232	59	240	54	350	79	318	71	309	73	261	70	238	68	106	35	118	40	2731	61
FORT WAYNE	144	48	200	65	220	59	261	65	258	58	324	72	373	81	332	78	246	66	207	60	104	35	93	32	2763	62
INDIANAPOLIS	118	39	206	66	195	53	260	65	216	48	319	71	280	62	303	71	239	64	193	56	54	18	58	20	2441	55
IOWA																										
DES MOINES	150	51	197	64	261	70	210	52	233	52	315	69	346	75	286	67	243	65	194	56	81	27	139	49	2654	59
SIOUX CITY	188	64	172	56	293	79	245	61	276	61	317	69	346	75	319	74	270	72	205	60	132	45	117	41	2880	64
KANSAS																										
CONCORDIA	177	59	164	53	276	75	276	69	275	62	329	73	314	69	299	70	291	78	250	72	147	49	180	62	2979	67
DODGE CITY	196	64	230	73	299	81	324	82	281	64	394	89	369	82	330	78	338	91	282	81	147	48	160	54	3348	75
TOPEKA	156	52	171	55	276	75	268	68	274	62	313	70	315	70	267	63	283	76	207	60	114	38	154	52	2798	63
WICHITA	120	39	216	69	253	68	283	72	256	58	308	70	298	66	293	70	277	74	241	69	128	42	201	68	2875	64
KENTUCKY																										
LOUISVILLE	121	39	194	62	203	55	220	55	201	45	305	69	274	61	302	71	252	67	233	67	120	39	119	40	2544	57
LOUISIANA																										
SHREVEPORT	100	31	199	60	174	47	190	49	244	57	251	59	272	63	280	68	252	68	238	67	166	53	161	52	2527	57
MAINE																										
PORTLAND	187	65	207	68	169	46	247	61	244	53	137	30	330	71	312	72	235	63	196	57	84	29	136	49	2484	56
MARYLAND																										
BALTIMORE	157	52	226	73	243	66	234	59	221	50	277	62	298	66	262	62	268	72	165	48	96	32	135	46	2582	58
MASSACHUSETTS																										
BLUE HILL OBS R	166	58	193	65	164	46	260	67	243	56	182	41	310	71	271	66	243	68	202	61	84	30	145	53	2463	57
BOSTON	185	63	213	69	189	51	287	71	260	57	237	52	339	73	295	69	270	72	219	64	103	35	158	56	2755	62
NANTUCKET	160	54	177	57	212	57	227	57	213	47	188	42	269	59	239	56	228	61	193	56	73	25	96	33	2274	51
MICHIGAN																										
ALPENA	83	29	150	50	210	57	240	59	254	55	223	48	321	68	306	70	213	57	154	45	64	22	69	25	2287	51
DETROIT M WAYNE CO	131	44	184	60	211	57	243	61	222	49	258	56	359	78	317	74	233	62	195	57	95	32	55	19	2501	56
GRAND RAPIDS	101	35	155	51	217	59	218	54	238	52	248	54	333	72	298	69	186	50	178	52	100	34	82	29	2354	53
LANSING	143	49	170	55	207	56	241	60	246	54	267	58	355	77	306	71	207	55	162	47	83	28	90	32	2476	55
MARQUETTE U	105	37	151	50	200	54	196	48	251	54	209	44	315	66	319	73	194	52	163	48	75	27	52	19	2230	50
SAULT STE MARIE	107	38	151	50	220	60	190	47	256	55	198	42	294	62	281	64	187	50	113	33	54	19	86	32	2137	48
MINNESOTA																										
DULUTH	113	40	214	71	201	54	215	53	198	43	209	44	286	60	266	61	218	58	134	40	80	28	91	34	2223	50
MINNEAPOLIS	124	43	226	75	254	69	205	51	198	43	272	58	354	75	312	72	248	66	172	50	86	30	105	38	2556	57

SUNSHINE, AMOUNT AND PERCENT

Station	January		February		March		April		May		June		July		August		September		October		November		December		Annual	
	Hours	Percent of possible	Hours	Percent of possible	Hours	Percent of possible	Hours	Percent of possible	Hours	Percent of possible	Hours	Percent of possible	Hours	Percent of possible	Hours	Percent of possible	Hours	Percent of possible	Hours	Percent of possible	Hours	Percent of possible	Hours	Percent of possible	Hours	Percent of possible
MISSISSIPPI																										
JACKSON	136	43	209	65	230	62	181	47	248	58	269	63	271	62	261	63	246	66	225	64	131	42	162	52	2570	58
MISSOURI																										
COLUMBIA	132	43	207	66	226	61	235	59	283	64	347	78	319	71	287	68	230	62	226	65	93	31	121	41	2705	61
KANSAS CITY	126	41	189	61	258	70	265	67	268	60	331	74	303	67	263	62	278	74	234	68	115	38	169	57	2798	63
ST LOUIS	129	42	204	65	214	58	258	65	243	55	352	79	328	73	272	64	254	68	250	72	79	26	110	37	2691	60
SPRINGFIELD	97	31	154	49	258	69	270	68	214	49	300	68	277	62	227	54	249	67	254	73	96	31	176	59	2571	58
MONTANA																										
BILLINGS	112	40	148	49	260	70	233	57	307	66	214	46	406	85	256	59	253	67	184	54	99	35	48	18	2519	56
GREAT FALLS	131	48	164	55	267	72	305	75	340	73	295	62	407	85	291	66	213	56	188	56	121	43	117	44	2839	63
HAVRE	128	47	207	70	261	71	327	80	360	76	339	70	430	88	360	81	265	70	217	65	124	45	125	48	3141	70
HELENA	139	50	152	51	250	68	269	66	280	60	222	47	388	81	277	63	206	55	173	51	102	36	65	24	2522	56
MISSOULA	68	24	151	50	218	59	242	59	294	63	263	55	419	87	288	65	212	56	158	47	84	30	70	26	2467	55
NEBRASKA																										
LINCOLN U	183	61	180	58	297	80	255	64	297	66	337	75	340	74	295	69	272	73	212	62	119	40	110	38	2897	65
NORTH PLATTE	209	70	196	63	301	81	257	64	261	58	346	76	335	73	312	73	292	78	240	70	142	48	148	51	3037	68
OMAHA	182	61	166	54	297	80	251	63	303	67	363	80	355	77	309	72	274	73	258	75	138	46	100	35	2995	67
VALENTINE	193	66	182	59	270	73	283	70	299	66	321	70	382	82	301	70	292	78	234	68	144	49	114	41	3016	67
NEVADA																										
ELY	254	84	202	65	257	69	282	71	324	73	355	79	361	80	314	74	327	88	264	76	152	51	184	63	3276	73
LAS VEGAS	257	83	234	74	333	90	365	93	398	91	399	91	376	85	359	86	348	93	297	85	257	83	211	70	3834	86
RENO	209	69	156	50	307	83	341	86	380	85	390	87	387	85	333	78	358	96	291	84	150	50	161	55	3462	78
WINNEMUCCA	166	56	130	42	193	52	213	53	300	67	329	73	381	83	266	62	298	80	268	78	60	20	85	29	2689	60
NEW HAMPSHIRE																										
CONCORD	171	59	199	65	184	50	271	67	282	62	158	34	309	66	244	57	233	62	197	58	95	32	140	50	2481	55
MT WASHINGTON OBS	126	43	78	25	101	27	182	44	177	38	92	20	153	32	111	25	156	41	116	33	64	22	83	29	1438	32
NEW JERSEY																										
ATLANTIC CITY	143	47	190	61	200	54	241	61	184	41	260	58	267	59	302	71	258	69	181	52	87	29	143	49	2455	55
TRENTON U	173	58	224	72	221	60	282	71	247	55	271	60	277	61	274	64	274	73	200	58	94	31	162	56	2698	60
NEW MEXICO																										
ALBUQUERQUE	248	79	210	66	245	66	283	72	364	84	401	92	320	72	323	78	335	90	288	82	203	65	226	74	3447	77
ROSWELL	193	61	218	68	222	60	308	79	330	77	369	86	313	72	265	64	321	86	293	83	182	58	232	75	3244	73
NEW YORK																										
ALBANY	172	59	195	64	171	46	295	73	246	54	187	41	312	67	263	61	243	65	159	46	58	20	119	42	2420	54
BINGHAMTON	128	44	135	44	146	39	256	64	172	38	238	52	336	73	291	68	268	72	156	45	51	17	82	29	2259	51
BUFFALO	109	37	157	51	176	48	286	71	202	44	261	57	342	74	293	68	255	68	182	53	62	21	75	26	2399	54
NEW YORK U	179	60	227	73	194	52	277	69	238	53	249	55	273	60	275	65	289	77	221	64	99	33	176	61	2696	60
ROCHESTER	113	39	186	61	197	53	262	65	209	46	256	56	355	76	312	72	251	67	161	47	51	17	70	25	2422	54
SYRACUSE	106	36	131	43	206	56	283	70	221	49	225	49	313	67	284	66	256	68	143	42	26	9	56	20	2250	50
NORTH CAROLINA																										
ASHEVILLE	140	45	225	71	278	75	250	64	283	65	298	68	248	56	293	70	222	60	183	52	132	43	189	62	2741	61
CAPE HATTERAS R	183	58	225	71	296	80	243	62	316	73	343	79	327	74	333	80	309	83	262	75	188	61	153	50	3176	71
CHARLOTTE	180	58	236	74	312	84	286	73	318	73	321	74	314	71	337	81	293	79	252	72	187	60	200	66	3235	73
GREENSBORO	144	46	230	73	267	72	184	47	217	50	236	54	251	56	304	73	274	74	221	63	155	50	165	55	2647	59
RALEIGH	159	51	215	68	279	75	182	46	219	50	288	66	272	61	290	69	278	75	257	73	177	57	167	55	2784	62
WILMINGTON	171	54	226	71	320	86	284	73	340	79	298	69	265	60	274	66	235	63	205	58	182	58	181	59	2981	67
NORTH DAKOTA																										
BISMARCK	158	56	143	48	265	72	295	72	338	72	289	61	411	86	343	78	295	78	203	60	130	46	92	34	2961	66
FARGO	128	46	183	61	252	68	255	62	247	53	321	68	383	80	375	85	256	68	182	54	82	29	58	22	2722	61
WILLISTON	181	66	171	58	292	79	325	79	332	71	256	53	390	81	300	68	271	72	187	56	109	39	160	61	2975	66
OHIO																										
CINCINNATI OBS	123	41	198	63	244	66	270	68	183	41	279	63	267	59	267	63	223	60	190	55	87	29	114	39	2444	55
CLEVELAND	107	36	168	54	220	60	236	59	182	40	236	52	259	56	271	63	240	64	186	54	61	21	24	8	2189	49
COLUMBUS	139	46	194	62	187	50	199	50	156	35	257	57	257	57	227	53	220	59	197	57	85	28	74	25	2192	49
DAYTON	128	42	205	66	207	56	230	58	224	50	316	70	315	69	291	69	244	65	199	58	84	28	69	24	2510	56
TOLEDO	135	46	192	62	222	60	254	64	222	49	263	58	310	67	287	67	238	63	184	53	114	38	101	35	2521	56
OKLAHOMA																										
OKLAHOMA CITY	91	29	205	65	187	50	275	70	242	56	306	70	338	76	278	67	292	79	266	76	153	49	183	60	2816	63
TULSA	98	32	191	61	229	62	275	70	246	56	315	72	316	71	294	70	291	78	259	74	125	41	174	58	2813	63
OREGON																										
PORTLAND	78	28	190	63	169	46	210	52	257	56	275	59	317	67	214	49	186	50	118	35	68	24	29	11	2112	47
PACIFIC AREA																										
JOHNSTON	281	80	261	77	161	43	161	43	186	46	208	53	213	53	166	42	232	63	266	73	216	63	163	47	2515	57
KOROR R	277	76	219	64	314	84	303	82	304	79	269	72	233	60	242	63	237	65	246	66	243	69	200	55	3087	70
MAJURO	218	60	199	58	222	59	220	60	242	63	240	64	218	56	216	56	255	70	218	59	180	51	163	45	2589	58
PAGO PAGO	178	45	119	33	206	55	131	37	159	45	136	40	235	67	177	49	174	48	154	40	243	63	237	59	2148	48
PONAPE R	108	29	113	33	121	32	177	48	166	43	183	49	162	42	258	67	218	60	211	57	183	52	146	40	2046	46
TAGUAC GUAM R	191	54	174	51	212	57	264	71	271	68	237	61	184	46	191	49	172	47	169	46	126	36	181	51	2372	53
TRUK MOEN ISLAND	210	58	201	58	245	66	207	56	226	58	255	68	248	64	287	75	267	73	240	65	233	66	226	62	2846	64
WAKE	221	64	225	67	258	69	254	67	330	82	344	86	339	83	295	75	252	69	274	75	242	72	229	67	3261	73
YAP R	202	56	149	43	250	67	241	65	300	77	234	61	231	59	192	50	195	53	209	56	191	54	144	40	2535	57
PENNSYLVANIA																										
HARRISBURG	138	46	213	69	201	54	295	74	217	48	298	66	377	83	303	71	286	77	172	50	70	23	127	44	2697	60
PHILADELPHIA	144	48	190	61	204	55	250	63	219	49	280	62	296	65	299	70	268	72	206	59	95	32	140	48	2589	58
PITTSBURGH	112	37	184	59	174	47	232	58	150	34	271	60	327	71	331	78	274	73	205	59	69	23	62	21	2390	54
PITTSBURGH U	100	33	167	54	156	42	224	56	146	33	262	58	311	68	325	76	272	73	197	57	67	23	59	20	2285	51
READING U	157	52	204	66	198	53	256	64	218	49	260	58	304	67	278	65	257	69	157	45	67	23	148	51	2504	56
SCRANTON	155	52	199	65	181	49	270	67	201	45	247	55	330	72	280	65	266	71	144	42	56	19	125	43	2453	55
RHODE ISLAND																										
PROVIDENCE	178	60	219	71	192	52	275	69	231	51	208	46	284	62	248	58	249	66	212	62	86	29	160	56	2541	57
SOUTH CAROLINA																										
CHARLESTON	175	55	207	65	255	69	200	51	255	59	293	68	272	62	244	59	186	50	177	50	208	66	187	60	2657	60
COLUMBIA	171	54	233	73	302	81	260	66	293	68	275	64	271	62	285	69	249	67	200	57	161	52	209	68	2908	65
GNVLE SPARTANBURG	136	43	210	66	291	79	231	59	245	56	237	55	261	59	315	76	215	58	191	55	138	44	168	55	2638	59
SOUTH DAKOTA																										
HURON	178	62	195	64	266	72	267	66	265	58	280	60	363	77	304	70	244	65	204	60	153	53	130	47	2848	64
RAPID CITY	169	59	191	63	249	67	235	58	245	53	265	57	333	71	278	64	256	68	209	61	123	43	91	33	2642	59
TENNESSEE																										
CHATTANOOGA	122	39	187	59	221	59	187	48	223	51	277	64	224	51	245	59	218	58	188	54	141	45	134	44	2365	53
KNOXVILLE	105	34	174	55	241	65	220	56	272	62	303	69	293	66	316	76	258	69	215	62	128	42	98	32	2624	59
MEMPHIS	117	37	157	49	231	62	230	59	284	65	337	78	313	71	313	75	266	71	242	69	167	54	191	63	2848	64
NASHVILLE	128	41	172	54	235	63	220	56	226	52	282	64	240	54	291	70	231	62	192	55	130	42	151	50	2497	56

SUNSHINE, AMOUNT AND PERCENT

YEAR 1968

Station	January		February		March		April		May		June		July		August		September		October		November		December		Annual	
	Hours	Percent of possible	Hours	Percent of possible	Hours	Percent of possible	Hours	Percent of possible	Hours	Percent of possible	Hours	Percent of possible	Hours	Percent of possible	Hours	Percent of possible	Hours	Percent of possible	Hours	Percent of possible	Hours	Percent of possible	Hours	Percent of possible	Hours	Percent of possible
TEXAS																										
ABILENE	112	35	189	59	223	60	277	71	316	74	344	80	356	82	362	88	308	83	262	74	172	55	235	75	3154	71
AMARILLO	179	57	196	62	251	68	324	82	281	65	362	83	324	73	285	68	338	91	282	80	147	48	198	65	3168	71
AUSTIN	99	31	177	55	152	41	176	45	235	55	244	58	322	75	311	76	237	64	201	57	182	57	177	56	2513	56
BROWNSVILLE	98	29	149	45	192	51	206	54	296	71	330	80	324	77	303	75	253	69	237	66	154	47	109	33	2650	62
CORPUS CHRISTI	104	32	147	45	197	53	158	41	214	51	239	58	279	66	304	75	190	51	243	68	198	61	165	51	2436	55
DALLAS	86	27	189	59	190	51	217	56	225	52	270	63	320	73	325	79	264	71	256	73	186	59	211	68	2737	61
EL PASO	201	63	232	72	241	65	327	84	404	94	383	90	341	78	332	81	354	96	330	93	232	73	277	89	3654	82
GALVESTON U	97	30	151	46	175	47	181	47	249	59	152	34	231	54	300	74	241	65	233	65	192	60	182	57	2383	54
HOUSTON	113	35	170	53	128	34	141	36	233	55	206	49	291	68	284	69	216	58	221	62	177	55	169	53	2348	57
PORT ARTHUR	123	38	205	63	155	42	195	50	292	69	202	48	270	63	296	72	241	65	244	69	185	58	167	49	2563	58
SAN ANTONIO	120	37	180	54	161	43	160	41	181	43	220	52	296	69	306	75	234	63	205	59	209	65	194	58	2456	55
UTAH																										
SALT LAKE CITY	182	61	173	56	299	81	253	63	300	67	355	79	406	89	311	73	318	85	304	88	145	49	85	31	3134	70
VERMONT																										
BURLINGTON	170	59	189	62	197	53	315	78	332	72	250	54	374	80	326	75	283	75	190	56	77	27	92	33	2794	62
VIRGINIA																										
LYNCHBURG	147	48	237	75	263	71	232	59	260	59	311	71	242	54	301	72	270	73	179	51	140	46	148	50	2730	61
NORFOLK	172	56	226	72	275	74	284	72	324	74	359	82	340	76	342	82	310	83	221	63	152	49	191	64	3195	72
RICHMOND	149	48	221	70	252	68	250	63	288	65	326	74	293	65	320	76	283	76	204	59	140	46	162	54	2886	65
WASH NATL AP	139	46	191	61	240	65	263	66	226	51	269	60	275	61	291	69	280	75	192	55	117	34	138	47	2621	59
WASHINGTON																										
QUILLAYUTE	34	12	146	49	99	27	124	30	170	36	158	33	235	49	165	37	163	43	43	13	9	3	47	18	1393	31
SEATTLE TACOMA	35	13	162	54	154	42	190	46	262	56	243	51	352	73	218	50	204	54	149	44	91	29	49	19	2100	47
SPOKANE	67	24	191	64	214	58	217	53	298	63	279	58	415	86	246	56	244	65	138	41	51	18	52	20	2412	54
WALLA WALLA U	53	19	97	32	189	51	231	57	309	67	336	71	421	89	284	65	253	67	163	48	48	17	25	9	2408	54
WEST INDIES																										
SAN JUAN P.R.	212	61	198	59	309	83	319	85	275	68	210	53	268	66	324	82	287	78	291	80	230	68	183	54	3108	70
WEST VIRGINIA																										
PARKERSBURG U	139	46	205	66	209	56	218	55	166	37	259	58	294	65	261	62	220	59	188	54	78	26	76	26	2311	52
WISCONSIN																										
GREEN BAY	86	30	192	63	192	52	222	55	234	51	258	55	312	66	289	66	177	47	179	53	121	42	98	36	2359	53
MADISON	124	42	205	67	220	59	217	54	241	53	283	61	356	77	312	72	236	63	176	51	101	35	97	34	2568	57
MILWAUKEE	113	39	214	70	244	66	223	55	254	56	279	61	362	78	326	76	241	64	203	59	111	38	95	34	2665	59
WYOMING																										
CHEYENNE	202	68	200	65	265	72	253	63	266	59	277	61	264	57	253	59	269	72	219	64	174	59	136	47	2778	62
LANDER	198	67	204	66	291	79	274	68	264	58	359	78	370	80	311	72	294	78	250	73	165	56	139	49	3118	70
SHERIDAN	157	55	165	55	235	64	247	61	279	61	272	58	380	81	285	65	274	73	201	59	135	47	121	44	2750	61

Data from airport unless otherwise specified.
"U" indicates Urban, "R" indicates Rural, sites.

ANNUAL CLIMATOLOGICAL DATA

ENGLISH UNITS

YEAR 1968

State and Station	Temperature: Averages: Daily maximum	Daily minimum	Annual	Extremes: Highest	Date	Lowest	Date	Heating degree days	Precipitation: Total	Greatest in 24 hours	Date (s)	Snow, Sleet: Total	Greatest in 24 hours	Date (s)	Relative humidity: 1:00 a.m. EST	7:00 a.m. EST	1:00 p.m. EST	7:00 p.m. EST
	°F	°F	°F	°F		°F		Base 65 °F	In	In		In	In		%	%	%	%
ALABAMA																		
BIRMINGHAM	72.3	49.1	60.7	99	JUL 1	15	DEC 15	3276	51.20	4.39	JUL 9-10	1.7	1.0	JAN 14	78	80	53	60
HUNTSVILLE	70.0	48.6	59.3	101	AUG 23	9	JAN 8	3736	42.43	2.60	MAY 11-12	9.1	2.4	JAN 14	82	86	58	63
MOBILE	77.6	56.4	67.0	102	AUG 22+	24	DEC 16+	2044	43.96	5.50	DEC 30-31	1.2	1.2	FEB 23	80	82	53	63
MONTGOMERY	75.2	52.2	63.7	100	AUG 24+	20	DEC 16+	2661	35.46	2.64	NOV 17-18	T	T	NOV 11 +	78	85	53	59
ALASKA																		
ANCHORAGE	42.3	29.1	35.7	82	AUG 6	-18	FEB 3	10637	12.08	.83	MAY 30-31	83.4	8.2	OCT 14-15	66	72	70	60
ANNETTE	52.9	39.9	46.4	81	AUG 9	5	DEC 28	6721	110.80	3.48	JAN 21-22	60.7	9.0	JAN 16-17	78	81	75	68
BARROW	15.5	4.5	10.0	76	AUG 8	-49	FEB 7+	20066	3.31	.20	NOV 7-8	33.7	2.7	NOV 7-8	82	83	83	81
BARTER ISLAND	16.4	4.4	10.4	64	AUG 8+	-51	FEB 6+	19900	5.69	.56	MAY 11-12	46.8	5.1	JUN 7-8	78		77	75
BETHEL	36.9	21.1	29.0	83	JUL 25	-30	JAN 20	13098	9.57	.72	AUG 21	46.6	3.4	APR 11-12	79	88	86	72
COLD BAY	43.0	34.1	38.6	72	JUL 25	- 1	FEB 10	9581	28.36	4.90	OCT 22	62.2	11.4	OCT 22	81	84	84	76
FAIRBANKS	36.1	15.0	25.6	89	JUL 24	-56	FEB 5	14454	7.73	1.25	DEC 18-19	71.0	14.7	DEC 18-19	61	70	65	55
JUNEAU	46.5	32.1	39.3	77	AUG 4+	-22	FEB 2	9321	48.02	1.95	FEB 5-6	106.7	10.8	DEC 2-3	86	91	85	77
KING SALMON	39.9	24.1	32.0	84	AUG 5	-29	DEC 2	11976	15.20	.87	SEP 27	60.6	8.5	JAN 22	67	73	72	60
KOTZEBUE	26.6	13.4	20.0	82	JUL 8	-52	FEB 24+	16394	6.69	.46	MAY 10-11	51.5	4.2	APR 4-5	74	77	77	73
MC GRATH	35.1	14.3	24.7	87	AUG 6+	-52	FEB 6+	14690	9.15	.59	DEC 18-19	79.8	6.6	DEC 17-18	64	74	70	55
NOME	32.2	15.8	24.0	86	JUL 8	-37	FEB 4	14913	10.88	1.15	AUG 4-5	45.7	3.7	JAN 24-25	67	71	69	63
ST. PAUL ISLAND	38.0	29.7	33.9	55	JUL 8+	- 7	MAR 3	11287	21.10	.96	JUL 26-27	66.8	5.3	OCT 31	88	90	90	86
SHEMYA	41.6	34.6	38.1	60	JUL 31	21	DEC 22+	9729	17.27	1.12	AUG 22-23	34.9	3.8	DEC 13-14	85	87	87	82
YAKUTAT	44.2	29.4	36.8	77	AUG 5	-15	FEB 2	10239	116.49	3.68	FEB 25-26	208.1	18.1	APR 12-13	90	92	84	77
ARIZONA																		
FLAGSTAFF	59.9	29.5	44.7	90	JUN 21+	-16	DEC 22	7405	16.53	1.34	OCT 3	91.1	12.4	JAN 27-28	63	71	40	40
PHOENIX	85.0	55.5	70.3	115	JUN 22+	24	DEC 22	1387	6.67	.88	JUL 30-31	T	T	DEC 20	45	58	34	24
TUCSON	81.7	54.5	68.1	110	JUN 22	19	DEC 22	1493	8.94	1.86	NOV 13-14	.4	.4	DEC 20-21	45	55	32	25
WINSLOW	67.1	37.8	52.5	103	JUL 21	- 9	DEC 22+	5567	4.54	.70	OCT 3-4	9.7	3.3	DEC 17	48	57	37	31
YUMA	87.0	59.0	73.0	116	JUN 21	27	DEC 22	890	1.67	.86	JUL 5-6	.0	.0		40	52	31	21
ARKANSAS																		
FORT SMITH	71.8	48.7	60.3	100	AUG 9+	7	JAN 7	3552	51.74	5.02	MAY 12-13	8.6	5.3	MAR 11-12	77	81	53	54
LITTLE ROCK	70.4	49.4	59.9	97	AUG 22	10	JAN 7	3474	60.65	5.00	MAY 13-14	5.3	2.2	FEB 14-15	77	81	56	60
CALIFORNIA																		
BAKERSFIELD	78.1	54.5	66.3	108	JUL 11+	25	DEC 22	1853	5.14	.80	OCT 13-14	T	T	DEC 20	53	64	49	36
BISHOP	75.0	38.3	56.7	104	JUN 26+	4	DEC 22	4093	1.82	.40	JUL 30	2.2	1.8	DEC 26			26	17
BLUE CANYON	58.8	43.0	50.9	87	AUG 30+	13	DEC 20	5501	64.57	3.61	OCT 11-12	210.1	22.5	DEC 24-25			46	
EUREKA U	57.9	47.2	52.6	82	AUG 30	29	DEC 21+	4471	35.64	2.34	JAN 14-15	T	T	DEC 19 +				
FRESNO	76.8	49.1	63.0	108	JUL 19+	25	DEC 22	2470	10.50	1.12	NOV 2-3	1.2	1.2	DEC 20	65	78	58	40

State and Station	Wind: Average speed	Resultant speed	Resultant direction	Fastest mile: Speed	Direction	Date	Possible sunshine	Average sky cover sunrise to sunset	Number of days: Sunrise to sunset: Clear, 0-0.3	Partly cloudy, 0.4-0.7	Cloudy, 0.8-1.0	Precipitation .01 inch or more	Snow, Sleet 1.0 inch or more	Thunderstorms	Heavy fog	Max temp: 90 °F and above	32 °F and below	Min temp: 32 °F and below	0 °F and below
	M.p.h	M.p.h		M.p.h			%	Tenths											
ALABAMA																			
BIRMINGHAM	6.8	0.7	36	37	W	DEC 27+	65	6.0	101	98	167	113	1	65	9	55	1	81	0
HUNTSVILLE	8.2	0.1	36	43	23	SEP 4		6.0	102	97	167	109	4	46	16	49	4	93	0
MOBILE	7.6	0.8	6	35	24	NOV 28		5.6	110	120	136	122	1	63	37	104	0	31	0
MONTGOMERY	5.9	1.1	29	43	[illegible]	DEC 27	61	5.7	107	114	145	101	0	59	24	86	1	59	0
ALASKA																			
ANCHORAGE	5.9	0.5	36	44	4	JAN 31	45	7.3	67	73	226	105	28	0	29	B 19	113	198	33
ANNETTE	9.9	4.2	14	49	15	NOV 28		7.7	54	57	255	231	16	2	13	35	16	81	0
BARROW				40	10	DEC 26			V46	V56	V198	88	9	0	54	2	246	299	166
BARTER ISLAND				55	26	MAY 12			X61	X63	X177	56	15	0	81	0	238	299	173
BETHEL	11.5	2.6	2	44	21	DEC 15		7.4	60	67	239	98	17	2	58	15	148	240	69
COLD BAY	15.7	1.9	29	57	17	JAN 24		8.7	14	59	293	199	23	0	28	1	55	153	1
FAIRBANKS	5.4	1.3	35	23	23	MAY 30+		6.7	74	103	189	81	15	5	29	63	157	236	120
JUNEAU	9.0	5.4	11	58	11	NOV 28	36	8.0	53	41	272	203	35	0	28	25	63	161	11
KING SALMON	9.6	2.0	5	48	8	SEP 26		7.4	58	77	231	120	20	3	41	15	111	209	52
KOTZEBUE	12.7	2.4	8	47	10	JAN 25		6.4	88	94	184	97	16	5	20	12	204	244	128
MC GRATH	5.1	1.2	31	30	20	DEC 19		6.9	72	89	205	114	27	12	13	40	162	241	125
NOME	8.5	2.4	5	40	3	FEB 18	44	6.6	97	63	206	126	12	1	30	6	184	269	99
ST. PAUL ISLAND	17.8	3.8	1	61	29	NOV 11		8.9	13	49	304	225	21	0	71	0	87	203	1
SHEMYA	19.5	1.4	27	62	22	DEC 11+		8.8	8	65	293	186	7	0	57	0	26	165	0
YAKUTAT	6.7	3.9	11	55	14	OCT 2		8.1	42	50	274	234	43	1	35	7	70	200	13
ARIZONA																			
FLAGSTAFF	7.7	2.3	21	29	21	SEP 20		4.5	168	85	113	77	23	55	11	2	15	228	9
PHOENIX	6.5	1.3	14	56Y	E	AUG 3	88	3.4	213	81	72	34	0	26	1	167	0	13	0
TUCSON	8.9	2.9	17	50	E	JUL 18	86	3.6	210	76	80	51	0	32	1	135	0	16	0
WINSLOW	7.5	3.4	22	40	9	JUL 4		4.0	181	99	86	40	4	29	8	66	29	122	21
YUMA	7.5	0.8	26	39	SE	AUG 31+	92	3.0	237	62	67	10	0	7	0	166	0	3	0
ARKANSAS																			
FORT SMITH	7.7	0.6	6	40	NW	NOV 15	62	6.3	92	92	182	97	3	49	20	77	6	90	0
LITTLE ROCK	8.4	1.0	24	40	S	APR 3+	67	6.1	112	74	180	106	4	60	17	56	8	78	0
CALIFORNIA																			
BAKERSFIELD	4.9	2.4	34	25	32	JUN 5		3.9	197	66	103	30	0	1	28	114	0	7	0
BISHOP								3.9	199	82	85	24	1			90	1	131	0
BLUE CANYON				37	18	DEC 10		5.0	158	64	144	93	37			0	14	86	0
EUREKA U				42	SE	DEC 22	53	7.1	62	91	213	121	0			0	0	4	0
FRESNO	6.4	2.7	31	29	NW	NOV 12+	75	4.2	187	75	104	42	1	4	52	116	0	22	0

See reference notes at end of table.

ANNUAL CLIMATOLOGICAL DATA
ENGLISH UNITS

State and Station	Temperature, Averages: Daily maximum	Temperature, Averages: Daily minimum	Temperature, Averages: Annual	Temperature, Extremes: Highest	Date	Lowest	Date	Heating degree days	Precipitation: Total	Greatest in 24 hours	Date (s)	Snow, Sleet: Total	Greatest in 24 hours	Date (s)	Relative humidity: 100am EST	700am EST	100p.m. EST	700p.m. E.ST	Wind: Average speed	Resultant speed	Resultant direction	Fastest mile: Speed	Direction	Date	Possible sunshine	Average sky cover sunrise to sunset	Number of days, Sunrise to sunset: Clear, 0–0.3	Partly cloudy, 0.4–0.7	Cloudy, 0.8–1.0	Precipitation .01 inch or more	Snow, Sleet 1.0 inch or more	Thunderstorms	Heavy fog	Max temp: 90 °F and above	Max temp: 32 °F and below	Min temp: 32 °F and below	Min temp: 0 °F and below
	°F	°F	°F	°F		°F		Base 65 °F	In.	In.		In	In.		%	%	%	%	M.p.h.	M.p.h.		M.p.h.			%	Tenths											
CALIFORNIA																																					
LONG BEACH	75.2	54.0	64.6	102	AUG 23	31	DEC 21	1121	5.66	1.99	MAR 7-8	.0	.0		70	76	56	49	6.8	2.1	24	35	34	NOV 25		4.9	153	110	103	28	0	4	35	25	0	1	0
LOS ANGELES	70.0	56.1	63.1	95	SEP 24	32	DEC 21	1132	7.56	3.54	MAR 7-8	.0	.0		74	76	60	63	8.0	3.7	25	38Y	N	NOV 25		5.0	145	114	107	32	0	2	28	4	0	1	0
LOS ANGELES U	75.1	57.3	66.2	100	AUG 23	33	DEC 21	850	7.58	3.03	MAR 7-8	.0	.0									28	N	NOV 25		4.4	172	100	94	32	0			22	0	0	0
MT SHASTA R	62.2	36.6	49.4	98	JUL 28	4	JAN 11	5897	36.50	2.94	DEC 9-10	172.9	25.0	JAN 9-10																94	25			17	7	136	0
OAKLAND	64.6	51.5	58.1	94	SEP 16	32	DEC 21	2606	17.19	2.58	JAN 29-30	.0	.0		79	83	74	68	7.4	3.9	28	35	17	DEC 13		5.3	131	108	127	70	0	3	19	2	0	1	0
RED BLUFF	75.2	50.3	62.8	110	AUG 30	20	JAN 4	2514	24.10	1.87	JAN 9-10	8.1	8.0	DEC 22-23	61	70	53	38	8.4	0.7	31	45	SE	JAN 29	76	5.0	157	73	136	77	2	7	18	92	0	24	0
SACRAMENTO	73.8	48.0	60.9	107	AUG 30	24	JAN 4+	2649	14.90	1.60	JAN 29-30	T	T	DEC 23 +	75	83	65	48	7.6	2.9	22	38	N	JUN 29	81	4.6	173	77	116	58	0	3	40	76	0	16	0
SANDBERG R	62.8	44.7	53.8	93	AUG 29+	14	DEC 20	4765	4.71	.63	FEB 9	11.2	3.3	JAN 27	52	54	43	43				71	34	FEB 2		3.9	201	67	98	30	4			11	6	73	0
SAN DIEGO	71.0	57.1	64.1	93	SEP 24	36	DEC 22	1052	3.68	1.39	MAR 7-8	.0	.0		71	72	59	59	6.9	2.9	28	32	SW	MAR 8	70	5.0	147	107	112	32	0	0	31	2	0	0	0
SAN FRANCISCO	65.1	48.3	56.7	98	AUG 29	29	DEC 21	3060	18.02	2.45	JAN 29-30	T	T	DEC 25 +	81	86	70	63	10.8	6.8	28	45	S	JAN 10		5.2	134	100	132	68	0	2	13	3	0	4	0
SAN FRANCISCO U	62.4	51.5	57.0	96	AUG 29	36	JAN 7	2942	17.96	1.88	JAN 29-30	.0	.0				78					35	SE	DEC 15	70					76	0			1	0	0	0
SANTA MARIA	69.6	46.9	58.3	99	SEP 25	27	DEC 21	2490	8.16	1.24	OCT 13-14	.0	.0				61	59								4.4	173	104	89	39	0			6	0	12	0
STOCKTON	72.7	48.4	60.6	106	JUL 5	22	DEC 21	2785	17.38	2.70	JAN 30	T	T	DEC 20	66	73	60	46				33	32	APR 21		4.8	158	82	126	58	0	1	55	73	0	21	0
COLORADO																																					
ALAMOSA	57.1	22.2	39.7	87	JUL 21+	-29	DEC 19	9204	8.10	1.20	JUL 26-27	26.8	6.3	DEC 17-18		79	46	41								4.7	142	144	80	56	9			0	46	235	60
COLORADO SPRINGS	61.0	34.4	47.7	97	JUN 28+	- 1	DEC 22	6564	12.41	.88	JUL 28	33.9	6.2	NOV 5-6	55	61	37	38	9.9	2.3	3	47	35	JUL 18		5.7	113	108	145	78	13	49	22	9	26	173	4
DENVER	63.7	34.0	48.9	97	JUN 20	-12	DEC 22	6332	12.13	1.43	AUG 9-10	47.7	7.0	APR 3	63	70	40	40	8.3	1.2	19	39	W	DEC 12	70	5.5	114	121	131	79	15	34	9	24	16	180	9
GRAND JUNCTION	63.1	37.1	50.1	102	JUN 20	-13	JAN 8+	6329	7.45	.63	AUG 9-10	13.5	3.1	DEC 26	53	62	43	37	8.5	1.6	12	42	NE	MAY 30	64	5.5	118	111	137	70	5	32	13	47	34	153	17
PUEBLO	67.3	37.7	52.5	102	JUN 28+	- 8	JAN 7+	5350	10.92	1.87	JUL 2	34.5	5.9	MAR 10-11	55	65	39	34	9.3	1.0	34	49	N	APR 3	77	5.2	124	133	109	63	13	29	7	59	18	145	7
CONNECTICUT																																					
BRIDGEPORT	59.6	44.3	52.0	93	JUN 30	- 3	JAN 9	5487	45.67	3.69	DEC 4	12.7	2.5	JAN 6-7	75	74	58	66	12.5	4.1	30	51	24	MAR 24		6.0	96	119	151	119	6	22	33	6	27	92	2
HARTFORD	59.9	39.2	49.6	99	JUL 1	-11	JAN 12+	6275	40.63	2.37	APR 24-25	37.7	4.8	DEC 15	74	75	51	60	9.1	2.8	30	40	NW	MAR 1		6.4	82	111	173	123	14	15	35	21	43	130	9
NEW HAVEN	59.1	42.0	50.6	92	JUN 30	- 5	JAN 9	5798	40.11	2.73	DEC 4	18.4	2.2	DEC 22		75	60					50	W	AUG 9	64	5.9	100	118	148	130	8			3	26	101	2
DELAWARE																																					
WILMINGTON	63.8	44.8	54.3	96	AUG 25	1	JAN 2	4948	31.75	2.35	MAY 28-29	4.4	1.0	MAR 12	73	74	51	62	10.0	3.0	27	39	28	JAN 4		6.1	98	112	156	99	1	32	31	26	21	97	0
DIST.OF COLUMBIA																																					
WASH NATL AP	67.2	47.7	57.5	98	AUG 24	7	JAN 12	4175	36.83	2.23	JUN 12	8.2	2.6	MAR 29-1	67	70	48	55	8.9	2.1	28	43	W	JUN 24	59	6.0	96	118	152	97	5	35	6	40	14	85	0
FLORIDA																																					
APALACHICOLA U	74.9	59.5	67.2	94	AUG 24+	27	DEC 16	1763	38.98	4.46	SEP 16-17	T	T	JAN 14								36	NW	NOV 11	69	4.8	141	127	98	81	0	42	31	39	0	8	0
DAYTONA BEACH	78.3	59.7	69.0	96	JUL 29+	27	DEC 17	1236	58.17	4.31	AUG 29-30	.0	.0		80	82	56	70	8.8	0.9	6	37	35	JUN 10+		5.8	87	163	116	110	0	72	31	45	0	6	0
FORT MYERS	82.4	63.3	72.9	97	JUL 29	32	DEC 16	534	70.29	5.83	JUN 3-4	.0	.0		87	89	57	75	8.1	1.8	7	37	18	JUN 14		5.2	104	169	93	118	0	91	21	89	0	1	0
JACKSONVILLE	78.9	59.0	69.0	98	AUG 25+	26	DEC 16	1539	53.72	7.93	AUG 27-28	.0	.0		81	84	53	68	8.5	0.6	31	52	N	JUN 6	65	5.5	111	131	124	112	0	47	24	76	0	13	0
KEY WEST	81.5	72.2	76.9	92	AUG 21	51	DEC 17	64	51.88	3.65	JUN 1-2	.0	.0		79	81	69	75	10.6	4.7	9	49	SE	OCT 16	76	5.8	82	161	123	129	0	76	0	23	0	0	0
LAKELAND U	79.8	61.4	70.6	97	AUG 17	27	DEC 16	932	55.37	4.95	JUN 3-4	.0	.0												67	5.0	120	168	78	108	0			60	0	1	0
MIAMI	81.2	67.4	74.3	93	SEP 6+	34	DEC 16	326	83.39	5.42	MAY 19-20	.0	.0		79	84	60	69	8.8	2.7	9	33	31	FEB 24		6.0	69	174	123	143	0	77	9	44	0	0	0

See reference notes at end of table.

ANNUAL CLIMATOLOGICAL DATA
ENGLISH UNITS

YEAR 1968

State and Station	Temperature: Averages: Daily maximum	Averages: Daily minimum	Averages: Annual	Extremes: Highest	Extremes: Date	Extremes: Lowest	Extremes: Date	Heating degree days	Precipitation: Total	Greatest in 24 hours	Date (s)	Snow, Sleet: Total	Snow, Sleet: Greatest in 24 hours	Snow, Sleet: Date (s)	Relative humidity: 100am EST	700am EST	100pm EST	700pm EST	Wind: Average speed	Resultant speed	Resultant direction	Fastest mile: Speed	Fastest mile: Direction	Fastest mile: Date	Possible sunshine	Average sky cover sunrise to sunset	Number of days: Sunrise to sunset: Clear, 0-0.3	Partly cloudy, 0.4-0.7	Cloudy, 0.8-1.0	Precipitation .01 inch or more	Snow, Sleet 1.0 inch or more	Thunderstorms	Heavy fog	Max. temp 90 °F and above	Max. temp 32 °F and below	Min temp. 32 °F and below	Min temp. 0 °F and below
	°F	°F	°F	°F		°F		Base 65 °F	In.	In.		In	In		%	%	%	%	M.p.h.	M.p.h		M.p.h			%	Tenths											
FLORIDA																																					
ORLANDO	80.6	60.2	70.4	96	JUL 29+	29	DEC 16	1009	52.10	6.16	JUN 4-5	.0	.0		85	88	54	68	9.1	0.9	4	46	26	NOV 11		5.7	92	157	117	106	0	78	23	82	0	5	0
PENSACOLA	75.3	56.6	66.0	96	JUL 28	24	DEC 15	2117	41.20	2.81	JUN 10	T	T	FEB 24 +	79	83	58	68	8.1	0.8	6	51	W	JUN 10	66	5.8	100	121	145	107	0			50	0	28	0
TALLAHASSEE	79.6	53.5	66.6	99	AUG 24+	19	DEC 16	2042	50.72	6.52	SEP 8	T	T	FEB 8 +	88	91	51	67	6.4	0.9	3	31	22	AUG 12		5.2	114	149	103	108	0	80	46	107	0	53	0
TAMPA	79.8	59.7	69.8	95	AUG 22+	27	DEC 17	1085	39.35	2.54	OCT 18-19	.0	.0		85	88	57	70	8.3	1.3	4	37	19	OCT 18	70	5.6	102	147	117	104	0	68	13	61	0	3	0
WEST PALM BEACH	81.0	63.8	72.4	93	APR 24	31	MAR 2	501	77.42	3.90	JUN 3-4	.0	.0		79	81	59	71	9.2	2.5	10	35	13	OCT 17		6.1	84	137	145	116	0	76	9	35	0	1	0
GEORGIA																																					
ATHENS	70.2	49.0	59.6	101	AUG 23	17	FEB 12	3426	56.24	2.60	JUL 3-4	6.2	2.2	NOV 11	76	82	54	62	6.7	1.5	30	35	16	MAY 25		5.6	117	104	145	108	3	55	38	39	4	84	0
ATLANTA	70.0	48.9	59.5	98	AUG 24	15	FEB 22+	3495	48.86	2.72	MAR 11-12	5.2	2.3	FEB 29	79	84	56	63	7.5	1.5	32	39	SW	DEC 28	67	5.9	103	112	151	114	2	48	33	33	2	88	0
AUGUSTA	75.0	49.3	62.2	104	AUG 23	16	FEB 12	2920	36.60	2.00	MAY 16-17	2.8	1.4	FEB 21-22+	82	84	48	64	6.4	1.1	28	40	32	JUL 16		5.7	110	120	136	110	1	50	19	67	1	80	0
COLUMBUS	74.2	51.2	62.7	101	AUG 23	18	DEC 15+	2847	36.11	3.31	MAR 11-12	T	T	DEC 15 +	81	86	54	62	5.6	1.4	34	29	30	FEB 8		5.7	125	93	148	101	0			71	1	74	0
MACON	75.1	49.1	62.1	104	AUG 23	17	FEB 14+	2974	33.73	2.26	MAY 14-15	2.9	1.9	FEB 23-24	77	81	50	58	6.8	1.4	31	42	S	MAR 22		5.8	110	106	150	116	2	55	23	89	2	89	0
ROME	71.3	45.5	58.4	103	AUG 23	11	FEB 12	3832	43.53	2.46	DEC 21-22	7.3	6.8	FEB 28-29																117	2			56	2	106	0
SAVANNAH	76.4	53.2	64.8	100	AUG 24	19	DEC 16	2396	37.34	3.72	JUN 6-7	3.6	3.6	FEB 8	84	86	51	67	7.5	0.6	24	36	W	JUL 31	66	5.9	109	103	154	100	1	58	41	72	1	64	0
HAWAII																																					
HILO	83.2	67.7	75.5	92	FEB 20	60	DEC 12+	0	134.14	9.10	FEB 2-3	.0	.0		85	87	79	71	6.3	1.0	18	30	SE	JAN 20	38	7.2	47	125	194	247	0	15	0	3	0	0	0
HONOLULU	85.1	70.7	77.9	92	OCT 14+	59	DEC 30+	0	37.26	3.45	JAN 15-16	.0	.0		72	79	74	59	10.4	6.7	5	43	N	JAN 16	63	5.7	107	137	122	114	0	18	0	72	0	0	0
KAHULUI	84.9	66.6	75.8	95	SEP 1	55	FEB 10+	0	34.73	4.94	MAR 14	.0	.0		80	87	79	63	11.1	7.0	5	43	N	MAR 14	65	5.6	122	103	141	116	0	11	0	94	0	0	0
LIHUE	80.1	68.5	74.3	86	AUG 23	56	FEB 10+	0	68.89	11.54	DEC 30-1	.0	.0		83	87	83	73	10.3	5.3	5	38	SW	FEB 20	59	6.3	63	172	131	178	0	16	0	0	0	0	0
IDAHO																																					
BOISE	63.8	40.6	52.2	104	JUL 27	6	DEC 21+	5376	10.97	.74	AUG 13-14	17.2	3.4	DEC 22-23	57	65	49	41	9.1	0.5	15	42	NW	JUL 19	67	5.8	114	99	153	84	5	10	6	45	13	103	0
LEWISTON	62.9	42.2	52.6	105	JUL 28+	-22	DEC 30	5160	14.20	.84	NOV 8-9	21.4	8.4	DEC 27-28		76	60	48								6.9	81	80	205	110	7			36	11	78	3
POCATELLO	58.5	32.0	45.3	97	JUL 29+	-11	DEC 31+	7489	14.08	.96	AUG 17	46.3	6.2	JAN 27-28	61	70	52	43	9.5	5.1	22	57	W	JUL 16	65	6.2	85	131	150	104	15	20	10	30	37	187	9
ILLINOIS																																					
CAIRO U	66.4	49.9	58.2	96	JUL 27	2	JAN 7	4144	48.06	2.94	MAY 10-11	6.9	4.4	JAN 12-13								53	SW	NOV 28	61	5.8	124	91	151	115	2			44	24	81	0
CHICAGO MIDWAY	60.2	42.8	51.5	96	JUN 23+	-11	JAN 7	5845	29.73	3.83	AUG 16-17	32.8	3.8	DEC 28	69	73	56	58	11.9	3.7	22	42	NE	NOV 28+	55	6.3	90	107	169	121	12	44	10	24	42	110	7
MOLINE	59.6	38.9	49.3	96	AUG 23+	-17	JAN 1	6557	31.85	2.21	JUL 23-24	23.8	5.0	NOV 28	74	78	56	59	10.7	3.4	23	44	NW	DEC 5+	59	6.2	96	105	165	108	9	42	14	23	51	140	14
PEORIA	60.2	40.5	50.4	94	AUG 23+	-15	JAN 7	6140	33.89	3.73	JUN 25	17.2	3.0	JAN 12-13	76	81	59	62	10.7	2.7	23	41	NW	DEC 4	58	6.3	96	94	176	117	7	48	20	16	45	120	10
ROCKFORD	58.0	38.7	48.4	93	AUG 6	-17	JAN 7	6678	39.99	3.58	AUG 16	19.5	4.5	NOV 28	79	83	60	63	10.4	2.6	24	46	23	JUN 29		6.1	104	97	165	113	5	43	14	12	54	136	17
SPRINGFIELD	61.7	41.8	51.8	96	AUG 23+	-14	JAN 7	5855	31.67	2.63	JUN 14-15	24.6	5.4	JAN 12-13	74	78	57	60	11.3	3.3	22	42	W	DEC 23+	60	5.9	116	83	167	111	10	42	17	35	42	120	10
INDIANA																																					
EVANSVILLE	65.3	44.5	54.9	97	AUG 24	- 8	JAN 8	4914	43.21	1.98	DEC 27-28	17.7	4.8	MAR 22	76	78	58	61	8.0	2.1	24	36	SW	DEC 28+	61	6.0	108	98	160	111	6	49	9	45	29	105	3
FORT WAYNE	58.7	39.7	49.2	92	AUG 21+	-17	JAN 8	6501	36.08	3.24	MAY 15-16	24.8	4.9	MAR 22-23	78	80	61	65	10.5	4.3	24	54	SW	JUN 11	62	6.8	78	91	197	133	6	38	18	17	50	133	8
INDIANAPOLIS	61.5	42.2	51.9	92	AUG 24+	-12	JAN 1	5706	41.05	3.13	MAY 23	29.1	8.0	JAN 12-13	77	81	58	63	8.2	2.7	24	42	NW	DEC 5	55	6.5	86	93	187	128	8	38	20	25	39	115	6
SOUTH BEND	57.3	40.5	48.9	93	AUG 23	-10	JAN 1	6493	39.31	4.70	JUN 24-25	79.6	5.7	FEB 10-11	77	81	63	65	10.0	3.6	24	37	24	APR 8		7.0	71	88	207	150	29	39	25	9	55	113	7
IOWA																																					
BURLINGTON	60.6	40.3	50.5	97	AUG 23+	-13	JAN 7	6178	26.85			14.9			73	78	58	60	10.6	2.8	25	46	30	DEC 4		6.0	104	105	157	95	9	36	15	20	42	137	11

See reference notes at end of table.

ANNUAL CLIMATOLOGICAL DATA
ENGLISH UNITS

State and Station	Temperature: Averages: Daily maximum	Averages: Daily minimum	Averages: Annual	Extremes: Highest	Extremes: Date	Extremes: Lowest	Extremes: Date	Heating degree days	Precipitation: Total	Precipitation: Greatest in 24 hours	Precipitation: Date (s)	Snow, Sleet: Total	Snow, Sleet: Greatest in 24 hours	Snow, Sleet: Date (s)	Relative humidity: 1:00 a.m. EST	Relative humidity: 7:00 a.m. EST	Relative humidity: 1:00 p.m. EST	Relative humidity: 7:00 p.m. EST	Wind: Average speed	Wind: Resultant speed	Wind: Resultant direction	Fastest mile: Speed	Fastest mile: Direction	Fastest mile: Date	Possible sunshine	Average sky cover sunrise to sunset	Number of days: Sunrise to sunset: Clear, 0–0.3	Sunrise to sunset: Partly cloudy, 0.4–0.7	Sunrise to sunset: Cloudy, 0.8–1.0	Precipitation .01 inch or more	Snow, Sleet 1.0 inch or more	Thunderstorms	Heavy fog	Max temp: 90 °F and above	Max temp: 32 °F and below	Min temp: 32 °F and below	Min temp: 0 °F and below
	°F	°F	°F	°F		°F		Base 65 °F	In.	In.		In.	In.		%	%	%	%	M.p.h.	M.p.h.		M.p.h.			%	Tenths											
IOWA																																					
DES MOINES	59.1	39.2	49.2	96	AUG 23+	-15	DEC 31+	6613	28.31	1.78	AUG 8	29.4	11.8	NOV 10	72	77	58	57	11.2	2.2	26	73	W	JUL 8	59	5.8	110	107	149	108	6	49	16	20	52	139	14
DUBUQUE	56.4	37.2	46.8	95	AUG 23	-19	JAN 7	7143	39.96	2.60	AUG 4-5	20.5	5.8	DEC 28		81	62	66								6.5	87	103	176	126	6			5	60	147	17
SIOUX CITY	60.2	37.7	49.0	99	AUG 5	-19	DEC 31+	6706	24.22	2.63	OCT 15-16	28.3	9.0	DEC 21-22	72	78	57	56	10.5	1.1	29	53	NW	DEC 22	64	5.9	108	110	148	102	8	49	14	34	51	149	17
WATERLOO	56.7	35.6	46.2	93	AUG 23+	-20	JAN 7	7406	44.62	9.31	JUL 16-17	22.7	6.0	DEC 27-28	78	82	59	62	10.7	1.9	25	44	2	AUG 6+		6.2	98	107	161	118	9	51	19	15	62	161	26
KANSAS																																					
CONCORDIA	64.1	41.1	52.6	103	JUN 28	-12	JAN 7	5693	30.01	4.56	AUG 9-10	13.9	6.0	DEC 18	74	82	56	56	12.8	2.3	20	61	NW	JUL 17	67	5.2	136	109	121	88	6	60	14	45	35	131	6
DODGE CITY	67.1	42.2	54.7	104	AUG 8+	- 7	DEC 31	5062	27.79	4.55	OCT 15-16	6.8	2.2	DEC 18	66	73	48	46	13.0	2.1	19	50	S	MAR 17	75	5.6	114	111	141	82	3	49	17	58	26	115	4
GOODLAND	65.6	36.5	51.1	104	JUN 29	-12	DEC 31	5904	13.70	2.65	JUN 15-16	25.6	6.2	DEC 12	67	74	45	43	12.8	2.3	25	55	30	MAY 6		5.1	136	112	118	70	7	39	17	50	21	152	7
TOPEKA	63.6	42.4	53.0	94	AUG 7+	- 9	JAN 7	5437	40.58	3.15	AUG 9-10	11.2	3.7	FEB 24-25	75	81	59	59	9.5	1.6	22	60	NW	JUL 23	63	5.9	108	107	151	86	5	58	11	24	34	124	7
WICHITA	66.9	43.9	55.4	106	AUG 9	- 5	DEC 31	4857	33.42	3.03	SEP 22-23	4.7	2.7	DEC 27	72	77	54	53	12.8	2.5	18	47	SE	MAY 6+	64	5.7	111	107	148	92	1	51	16	55	19	113	4
KENTUCKY																																					
COVINGTON	63.3	43.8	53.6	94	AUG 24+	-10	JAN 8	5184	42.54	3.30	MAY 23-24	27.7	9.8	MAR 22	73	77	56	61	8.4	2.7	24	35	20	NOV 28		6.7	75	102	189	132	6	35	22	26	33	101	6
LEXINGTON	63.7	44.5	54.1	93	AUG 23+	- 3	JAN 8	4977	43.32	3.56	AUG 14	26.3	7.6	MAR 22-23	74	79	58	62	8.6	2.9	21	35	22	JUN 25		6.3	97	89	180	130	5	49	16	21	26	97	3
LOUISVILLE	65.0	45.9	55.5	96	AUG 24	- 2	JAN 1	4716	37.28	2.23	APR 3-4	29.7	12.1	MAR 22-23	74	79	56	58	8.1	2.2	25	52	W	DEC 23	57	6.4	88	105	173	131	7	38	4	35	26	101	2
LOUISIANA																																					
ALEXANDRIA	74.8	51.8	63.3	96	AUG 6+	16	FEB 24	2612	49.81	3.50	JAN 8-9	4.6	3.1	FEB 23			60		6.4	0.3	2	31	36	MAY 17		5.9	105	107	154	103	2	63	36	65	2	63	0
BATON ROUGE	77.0	55.1	66.1	95	AUG 21+	24	DEC 16+	2137	45.15	2.80	AUG 11-12	1.0	1.0	FEB 23	84	89	58	64	7.6	1.1	9	32	16	JUL 18		5.7	114	112	140	106	1	61	34	95	0	36	0
LAKE CHARLES	75.9	57.2	66.6	94	JUN 12	26	JAN 14	1893	51.24	3.54	JUN 22	.3	.3	FEB 23	89	91	63	72	7.8	1.9	10	32	20	SEP 15		6.0	100	117	149	105	0	85	31	58	1	20	0
NEW ORLEANS	76.1	55.7	65.9	96	JUL 29+	23	DEC 16	2045	43.15	2.55	DEC 30-31	T	T	FEB 23	83	86	62	69	7.8	1.1	7	30	16	DEC 1+		5.5	119	105	142	120	0	47	28	66	0	33	0
SHREVEPORT	74.0	53.9	64.0	97	JUN 12	18	JAN 8	2538	57.83	5.14	SEP 14-15	2.9	1.5	MAR 21-22	80	85	59	62	7.7	1.5	17	33	28	DEC 27	57	6.1	104	92	170	114	2	58	13	74	2	47	0
MAINE																																					
CARIBOU	49.0	29.3	39.2	93	JUL 16+	-23	JAN 3	9484	31.67	1.99	OCT 20-21	124.3	11.4	MAR 1		77	59	66								7.3	52	99	215	140	28			3	97	169	48
PORTLAND	54.9	34.7	44.8	96	JUL 16	-20	JAN 11	7583	41.13	2.38	DEC 4-5	70.5	9.9	JAN 7	78	76	57	68	7.3	2.0	27	40	W	FEB 17	56	6.0	102	106	158	128	17	10	68	2	57	147	26
MARYLAND																																					
BALTIMORE	65.3	45.3	55.3	98	AUG 24+	0	JAN 2	4743	39.80	3.72	SEP 10	14.7	4.4	MAR 12	71	74	50	58	9.0	3.3	28	47	NW	FEB 17	58	5.8	104	120	142	102	5	33	23	39	19	98	1
MASSACHUSETTS																																					
BLUE HILL OBS R	56.7	39.3	48.0	94	JUL 16	- 9	JAN 9	6639	49.89	6.62	MAR 17-18	44.7	10.3	JAN 25-26	78	78	56	67				66	WSW	AUG 9	57					117	11			6	49	119	9
BOSTON	57.2	43.6	50.4	98	JUL 16	- 4	JAN 9+	5916	42.28	4.13	MAR 17-18	33.4	8.6	JAN 6-7	70	71	57	63	13.4	4.1	28	54	NE	NOV 12	62	6.0	105	105	156	118	10	14	21	10	35	94	5
NANTUCKET	56.5	41.2	48.9	90	JUL 1	2	JAN 9	6035	39.11	2.92	MAR 12-13	21.5	5.4	FEB 8	87	84	71	84	13.3	3.6	29	63	NE	FEB 8	51	6.6	83	97	186	123	7	17	99	1	27	97	0
WORCESTER	55.2	37.4	46.3	92	JUL 1	-13	JAN 9	7164	46.82	3.89	MAR 17-18	61.7	7.3	NOV 12	72	72	54	63	10.2	4.9	28	47	29	FEB 17		6.0	96	115	155	123	20	20	98	4	63	134	15
MICHIGAN																																					
ALPENA	53.6	32.5	43.1	95	JUL 15	-21	JAN 8	8243	34.05	3.18	AUG 19-20	85.9	9.5	DEC 28-29	80	82	63	70	7.6	1.8	25	35	SW	APR 8	51	6.8	69	111	186	156	27	33	27	8	68	176	26
DETROIT	58.9	43.0	51.0	96	AUG 23+	0	JAN 1	6051	36.63	3.53	JUN 25	25.7			70	73	56	60	10.2	3.6	26	46	30	AUG 16						108	8	34	8	19	48	116	1
DETROIT M WAYNE CO	58.7	39.8	49.3	93	AUG 23+	- 8	JAN 8	6402	35.23	2.87	MAY 26-27	30.6	6.6	JAN 13-14	76	79	57	64	10.1	3.3	26	50	SW	JUL 9	56	6.5	79	116	171	130	9	35	22	14	46	132	6
FLINT	55.7	37.7	46.7	90	AUG 24+	- 8	JAN 8	7092	33.90	4.45	AUG 16	41.5	7.2	JAN 14-15	77	78	61	65	10.3	3.9	24	46	23	JUN 11		6.7	76	105	185	133	14	34	16	3	55	134	7

See reference notes at end of table.

ANNUAL CLIMATOLOGICAL DATA
ENGLISH UNITS

State and Station	Temperature – Averages – Daily maximum	Temperature – Averages – Daily minimum	Temperature – Averages – Annual	Temperature – Extremes – Highest	Date	Temperature – Extremes – Lowest	Date	Heating degree days	Precipitation – Total	Precipitation – Greatest in 24 hours	Date (s)	Snow, Sleet – Total	Snow, Sleet – Greatest in 24 hours	Date (s)	Relative humidity – 1:00a.m. E S T	Relative humidity – 7:00a.m. E S T	Relative humidity – 1:00p.m. E S T	Relative humidity – 7:00p.m. E S T	Wind – Average speed	Wind – Resultant speed	Wind – Resultant direction	Wind – Fastest mile – Speed	Wind – Fastest mile – Direction	Wind – Fastest mile – Date	Possible sunshine	Average sky cover sunrise to sunset	Number of days – Sunrise to sunset – Clear, 0–0.3	Number of days – Sunrise to sunset – Partly cloudy, 0.4–0.7	Number of days – Sunrise to sunset – Cloudy, 0.8–1.0	Number of days – Precipitation .01 inch or more	Number of days – Snow, Sleet 1.0 inch or more	Number of days – Thunderstorms	Number of days – Heavy fog	Number of days – Max temp – 90 °F and above	Number of days – Max temp – 32 °F and below	Number of days – Min temp – 32 °F and below	Number of days – Min temp – 0 °F and below
	°F	°F	°F	°F		°F		Base 65 °F	In	In		In	In		%	%	%	%	M.p.h	M.p.h		M.p.h			%	Tenths											
MICHIGAN																																					
GRAND RAPIDS	57.1	37.5	47.3	92	AUG 23+	-15	JAN 1	6981	36.14	1.59	NOV 28-29	56.5	6.8	DEC 5	77	79	61	66	10.0	3.2	24	52	NW	JUN 29	53	6.8	72	107	187	137	22	35	29	13	61	139	13
HOUGHTON LAKE	53.2	33.3	43.3	91	AUG 23	-21	JAN 8	8179	28.28	1.75	JUN 24-25	80.5	6.4	DEC 28 +	83	85	63	68	9.0	2.4	26	32	23	OCT 27		6.7	65	116	185	148	23	38	33	3	78	171	27
LANSING	57.1	36.7	46.9	94	JUL 17	- 9	JAN 8	7109	35.75	2.42	JUN 25-26	37.7	7.4	MAR 22-23	77	78	60	66	9.9	3.6	25	49	NW	JUN 23	55	6.6	77	118	171	146	10	32	16	11	55	148	14
MARQUETTE U	50.4	35.4	42.9	95	JUL 15	-14	JAN 7	8243	37.70	2.77	SEP 8-9	124.3	8.1	FEB 6-7								40	SW	JUL 1	50	7.4	48	103	215	181	34			2	81	146	13
MUSKEGON	55.8	39.4	47.6	92	JUL 17	- 2	JAN 1	6765	29.81	1.73	JUL 17-18	90.6	5.9	DEC 28-29	75	78	62	65	11.1	2.8	25	35	24	DEC 13+		6.7	80	98	188	147	31	35	27	4	59	119	4
SAULT STE MARIE	49.3	30.2	39.8	89	JUL 17+	-28	JAN 8	9273	35.66	2.30	AUG 21-22	116.0	12.6	FEB 2-3	85	85	69	75	9.7	0.7	34	47	W	FEB 22	48	7.2	59	93	214	176	35	36	46	0	87	174	37
MINNESOTA																																					
DULUTH	48.5	29.1	38.8	90	JUN 4	-33	JAN 6	9598	38.29	2.64	NOV 16-17	89.5	15.7	NOV 16-17	76	79	62	64	10.5	1.1	32	45	NW	DEC 5+	50	7.2	52	106	208	150	24	36	74	1	93	178	47
INTERNATIONAL FALLS	47.6	26.4	37.0	88	JUL 7+	-46	JAN 6	10280	29.03	2.32	JUL 15-16	68.3	7.4	APR 22-23	79	83	65	65	9.2	0.9	30	33	3	DEC 12		7.1	60	99	207	148	26	39	21	0	108	192	61
MINNEAPOLIS	54.5	35.8	45.2	96	AUG 23+	-21	JAN 7+	7766	37.93	2.01	SEP 22-23	47.6	7.6	DEC 21-22	74	79	61	60	10.5	1.4	28	44	NW	FEB 16	57	6.5	87	95	184	122	17	41	10	14	73	148	28
ROCHESTER	53.8	33.5	43.7	92	JUN 4	-22	JAN 7	8093	32.40	2.33	JUN 25-26	33.3	7.4	DEC 21-22	78	81	61	65	12.7	3.3	24	40	25	MAY 8		6.4	94	90	182	126	8	50	33	3	72	158	31
ST CLOUD	52.7	32.1	42.4	94	AUG 23+	-27	JAN 6	8623	33.68	2.48	OCT 16-17	44.1	10.2	DEC 21-22	77	81	59	60								6.6	84	91	191	115	14			10	87	166	44
MISSISSIPPI																																					
JACKSON	74.9	50.6	62.8	97	AUG 2+	14	FEB 12	2875	45.19	2.35	MAY 10-11	8.9	5.3	MAR 22-23	84	89	57	65	7.6	0.7	15	42	S	MAR 20	58	5.7	127	76	163	111	2	61	18	79	0	74	0
MERIDIAN	75.7	50.1	62.9	101	JUL 27	18	FEB 24+	2793	45.38	3.50	DEC 21-22	4.5	3.0	FEB 23	88	90	54	66	5.9	0.7	27	32	14	AUG 24+		6.1	103	88	175	104	2	61	21	79	1	77	0
MISSOURI																																					
COLUMBIA	63.8	44.6	54.2	95	AUG 23	-11	JAN 7	5114	36.84	4.37	JUN 24-25	12.5	2.8	FEB 28	73	80	58	58	10.3	2.3	22	42	NW	DEC 4	61	6.2	105	83	178	108	3	49	5	29	33	107	4
KANSAS CITY	65.1	45.4	55.3	98	AUG 7	- 7	DEC 31+	5007	31.96	2.38	MAY 22-23	9.5	3.0	NOV 28	71	78	57	55	9.9	2.4	21	43	SW	DEC 22	63	5.8	111	105	150	94	3	42	7	43	32	104	6
ST JOSEPH	65.3	42.3	53.8	96	AUG 7	-14	JAN 7	5255	33.20						77	83	58	58	9.6	1.7	22	41	29	MAY 15		5.4	131	103	132	89		40	19	34	28	128	6
ST LOUIS	64.4	44.6	54.5	98	AUG 23	- 7	JAN 7+	5125	32.49	2.47	MAY 25	16.3	7.2	MAR 11-12	74	81	57	58	10.0	2.5	23	45	NE	MAR 12	60	6.3	88	102	176	110	4	45	6	41	33	107	3
SPRINGFIELD	65.1	43.4	54.3	96	JUL 27	- 7	JAN 7	4980	45.83	3.04	NOV 2	20.8	11.5	MAR 11-12	77	81	57	62	9.8	3.0	19	45	N	APR 22	58	6.0	114	[illegible]8	164	110	5	56	21	27	17	114	3
MONTANA																																					
BILLINGS	58.1	37.7	47.9	99	JUL 29	-25	DEC 29	6657	16.62	1.73	JUN 8-9	47.1	5.0	MAR 17-18	55	62	50	42	11.1	4.3	27	79	NW	JUN 13	56	6.5	78	107	181	111	18	26	31	18	40	124	17
GLASGOW	53.9	29.8	41.9	100	JUL 12	-35	DEC 29	8674	7.65	1.63	AUG 15-16	18.3	5.2	APR 6-7	66	75	54	4[illegible]								6.8	70	108	188	83	7			16	69	189	36
GREAT FALLS	55.8	33.1	44.5	97	JUL 29	-43	DEC 29	7680	16.36	1.35	MAY 21-22	48.7	6.9	MAR 17-18	59	63	49	44	11.1	6.4	23	47	SW	DEC 3+	63	6.8	75	92	199	101	14	22	9	13	41	155	26
HAVRE	55.0	28.8	41.9	98	JUL 29+	-46	DEC 29	8610	13.01	2.34	AUG 14-15	34.6	3.5	FEB 21-22	67	76	54	47	11.1	3.7	26	54	NW	AUG 11	70	7.2	52	104	210	97	14	22	5	20	56	188	41
HELENA	55.0	30.5	42.8	95	JUL 29+	-37	DEC 30	8258	13.17	1.34	SEP 19-20	42.2	9.6	APR 1-2	65	74	55	48	8.1	4.6	27	46	W	SEP 18	56	6.7	78	96	192	97	13	19	12	10	48	181	24
KALISPELL	53.9	31.0	42.5	96	JUL 9+	-35	DEC 30	8302	19.95	1.38	AUG 14-15	65.6	7.0	JAN 31-1		84	64	55								7.2	65	74	227	137	23			17	49	190	14
MILES CITY	56.9	32.7	44.8	103	JUL 12	-28	DEC 30	7875	17.62			39.4			67	75	55	50	11.0	2.5	31									130	15	35	11	31	61	174	26
MISSOULA	56.2	33.0	44.6	101	JUL 28	-27	DEC 30	7652	12.85	.96	AUG 14-15	45.6	8.5	DEC 27-28	69	78	61	50	5.9	1.4	31	37	NW	JUL 19	55	7.2	61	84	221	136	13	15	30	20	47	182	12
NEBRASKA																																					
GRAND ISLAND	62.5	38.0	50.3	101	AUG 6+	-16	DEC 31+	6309	31.62	4.20	JUN 23-24	29.2	12.0	DEC 18-19	74	81	54	54	12.0	1.7	25	52	32	JUL 16		5.7	121	102	143	82	7	50	14	40	41	148	16
LINCOLN U	62.2	41.9	52.1	99	JUN 29+	-13	DEC 31+	5868	29.03	2.54	SEP 15-16	18.7	9.0	DEC 18-19								52	S	AUG 26+	65	5.6	119	112	135	100	2			41	43	117	8
NORFOLK	59.5	36.9	48.2	99	JUN 20	-25	JAN 7	6959	23.00	2.79	OCT 15-16	23.3	10.5	DEC 21-22		75	51	50								5.9	112	98	156	83	7			29	58	157	16
NORTH PLATTE	62.1	32.6	47.4	102	AUG 7+	-20	DEC 31+	7079	17.04	1.84	JUN 23-24	18.2	8.6	DEC 21-22	71	77	49	47	10.2	1.0	35	48	NW	DEC 12	68	5.4	112	129	125	70	6	39	10	33	40	181	18

See reference notes at end of table.

ANNUAL CLIMATOLOGICAL DATA
ENGLISH UNITS

State and Station	Temperature – Averages – Daily maximum	Temperature – Averages – Daily minimum	Temperature – Averages – Annual	Temperature – Extremes – Highest	Temperature – Extremes – Date	Temperature – Extremes – Lowest	Temperature – Extremes – Date	Heating degree days	Precipitation – Total	Precipitation – Greatest in 24 hours	Precipitation – Date (s)	Snow, Sleet – Total	Snow, Sleet – Greatest in 24 hours	Snow, Sleet – Date (s)	Relative humidity – 100am E S T	Relative humidity – 700am E S T	Relative humidity – 100p.m. E S T	Relative humidity – 700p.m. E S T	Wind – Average speed	Wind – Resultant speed	Wind – Resultant direction	Wind – Fastest mile – Speed	Wind – Fastest mile – Direction	Wind – Fastest mile – Date	Possible sunshine	Average sky cover sunrise to sunset	Number of days – Sunrise to sunset – Clear, 0-03	Number of days – Sunrise to sunset – Partly cloudy, 04-07	Number of days – Sunrise to sunset – Cloudy, 0.8-1.0	Number of days – Precipitation .01 inch or more	Number of days – Snow, Sleet 1.0 inch or more	Number of days – Thunderstorms	Number of days – Heavy fog	Number of days – Max temp – 90 °F and above	Number of days – Max temp – 32 °F and below	Number of days – Min temp. – 32 °F and below	Number of days – Min temp. – 0 °F and below
	°F	°F	°F	°F		°F		Base 65 °F	In.	In		In	In		%	%	%	%	M.p.h.	M.p.h.		M.p.h.			%	Tenths											
NEBRASKA																																					
OMAHA	62.1	40.0	51.1	98	JUL 21	-16	JAN 7	6110	33.69	3.13	OCT 16-17	19.0	4.0	NOV 9-10	74	80	57	57	10.5	0.8	26	65	NW	MAY 15	67	5.8	106	114	146	101	7	52	10	34	42	137	9
SCOTTSBLUFF	61.9	33.5	47.7	101	JUL 20	-22	DEC 31+	6824	12.86	.81	MAY 6-7	26.2	5.4	MAR 9-10	70	79	48	44	10.7	2.8	33	44	32	DEC 12		5.6	115	105	146	87	10	39	6	29	23	173	15
VALENTINE	59.7	32.7	46.2	104	AUG 5	-28	JAN 7	7442	20.46	2.04	JUN 24	30.6	9.0	APR 3								68	N	JUN 20	67	5.8	115	101	150	87	9			30	55	177	22
NEVADA																																					
ELKO	64.0	33.8	48.9	101	JUL 19	-11	DEC 22+	6357	14.63	1.85	JUN 5-6	59.4	12.0	JAN 27	56	65	47	36	5.2	1.8	26	35	33	MAY 5		6.0	104	105	157	90	18	26	7	55	11	170	4
ELY	60.2	28.3	44.3	93	JUL 21+	-15	DEC 22	7674	10.03	1.09	OCT 14	65.6	6.7	DEC 1	60	68	43	37	9.0	3.6	21	40	S	AUG 20	73	5.6	109	121	136	83	23	46	6	12	16	234	19
LAS VEGAS	79.6	52.3	66.0	111	JUN 27+	15	DEC 22	2328	1.11	.31	JUN 8	.0	.0		30	37	25	19	8.3	3.0	24	42	SW	DEC 11+	86	3.6	204	83	79	14	0	12	0	120	0	45	0
RENO	67.2	32.2	49.7	100	JUL 28+	- 3	DEC 21	5923	5.45	.71	JAN 30	28.5	10.9	JAN 30	49	66	42	30	5.9	1.7	27	80	SW	MAR 12+	78	5.2	132	98	136	41	9	6	4	54	5	198	3
WINNEMUCCA	65.1	33.2	49.2	103	JUL 28	- 3	DEC 20	6224	8.48	.98	NOV 2-3	26.2	8.2	DEC 22-23	50	59	42	34	8.5	1.3	24	38	SW	SEP 18	60	6.0	103	93	170	69	9	16	4	47	5	185	2
NEW HAMPSHIRE																																					
CONCORD	55.8	32.5	44.2	95	JUL 16	-21	JAN 2	7823	41.32	1.98	DEC 14-15	54.9	6.8	NOV 12	79	79	53	66	6.4	2.6	29	52	SW	AUG 25	55	6.3	83	121	162	133	19	24	60	5	51	169	34
MT WASHINGTON OBS	32.8	19.2	26.0	67	JUL 18	-46	JAN 8	14176	91.15	6.07	NOV 12-13	227.5	37.5	DEC 15	86	84	84	86	32.9			136Y	W	DEC 5	32	7.9	49	57	260	212	66	18	327	0	169	246	74
NEW JERSEY																																					
ATLANTIC CITY	62.4	41.1	51.8	99	JUL 1	0	DEC 10+	5626	33.46	3.56	MAY 28-29	11.1	4.3	DEC 15	80	79	52	68	10.8	3.3	27	39	6	NOV 12	55	6.0	93	128	145	95	3	30	49	23	28	117	3
NEWARK	62.4	45.5	54.0	98	JUL 16+	1	JAN 9	5115	36.89	4.11	MAY 28-29	12.0	3.3	JAN 31-1	71	72	52	60	10.8	3.7	27	39	4	NOV 12+		5.9	103	122	141	113	4	24	15	23	25	92	0
TRENTON U	62.3	45.8	54.1	97	JUL 17+	4	JAN 9	4975	37.48	4.43	JUN 12-13	10.8	3.7	DEC 15								49	NW	MAR 1	60	6.0	99	109	158	111	3			22	27	85	0
NEW MEXICO																																					
ALBUQUERQUE	68.9	42.0	55.5	101	JUN 22+	4	DEC 22	4472	10.67	.95	JUL 31	10.8	2.4	DEC 17	47	59	37	29	9.1	0.2	33	54	E	JUL 2	77	4.4	166	104	96	62	5	42	1	42	5	114	0
CLAYTON	66.8	38.0	52.4	104	JUN 28	1	JAN 6	5222	10.69	1.40	JUN 4	14.0	6.0	MAR 10-11		64	34	36								5.1	140	101	125	58	5			30	10	147	0
ROSWELL	74.7	40.5	57.6	109	JUN 28	6	DEC 23	3892	15.84	2.71	JUL 4-5	25.3	8.4	NOV 26-27	61	75	42	35	7.8	0.8	19	41	NW	FEB 22	73	4.8	154	106	106	71	8	27	19	98	4	133	0
NEW YORK																																					
ALBANY	58.5	35.8	47.2	98	JUN 9	-26	JAN 12	7000	32.28	2.20	APR 24-25	47.0	9.1	NOV 12-13	74	73	53	64	9.3	3.5	27	43	W	FEB 17	54	6.9	59	111	196	138	14	25	32	15	52	144	23
BINGHAMTON	53.2	36.8	45.0	89	JUL 18	-15	JAN 9	7604	42.39	3.40	SEP 10-11	57.9	9.5	NOV 12-13	81	85	65	71	9.9	3.8	26	52	W	DEC 5	51	7.4	43	101	222	168	16	29	60	0	75	138	20
BUFFALO	55.7	39.4	47.6	94	JUL 18	-11	JAN 12	6854	38.26	3.04	JUN 25-26	64.8	6.8	MAR 12-13	79	80	64	70	11.4	5.3	24	43	SW	DEC 29	54	7.1	62	95	209	176	22	39	17	5	61	123	6
J.F. KENNEDY	59.5	45.5	52.5	98	JUL 16	0	JAN 9	5484	41.23	2.88	MAY 29	15.4	3.6	DEC 15	72	71	57	65	12.7	3.3	28	46	27	DEC 5		6.0	93	129	144	119	7	21	36	12	29	91	1
NEW YORK U	62.0	46.1	54.1	98	JUL 17	- 1	JAN 9	5034	43.57	4.88	MAY 28-29	17.8	5.5	MAR 1	66	68	50	57	8.6	2.7	29	51	NE	NOV 12	60					109	5	18		17	26	87	1
NEW YORK LA GUARDIA	60.7	46.6	53.7	96	JUL 1	1	JAN 9	5148	39.53	3.02	MAY 28-29	13.8	4.1	DEC 15	64	66	51	56	11.7	3.6	30	67	NE	NOV 12		6.1	90	123	153	111	6	24	15	15	27	89	0
ROCHESTER	56.9	38.3	47.6	92	JUL 18+	-11	JAN 12	6813	31.75	2.39	AUG 23-24	90.6	8.8	MAR 12-13	79	79	61	68	9.1	4.5	25	43	W	FEB 18+	54	7.1	62	96	208	154	35	31	10	8	56	124	9
SYRACUSE	55.9	37.8	46.9	91	JUL 1	-22	JAN 9	7033	44.23	3.10	JUN 25-26	95.1	8.9	NOV 12-13	78	79	62	68	9.4	3.2	26	43	W	MAR 24	50	6.9	74	90	202	167	31	32	7	3	58	130	14
NORTH CAROLINA																																					
ASHEVILLE	65.6	42.4	54.0	94	AUG 24	9	JAN 8	4682	44.78	5.13	MAR 11-12	22.9	5.7	NOV 11-12+	86	90	57	69	7.7	2.7	35	40	34	MAR 1	61	5.9	104	106	156	120	6	50	87	11	9	116	0
CAPE HATTERAS R	68.5	53.6	61.1	94	AUG 23+	23	DEC 18+	3018	55.13	3.55	JUL 9-10	3.5	3.5	FEB 24-25	80	79	64	76	11.3	2.4	32	60	NNW	OCT 20	71	5.7	114	103	149	112	1	50	9	13	1	49	0
CHARLOTTE	69.3	47.7	58.5	99	AUG 23+	14	JAN 8	3713	40.05	3.28	JUN 8-9	9.2	2.9	JAN 24-25	77	83	52	60	6.8	1.0	29	38	SW	DEC 28	73	5.6	128	82	156	100	3	32	18	33	4	92	0
GREENSBORO	69.2	46.5	57.9	98	AUG 24	11	FEB 22	3852	32.86	2.26	MAR 11-12	15.1	5.0	NOV 11-12	76	80	51	60	7.2	1.3	28	39	SW	DEC 28	59	5.9	103	106	157	110	4	41	22	37	3	99	0
RALEIGH	70.3	46.5	58.4	98	AUG 22+	8	FEB 12	3722	35.60	1.96	JUL 11	6.2	1.6	JAN 10-11	79	84	52	63	8.9	1.5	27	35	21	DEC 28	62	5.6	116	113	137	101	4	40	26	41	4	101	0

See reference notes at end of table

ANNUAL CLIMATOLOGICAL DATA
ENGLISH UNITS

State and Station	Temperature: Averages: Daily maximum	Temperature: Averages: Daily minimum	Temperature: Averages: Annual	Temperature: Extremes: Highest	Temperature: Extremes: Date	Temperature: Extremes: Lowest	Temperature: Extremes: Date	Heating degree days	Precipitation: Total	Precipitation: Greatest in 24 hours	Precipitation: Date (s)	Snow, Sleet: Total	Snow, Sleet: Greatest in 24 hours	Snow, Sleet: Date (s)	Relative humidity: 100am EST	Relative humidity: 700am EST	Relative humidity: 100pm EST	Relative humidity: 700pm EST	Wind: Average speed	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile: Speed	Wind: Fastest mile: Direction	Wind: Fastest mile: Date	Possible sunshine	Average sky cover sunrise to sunset	Number of days: Sunrise to sunset: Clear, 0-03	Number of days: Sunrise to sunset: Partly cloudy, 04-07	Number of days: Sunrise to sunset: Cloudy, 0.8-1.0	Number of days: Precipitation .01 inch or more	Number of days: Snow, Sleet 1.0 inch or more	Number of days: Thunderstorms	Number of days: Heavy fog	Number of days: Max temp: 90 °F and above	Number of days: Max temp: 32 °F and below	Number of days: Min temp: 32 °F and below	Number of days: Min temp: 0 °F and below
	°F	°F	°F	°F		°F		Base 65 °F	In	In		In	In		%	%	%	%	M.p.h	M.p.h		M.p.h			%	Tenths											
NORTH CAROLINA																																					
WILMINGTON	73.1	51.7	62.4	100	AUG 23+	18	FEB 14	2902	37.77	2.70	JUL 11-12	3.7	2.0	FEB 22	80	80	52	69	8.0	1.0	27	36	SE	JAN 13	67	5.5	127	101	138	116	2	32	20	49	1	72	0
NORTH DAKOTA																																					
BISMARCK	52.2	28.4	40.3	96	JUN 3	-41	JAN 4	9187	19.03	2.62	AUG 23-24	34.8	5.7	MAR 18-19	75	79	57	56	10.3	2.4	33	46	NW	DEC 4	66	6.7	79	100	187	103	10	30	8	8	81	195	48
FARGO	52.1	30.6	41.4	99	AUG 5	-33	JAN 4	9013	20.60	1.02	OCT 17-18	36.5	5.4	APR 3	80	84	64	64	12.4	2.1	34	62	SE	JAN 11	61	6.6	69	130	167	117	14	32	9	14	92	177	44
WILLISTON	53.4	28.4	40.9	102	JUL 10	-35	DEC 30	9033	12.93	1.85	JUN 9-10	27.5	4.0	JAN 27	73	80	57	54	9.1	2.0	31	47	N	MAR 30+	66	6.4	83	116	167	87	10	23	7	16	76	194	49
OHIO																																					
AKRON	60.0	40.9	50.5	94	AUG 24	-8	JAN 8	6037	35.47	1.75	JUL 16-17	41.1	10.4	JAN 13-14	76	79	60	66	9.9	3.6	24	40	24	DEC 28+		6.8	65	113	188	157	13	46	28	16	44	119	10
CINCINNATI OBS	63.0	44.4	53.7	94	AUG 21	-5	JAN 8	5178	46.22	3.69	MAY 23-24	22.7	9.3	MAR 22								35	SW	DEC 28	55					141	5			30	38	100	3
CLEVELAND	57.5	39.7	48.6	93	AUG 6	-10	JAN 8	6529	34.73	1.76	JUL 16-17	46.4	4.9	NOV 19-20	75	78	61	66	10.3	4.2	23	49	SW	DEC 28	49	7.0	65	92	209	165	19	36	12	8	56	130	6
COLUMBUS	61.1	41.8	51.5	95	JUL 18+	-9	JAN 8	5750	37.78	2.72	MAY 26-27	28.3	5.4	JAN 13	75	78	58	62	9.0	2.5	23	42	W	DEC 28	49	6.7	68	110	188	133	6	54	18	20	43	116	7
DAYTON	60.7	41.8	51.3	92	AUG 21+	-11	JAN 8	5805	34.35	2.93	MAY 23-24	33.4	11.3	MAR 22-23	73	77	56	62	9.8	3.3	24	43	SW	APR 4	56	6.6	84	94	188	130	9	39	21	12	39	112	7
MANSFIELD	59.2	40.8	50.0	93	AUG 24	-10	JAN 8	6171	32.11	1.84	MAY 26-27	47.2	12.0	JAN 13-14	76	80	60	66	11.4	4.9	23	40	24	DEC 28		6.6	80	103	183	152	14	35	27	11	51	120	7
TOLEDO	59.6	38.8	49.2	96	AUG 24+	-14	JAN 8	6505	33.07	2.01	DEC 27-28	37.4	6.6	MAR 22-23	80	82	58	66	9.6	3.5	25	40	SW	APR 8	56	6.7	71	113	182	140	12	37	21	21	49	146	8
YOUNGSTOWN	56.7	38.2	47.5	92	AUG 24	-9	FEB 21+	6913	41.55	2.37	OCT 18-19	56.4	5.8	DEC 24 +	82	84	65	70	9.9	3.4	25	38	25	DEC 28+		7.0	67	100	199	173	20	45	32	5	65	134	11
OKLAHOMA																																					
OKLAHOMA CITY	68.9	47.3	58.1	103	AUG 10+	1	DEC 31	3970	35.51	2.11	MAY 6-7	24.7	6.3	MAR 20	78	84	58	58	11.0	2.3	17	47	NE	FEB 26	63	5.9	107	98	161	92	9	52	15	53	11	92	0
TULSA	69.8	47.4	58.6	103	AUG 9	-1	JAN 7	3993	35.78	2.45	SEP 23-24	15.9	9.8	MAR 11-12	74	79	55	55	10.6	3.1	19	43	SW	DEC 12	63	5.8	112	96	158	98	5	45	7	60	10	88	1
OREGON																																					
ASTORIA	57.9	43.2	50.6	86	SEP 5	19	DEC 30	5211	87.39	2.65	NOV 7-8	8.2	3.7	JAN 29	84	86	78	72	8.4	2.2	21	38	19	FEB 3		7.7	45	76	245	219	3	5	50	0	2	40	0
BURNS U	60.2	33.3	46.8	101	JUL 28	2	JAN 27	6970	10.73	.66	AUG 13-14	30.7	7.0	DEC 25-26	61	72	54	40	7.2	2.8	30					6.0	100	112	154	92	7			23	15	203	0
EUGENE	64.2	43.2	53.7	99	JUL 31	13	DEC 31	4315	56.55	2.97	DEC 3-4	5.9	2.1	DEC 29-30	84	90	76	63	7.6	1.9	21	32	20	DEC 11+		7.2	54	94	218	145	3	6	62	18	1	38	0
MEACHAM	51.7	35.2	43.5	94	JUL 5	-20	DEC 30	7985	34.07	2.00	NOV 8-9	112.8	7.0	DEC 23-24			64					25	29	FEB 23		7.0	78	71	217	154	36			6	53	165	3
MEDFORD	68.1	41.9	55.0	107	JUN 25	17	JAN 28	4384	15.29	1.17	FEB 22-23	8.4	4.3	JAN 26-27	68	80	65	45	5.1	1.5	31	36	14	DEC 13		6.0	110	84	172	110	3	6	57	58	4	83	0
PENDLETON	64.3	43.3	53.8	108	JUL 6	-12	DEC 30	4838	11.23	.65	DEC 3-4	13.2	3.3	DEC 31	60	68	55	45	10.0	4.2	25	46	28	JUL 19		6.5	83	97	186	97	6	5	20	39	9	61	3
PORTLAND	61.7	43.9	52.8	99	JUL 31	8	DEC 30	4631	50.89	2.11	DEC 3-4	20.9	6.0	DEC 30	76	85	73	61	8.2	1.1	16	45	S	JAN 9	47	7.5	60	60	246	184	6	4	41	9	5	38	0
SALEM	62.6	41.0	51.8	99	JUL 31	8	DEC 31	4913	54.36	2.84	FEB 18-19	21.9	6.7	DEC 29-30	83	89	74	62	6.7	2.2	21	35	19	DEC 7		7.1	64	78	224	180	6	5	38	15	3	66	0
SEXTON SUMMIT R	55.7	39.2	47.5	90	AUG 31+	13	DEC 21	6617	33.86	1.52	OCT 29-30	91.2	9.3	JAN 29-30	74	77	72	61				59	19	NOV 29		5.7	129	71	166	121	27			4	27	113	0
PACIFIC AREA																																					
JOHNSTON	84.2	75.6	79.9	89	OCT 13	69	APR 5+	0	42.27	4.48	MAY 4-5	.0	.0		76	78	77	68	15.1	12.2	8	48	E	SEP 22	57	5.8	106	137	123	168	0	5	0	0	0	0	0
KOROR R	87.9	75.8	81.9	93	JUL 3	72	NOV 9+	0	131.47	3.95	FEB 14-15	.0	.0		75	87	89	78	7.2	1.9	6	36	SW	OCT 16	70	9.0	0	54	312	252	0	24	0	94	0	0	0
KWAJALEIN	86.5	76.7	81.6	91	OCT 13+	71	AUG 1+	0	120.25	6.53	OCT 19-20	.0	.0		77	79	84	84	12.2	8.6	7	40	20	OCT 26		9.1	4	58	304	245	0	9	0	13	0	0	0
MAJURO	85.5	76.5	81.0	90	OCT 14+	71	DEC 20	0	136.02	5.38	DEC 19-20	.0	.0		76	79	82	83	9.0	6.3	8	34	E	JUL 6	58	8.1	18	104	244	265	0	16	0	3	0	0	0
PAGO PAGO	85.3	73.8	79.6	91	JAN 23	65	AUG 17+	0	116.84	9.01	FEB 4-5	.0	.0		84	89	88	77	9.0	5.5	10	56	NW	FEB 10	48	7.2	43	140	183	246	0	29	0	14	0	0	0
PONAPE R	87.1	73.3	80.2	91	DEC 29+	69	NOV 29+	0	191.13	8.91	FEB 11-12	.0	.0		79	89	91	77	6.9	3.8	9	24	SW	APR 7	46	8.6	11	66	289	288	0	35	0	53	0	0	0
TAGUAC GUAM R	84.9	71.3	78.1	91	AUG 22	62	FEB 18+	0	96.34	4.82	OCT 21-22	.0	.0		78	90		78				44	W	OCT 22	53	7.8	8	147	211	263	0			1	0	0	0

See reference notes at end of table.

ANNUAL CLIMATOLOGICAL DATA
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State and Station	Temperature: Averages: Daily maximum	Temperature: Averages: Daily minimum	Temperature: Averages: Annual	Temperature: Extremes: Highest	Temperature: Extremes: Date	Temperature: Extremes: Lowest	Temperature: Extremes: Date	Heating degree days	Precipitation: Total	Precipitation: Greatest in 24 hours	Precipitation: Date (s)	Snow, Sleet: Total	Snow, Sleet: Greatest in 24 hours	Snow, Sleet: Date (s)	Relative humidity: 100am E.S.T.	Relative humidity: 700am E.S.T	Relative humidity: 100p.m. E.S.T	Relative humidity: 700p.m. E.S.T	Wind: Average speed	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile: Speed	Wind: Fastest mile: Direction	Wind: Fastest mile: Date	Possible sunshine	Average sky cover sunrise to sunset	Number of days: Sunrise to sunset: Clear, 0-03	Number of days: Sunrise to sunset: Partly cloudy, 04-07	Number of days: Sunrise to sunset: Cloudy, 0.8-1.0	Number of days: Precipitation .01 inch or more	Number of days: Snow, Sleet 1.0 inch or more	Number of days: Thunderstorms	Number of days: Heavy fog	Number of days: Max temp: 90 °F and above	Number of days: Max temp: 32 °F and below	Number of days: Min temp: 32 °F and below	Number of days: Min temp: 0 °F and below
	°F	°F	°F	°F		°F		Base 65 °F	In	In		In	In		%	%	%	%	M.p.h.	M.p.h.		M.p.h.			%	Tenths											
PACIFIC AREA																																					
TRUK MOEN ISLAND	86.4	75.4	80.9	91	DEC 16	70	DEC 15+	0	155.60	6.55	OCT 30-31	.0	.0		77	86	87	77	9.4	4.2	6	38	NW	APR 8	64	8.8	4	68	294	274	0	30	0	8	0	0	0
WAKE	85.5	74.8	80.2	91	AUG 27+	66	JAN 30	0	40.93	3.77	APR 9-10	.0	.0		66	71	79	81	15.2	10.8	8	46	S	OCT 6	73	6.1	86	150	130	168	0	10	0	22	0	0	0
YAP R	86.5	74.9	80.7	91	JUN 8	70	NOV 5	0	92.99	3.78	OCT 13-14	.0	.0		75	87	89	77	8.2	3.2	6	31	NE	FEB 24	57	8.8	3	71	292	240	0	12	0	8	0	0	0
PENNSYLVANIA																																					
ALLENTOWN	60.9	39.9	50.4	96	JUL 18	- 7	JAN 2	6005	38.43	2.52	APR 24	14.6	6.4	NOV 12	74	77	53	61	8.7	3.6	28	41	31	JAN 7		6.2	91	120	155	110	2	29	35	17	33	122	8
ERIE	56.3	40.5	48.4	94	JUL 18	- 5	JAN 12	6558	34.33	1.86	DEC 27-28	86.9	9.0	JAN 14-15	74	75	64	67	12.0	4.6	24	39	30	NOV 19		7.0	54	116	196	170	28	41	19	2	55	121	6
HARRISBURG	62.2	43.2	52.7	98	AUG 22	- 5	JAN 2	5440	33.21	3.74	SEP 10	11.5	3.0	NOV 12	73	76	54	60	8.7	3.1	28	43	NW	FEB 17	60	6.5	79	107	180	115	5	32	19	32	31	103	1
PHILADELPHIA	63.5	44.7	54.1	97	AUG 25	6	FEB 21+	5054	35.45	3.05	JUN 12	8.9	2.6	DEC 15	71	72	51	59	9.9	3.0	29	45	W	DEC 5+	58	6.2	96	111	159	103	4	24	20	27	22	97	0
PITTSBURGH	59.0	39.1	49.1	93	JUL 22	- 8	JAN 8	6401	36.07	2.16	AUG 7	48.5	6.4	MAR 12	72	76	56	59	9.2	4.1	26	48	25	DEC 28	54	7.1	52	119	195	156	13	35	18	11	51	129	12
PITTSBURGH U	61.2	43.0	52.1	95	JUL 18	- 4	JAN 8	5562	31.37	1.76	SEP 5-6	25.8	4.1	JAN 13-14											51					145	8			13	42	105	3
READING U	62.8	45.4	54.1	97	JUL 1	1	JAN 2	5014	35.11	2.51	SEP 10-11	9.2	1.9	NOV 12								57	NW	MAR 1	56	5.8	107	113	146	115	5			25	29	87	0
SCRANTON	58.5	40.1	49.3	94	JUL 18	-10	JAN 12	6315	30.75	2.12	SEP 5-6	28.3	8.0	NOV 12	77	81	59	64	8.7	2.6	25	39	W	MAY 3	55	6.7	72	111	183	136	8	27	24	12	45	116	7
WILLIAMSPORT	60.4	39.7	50.1	95	AUG 22	-11	JAN 12	5976	37.79	3.07	SEP 5-6	18.4	7.2	NOV 12	84	84	60	69	8.6	3.0	28	40	32	JUN 15		6.7	68	121	177	133	4	35	46	15	33	117	5
RHODE ISLAND																																					
BLOCK ISLAND	55.5	43.4	49.5	88	JUL 17	- 2	JAN 9	6003	35.04	3.63	MAR 17-18	16.1	4.8	JAN 6-7												6.1	103	115	148	114	6			0	32	89	3
PROVIDENCE	58.9	40.2	49.6	95	JUL 16	- 5	JAN 9	6157	41.36	4.53	MAR 17-18	26.0	5.7	JAN 25	73	71	52	63	10.4	3.6	29	40	30	DEC 17	57	5.9	107	107	152	125	9	18	18	9	33	114	6
SOUTH CAROLINA																																					
CHARLESTON	74.6	52.3	63.5	99	AUG 8	18	FEB 14+	2680	45.84	2.77	JUN 9-10+	1.8	1.3	FEB 22	79	80	51	66	8.6	0.9	25	69Y	N	AUG 24	60	5.6	116	112	138	106	1	51	28	55	0	68	0
COLUMBIA	74.3	49.6	62.0	106	AUG 23	15	FEB 14+	3046	48.67	2.82	JAN 9-10	2.7	1.3	JAN 12	82	86	49	62	6.7	1.2	30	32	31	JUN 12	65	5.4	134	96	136	107	1	49	16	73	1	86	0
GNVLE-SPARTANBURG	70.1	47.4	58.8	99	AUG 23	13	FEB 12	3591	43.18	4.07	JUN 7-8	4.6	1.9	NOV 11	75	79	50	61	6.9	1.4	32	34	NW	DEC 16	59	5.6	120	100	146	109	2	46	26	36	4	91	0
SOUTH DAKOTA																																					
ABERDEEN	54.2	31.2	42.7	99	AUG 21	-30	JAN 4	8517	21.16	2.59	MAR 18-19	39.9	10.5	APR 3	77	81	60	59	11.4	2.2	34	49	36	APR 4+		6.3	95	108	163	100	11	34	7	17	85	186	31
HURON	56.5	33.1	44.8	99	JUL 20+	-25	JAN 4	7878	26.17	3.41	JUN 24-25	42.7	9.1	DEC 21-22	74	78	57	56	11.6	1.3	29	72	NW	AUG 7	64	6.3	87	115	164	94	16	37	8	18	73	173	30
RAPID CITY	58.3	33.1	45.7	96	AUG 7+	-21	DEC 30	7326	18.46	1.89	JUN 23-24	32.6	5.6	APR 13	66	70	49	48	10.9	4.4	34	56	NW	DEC 12+	59	6.1	100	104	162	99	10	38	7	10	50	172	15
SIOUX FALLS	57.6	34.1	45.9	101	JUN 20	-22	DEC 31+	7659	27.82	2.37	JUN 24-25	49.4	16.6	DEC 21-22	75	80	56	57	11.9	1.9	28	58	25	JUN 21		5.9	104	111	151	97	13	49	15	28	64	168	31
TENNESSEE																																					
BRISTOL	66.1	43.0	54.6	94	AUG 23+	1	JAN 8	4728	32.79	1.54	MAR 9-10	23.3	4.8	FEB 29	78	83	54	61	5.4	1.6	29	40	24	DEC 28		6.5	75	113	178	133	7	45	57	25	18	116	0
CHATTANOOGA	69.7	47.5	58.6	102	AUG 23	10	FEB 12	3915	35.09	1.77	DEC 21-22	10.5	4.7	JAN 12-13	81	85	55	60	6.0	1.0	27	34	SW	DEC 28	53	6.2	98	102	166	109	4	48	43	56	5	98	0
KNOXVILLE	67.7	46.8	57.3	99	AUG 23+	8	FEB 22	4076	35.76	1.42	SEP 9	12.8	3.7	FEB 28-29	78	83	56	60	6.1	1.4	29	38	SW	DEC 28	59	6.6	83	97	186	118	5	44	28	31	4	91	0
MEMPHIS	70.2	51.1	60.7	98	AUG 23	11	JAN 7	3466	51.87	2.91	JUN 24-25	23.8	16.1	MAR 21-22	70	76	54	56	8.4	1.4	21	47	SE	SEP 9	64	6.1	108	89	169	98	7	55	8	57	6	75	0
NASHVILLE	68.5	46.0	57.3	99	AUG 23	4	JAN 8	4227	43.93	3.34	NOV 27-28	18.6	8.2	MAR 22	77	83	55	59	8.5	2.0	23	42	SW	NOV 28+	56	6.3	90	108	168	113	6	51	24	46	10	100	0
OAK RIDGE R	67.5	46.1	56.8	99	AUG 23+	10	FEB 22+	4211	39.62	2.12	MAR 11-12	8.0	3.3	JAN 13								45Y		NOV 28		6.5	99	78	189	117	2			33	3	91	0
TEXAS																																					
ABILENE	73.9	52.4	63.2	98	OCT 2+	12	DEC 31+	2802	28.64	2.65	JUL 18-19	12.2	3.1	NOV 27	69	76	54	49	11.5	4.3	18	45	NW	MAY 10	71	5.8	118	86	162	80	5	41	14	80	5	59	0
AMARILLO	70.2	44.1	57.2	104	JUN 29+	3	DEC 31+	4113	17.97	1.74	JAN 21-22	13.6	3.3	FEB 22	64	73	46	41	13.8	3.8	20	50	NE	MAY 31+	71	5.1	143	100	123	79	5	48	31	60	9	96	0
AUSTIN	76.3	56.1	66.2	98	AUG 23+	22	JAN 7	2098	38.72	2.78	JUL 8-9	T	T	MAR 21 +	78	85	58	57	9.4	2.0	15	42	W	DEC 27	56	6.1	85	136	145	97	0	48	17	84	2	27	0

See reference notes at end of table.

ANNUAL CLIMATOLOGICAL DATA
ENGLISH UNITS

YEAR 1968

State and Station	Temperature – Averages – Daily maximum °F	Daily minimum °F	Annual °F	Extremes – Highest °F	Date	Lowest °F	Date	Heating degree days (Base 65 °F)	Precipitation – Total In	Greatest in 24 hours In	Date (s)	Snow, Sleet – Total In	Greatest in 24 hours In	Date (s)
TEXAS														
BROWNSVILLE	81.6	64.5	73.1	96	AUG 15+	32	FEB 24+	779	29.64	2.49	OCT 4-5	.0	.0	
CORPUS CHRISTI	78.0	61.1	69.6	96	AUG 12+	28	JAN 13+	1312	41.53	4.65	MAY 7-8	.0	.0	
DALLAS	74.2	55.6	64.9	101	AUG 10	13	JAN 7	2461	36.19	2.65	MAR 19-20	.4	.4	FEB 22-23
DEL RIO	78.9	57.1	68.0	103	AUG 12	25	DEC 23	1803	17.17	2.21	JUL 2-3	T	T	MAR 3
EL PASO	75.5	48.9	62.2	106	JUN 21	13	DEC 23	2814	12.02	2.63	JUL 5-6	12.2	7.0	NOV 26-27
FORT WORTH	74.2	53.5	63.9	101	AUG 10	12	JAN 7	2596	38.48	3.17	MAY 7	3.0	2.5	FEB 22-23
GALVESTON U	73.3	64.0	68.7	93	JUN 13	30	JAN 8	1455	51.16	4.95	JUN 20-21	.0	.0	
HOUSTON	78.0	59.3	68.7	96	AUG 22+	28	JAN 14	1552	61.44	6.35	MAY 10	1.0	1.0	MAR 22
LUBBOCK	70.6	43.9	57.3	103	JUN 28	6	JAN 7	3883	19.42	1.70	MAR 19-20	15.5	7.7	MAR 20
MIDLAND	74.6	49.0	61.8	102	JUN 28	15	JAN 7	2914	18.51	4.75	MAY 9	7.2	2.0	NOV 8
PORT ARTHUR	76.8	57.4	67.1	97	AUG 12	24	JAN 14	1752	57.98	7.23	APR 8-9	1.4	1.4	MAR 22
SAN ANGELO	77.0	52.0	64.5	104	AUG 12	16	DEC 23	2501	23.30	1.57	APR 8-9	10.2	5.8	NOV 8
SAN ANTONIO	77.2	56.4	66.8	99	AUG 12+	24	DEC 24+	1972	30.40	3.18	JAN 19-20	T	T	FEB 22
VICTORIA	78.3	59.5	68.9	96	AUG 22+	27	JAN 14	1528	49.32	5.47	MAY 7-8	T	T	JAN 9
WACO	75.2	56.1	65.7	100	AUG 10	19	JAN 7	2246	36.71	4.01	MAY 9-10	1.0	1.0	FEB 22
WICHITA FALLS	74.9	49.6	62.3	107	AUG 10	8	JAN 7	3074	30.56	2.58	NOV 26	12.4	3.8	MAR 11
UTAH														
MILFORD	64.5	33.3	48.9	102	JUN 27	-23	DEC 22	6435	8.16	.88	OCT 14-15	41.0	3.9	MAR 19
SALT LAKE CITY	62.7	37.7	50.2	102	JUL 19	0	JAN 13+	6141	21.11	1.15	OCT 14-15	85.0	9.5	DEC 11
WENDOVER	61.2	40.8	51.0	101	JUL 19	2	DEC 22	5998	5.46	.44	MAY 21	7.9	3.2	APR 21-22
VERMONT														
BURLINGTON	51.5	32.0	41.8	92	JUL 16	-27	JAN 11	8675	32.74	2.16	APR 24-25	105.1	8.7	DEC 27-28
VIRGINIA														
LYNCHBURG	66.6	44.1	55.4	98	AUG 22+	3	FEB 22	4531	28.42	2.65	MAY 26-27	19.1	6.7	NOV 11-12
NORFOLK	67.2	49.5	58.4	99	AUG 25	14	FEB 11	3887	37.71	3.11	MAR 17-18	9.1	3.8	DEC 7-8
RICHMOND	69.9	46.3	58.1	99	AUG 25+	6	FEB 22	3964	33.10	1.96	MAR 12-13	11.5	4.7	MAR 29-1
ROANOKE	66.2	44.6	55.4	97	JUL 1+	7	DEC 11	4410	35.08	6.41	OCT 18-19	33.0	11.6	JAN 13
WASHINGTON														
OLYMPIA	60.0	40.1	50.1	95	JUL 31	6	DEC 30	5475	64.25	2.35	FEB 18-19	38.3	8.5	DEC 28
QUILLAYUTE	56.7	41.3	49.0	88	JUL 30	12	DEC 29+	5776	129.42	8.32	JAN 18-19	11.4	4.0	DEC 30-31
SEATTLE-TACOMA	59.7	45.2	52.5	92	JUL 2	6	DEC 30	4674	50.15	1.85	DEC 3	30.1	13.0	DEC 30-31
SPOKANE	57.3	36.9	47.1	101	JUL 6	-25	DEC 30	6825	16.26	1.03	NOV 10-11	33.2	7.5	DEC 31
STAMPEDE PASS R	44.8	33.7	39.3	85	JUL 3	-21	DEC 30	9384	106.72	2.97	DEC 3	395.4	20.7	NOV 26-27
WALLA WALLA U	64.0	45.3	54.7	106	JUL 6	-13	DEC 30	4552	17.06	1.02	DEC 31	23.5	12.1	DEC 31
YAKIMA	62.4	37.1	49.8	101	JUL 6	-10	DEC 30+	5862	9.46	.80	JAN 14-15	26.8	5.2	DEC 22

State and Station	Relative humidity – 1:00 a.m. EST %	7:00 a.m. EST %	1:00 p.m. EST %	7:00 p.m. EST %	Wind – Average speed M.p.h	Resultant speed M.p.h	Resultant direction	Fastest mile – Speed M.p.h	Direction	Date	Possible sunshine %	Average sky cover sunrise to sunset Tenths	Number of days – Sunrise to sunset – Clear, 0-0.3	Partly cloudy, 0.4-0.7	Cloudy, 0.8-1.0	Precipitation .01 inch or more	Snow, Sleet 1.0 inch or more	Thunderstorms	Heavy fog	Max temp – 90 °F and above	Max temp – 32 °F and below	Min temp – 32 °F and below	Min temp – 0 °F and below
TEXAS																							
BROWNSVILLE	86	88	63	70	11.7	5.1	13	66	NW	MAY 4	60	6.2	85	129	152	86	0	40	20	108	0	4	0
CORPUS CHRISTI	86	90	68	71	11.1	5.2	12	45	NE	MAY 11+	55	6.7	56	139	171	95	0	40	25	52	0	9	0
DALLAS	69	78	56	53	10.7	3.6	16	45	NE	MAR 11	61	6.0	102	102	162	111	0	49	3	72	4	39	0
DEL RIO	70	82	58	48	9.8	5.5	12	38	36	JUN 25		6.2	92	106	168	65	0	39	15	116	0	17	0
EL PASO	48	59	39	30	7.2	1.5	24	61	W	FEB 20	82	4.0	197	79	90	59	4	36	1	75	0	63	0
FORT WORTH	79	87	61	59	9.6	2.7	18	53	32	DEC 27		6.1	107	90	169	113	2	54	10	72	5	48	0
GALVESTON U								42	NW	MAR 11	54					101	0			8	0	2	0
HOUSTON	82	85	59	64	10.0	2.5	13	41	17	MAY 11	53	6.4	82	105	179	126	1	68	30	81	0	10	0
LUBBOCK	70	82	51	44	11.6	2.9	19	51	26	DEC 21		5.4	131	103	132	79	5	56	30	45	6	100	0
MIDLAND	65	76	46	39	11.2	3.4	17	48	30	JUN 9		5.0	153	87	126	64	4	34	18	84	2	73	0
PORT ARTHUR	86	88	63	71	9.2	2.3	11	56	SW	SEP 17	58	6.1	96	113	157	116	1	68	29	67	0	19	0
SAN ANGELO	74	82	53	50	10.9	4.1	18	40	30	DEC 27		5.5	127	99	140	75	2	34	14	110	1	56	0
SAN ANTONIO	79	85	59	56	9.1	2.7	13	42	N	APR 23	55	6.3	75	140	151	106	0	37	15	96	0	28	0
VICTORIA	86	89	61	67	10.0	3.2	12	61Y	ESE	MAY 11		6.7	71	115	180	106	0	57	35	85	0	15	0
WACO	76	83	62	58	10.7	3.6	16	35	29	DEC 27+		5.9	102	115	149	93	1	42	11	80	2	27	0
WICHITA FALLS	77	85	55	53	12.3	3.4	15	51	26	DEC 18		6.1	105	86	175	80	5	60	15	94	8	75	0
UTAH																							
MILFORD			42									5.0	140	103	123	75	18			48	15	195	12
SALT LAKE CITY	63	67	47	42	8.0	2.4	17	54	NW	MAY 5	70	5.8	122	89	155	100	23	39	12	47	24	143	2
WENDOVER	47	54	43													63	2			42	27	124	0
VERMONT																							
BURLINGTON	78	76	59	66	7.9	1.4	24	38	S	DEC 13	62	7.1	59	106	201	148	32	27	28	4	87	163	46
VIRGINIA																							
LYNCHBURG		74	47	58				40	SW	DEC 28	61	5.6	120	106	140	99	5			35	16	109	0
NORFOLK	73	73	55	63	10.2	1.1	27	52	SE	MAY 27	72	5.6	118	108	140	118	2	35	14	30	11	82	0
RICHMOND	77	78	48	61	7.3	1.1	27	40	SW	DEC 28	65	5.9	106	114	146	102	5	35	23	53	10	98	0
ROANOKE	70	72	47	54	9.5	3.4	29	37	26	DEC 28+		5.7	110	117	139	112	8	39	20	27	17	99	0
WASHINGTON																							
OLYMPIA	85	89	78	64	6.7	3.5	21	35	19	JAN 9		7.5	48	86	232	184	11	6	88	6	3	73	0
QUILLAYUTE	92	95	83	75	7.3	1.9	18	34	S	JAN 9	31	7.8	43	70	253	224	4	7	50	0	3	52	0
SEATTLE-TACOMA	74	81	75	63	8.9	2.6	19	35	21	JAN 10	47	7.7	48	72	246	167	8	6	43	3	3	22	0
SPOKANE	65	75	61	50	10.3	4.2	19	50	SW	DEC 3	54	6.7	77	97	192	113	9	2	46	17	30	138	4
STAMPEDE PASS R		91	82													238	102			0	87	184	4
WALLA WALLA U								31	NW	APR 30	54	6.9	81	74	211	115	3			33	10	47	3
YAKIMA	65	74	55	43	7.6	3.9	28	43	24	JUL 11		6.1	102	97	167	71	7	3	17	20	12	131	4

See reference notes at end of table.

ANNUAL CLIMATOLOGICAL DATA
ENGLISH UNITS

State and Station	Temperature: Averages: Daily maximum	Daily minimum	Annual	Extremes: Highest	Date	Lowest	Date	Heating degree days	Precipitation: Total	Greatest in 24 hours	Date (s)	Snow, Sleet: Total	Greatest in 24 hours	Date (s)	Relative humidity: 100am E.S.T.	700am EST	100p.m. EST	700p.m. EST	Wind: Average speed	Resultant speed	Resultant direction	Fastest mile: Speed	Direction	Date	Possible sunshine	Average sky cover sunrise to sunset	Number of days: Sunrise to sunset: Clear, 0-0.3	Partly cloudy, 0.4-0.7	Cloudy, 0.8-1.0	Precipitation .01 inch or more	Snow, Sleet 1.0 inch or more	Thunderstorms	Heavy fog	Max temp: 90 °F and above	32 °F and below	Min temp.: 32 °F and below	0 °F and below
	°F	°F	°F	°F		°F		Base 65 °F	In.	In.		In.	In.		%	%	%	%	M.p.h.	M.p.h.		M.p.h.			%	Tenths											
WEST INDIES																																					
SAN JUAN P.R.	85.3	73.0	79.2	93	MAY 3	62	FEB 7+	0	53.20	3.72	NOV 26-27	.0	.0		86	82	71	81	7.9	5.7	8	32	NE	NOV 27+	70	5.6	68	216	82	186	0	50	0	25	0	0	0
SWAN ISLAND	84.9	75.9	80.4	90	SEP 5+	69	FEB 11+	0	57.98	6.72	NOV 19-20	.0	.0													6.5	59	163	144	166	0			5	0	0	0
WEST VIRGINIA																																					
BECKLEY	59.3	40.0	49.7	88	JUN 30	- 7	JAN 8	5988	34.48	1.85	MAY 26-27	63.2	9.1	JAN 13-14	79	82	58	68	9.6	3.3	24	44	19	MAR 22		6.8	75	95	196	165	21	42	33	0	42	121	5
CHARLESTON	64.2	43.0	53.6	94	JUL 18	- 6	FEB 22	4990	40.21	2.22	MAR 11-12	33.5	6.2	JAN 13-14	79	82	55	63	6.8	2.6	23	35	28	APR 14		6.8	66	111	189	151	12	41	124	15	27	106	3
ELKINS	60.7	36.3	48.5	89	JUN 30	-17	JAN 2	6376	38.84	1.86	MAY 23-24	80.7	8.9	NOV 12		89	59	69				40	30	APR 14		7.5	53	86	227	168	26			0	36	145	13
HUNTINGTON	63.9	43.1	53.5	95	AUG 20	- 6	JAN 8	5046	36.14	2.49	MAR 11-12	19.3	2.8	FEB 20-21	80	84	58	62	6.4	2.4	23	44	18	APR 23		6.7	75	104	187	137	6	47	65	24	36	111	2
PARKERSBURG U	63.2	43.5	53.4	94	AUG 21	- 7	JAN 8	5156	43.37	2.49	MAY 24	21.2	9.0	JAN 13								41	SW	DEC 5+	52					130	7			16	34	105	2
WISCONSIN																																					
GREEN BAY	54.7	35.2	45.0	94	AUG 23	-24	JAN 7	7703	29.95	2.30	JUN 25-26	42.6	5.9	DEC 19	78	81	62	67	10.6	2.6	26	54	SW	MAY 8	53	6.4	86	111	169	125	13	41	22	2	69	158	20
LA CROSSE	57.2	37.5	47.4	98	AUG 6	-22	DEC 25	7049	35.66			33.0			78	82	59	62	9.6	1.5	24									115	9	47	29	16	62	145	22
MADISON	56.9	35.2	46.1	94	AUG 6	-18	JAN 7	7333	30.71	2.19	JUN 25-26	20.6	4.3	DEC 28	79	83	60	64	10.2	2.8	25	54	W	JUN 10	57	6.3	99	91	176	129	7	39	18	13	59	154	23
MILWAUKEE	56.3	38.7	47.5	94	AUG 23+	-15	JAN 7	6878	31.51	2.06	JUN 25-26	21.6	5.3	DEC 28	76	79	61	65	10.9	3.2	25	42	SW	JUN 29+	59	6.1	103	93	170	136	6	39	21	10	53	137	11
WYOMING																																					
CASPER	57.1	30.5	43.8	95	AUG 7+	-28	DEC 30	7926	11.88	.95	MAY 22-23	63.4	7.8	APP 2-3	65	70	46	43	12.7	6.9	24	46	29	SEP 14		6.1	102	103	161	99	20	30	8	15	51	198	16
CHEYENNE	58.8	33.1	46.0	93	JUL 20	-14	JAN 6	7138	11.91	1.52	MAY 22-23	35.1	7.5	APR 2-3	54	57	37	40	12.5	6.7	30	65	W	DEC 3	62	5.6	104	136	126	71	14	38	13	9	25	184	4
LANDER	55.3	30.0	42.7	93	JUL 15	-22	DEC 31	8362	12.55	1.37	JUN 5-6	104.5	15.6	APR 16-17	58	65	49	45	6.9	2.3	25	61	SW	APP 12	70	6.1	88	117	161	57	24	32	9	9	56	197	24
SHERIDAN	56.5	29.7	43.1	95	AUG 5+	-28	DEC 30	8132	17.59	1.52	JUN 8-9	64.7	4.7	JAN 5	67	73	52	50	6.2	2.7	30	43	NW	JUL 30	61	6.4	84	105	177	119	26	38	5	11	48	203	29

Data from airport unless otherwise specified. U indicates Urban, R indicates Rural, sites.

Precipitation data in column headed "Greatest in 24 hours" are computed on a 24-hour basis without regard to calendar day - data may include precipitation with a measurable amount from the last day of the previous month or the first day of the following month.

Wind directions under resultant direction are in tens of degrees.

Value entered in column "Fastest Mile" is the highest observed 1-minute wind speed when the direction is in tens of degrees. These stations are not equipped with a recording anemometer from which "Fastest Mile" data can be evaluated.

+ And also on an earlier date or dates.

B Number of days maximum 70°F. or above for Alaskan Stations.

Y Peak gust.

V Sun below horizon November 19 - January 23, inclusive.

X Sun below horizon November 24 - January 17, inclusive.

ANNUAL CLIMATOLOGICAL DATA
METRIC UNITS

YEAR 1968

State and Station	Temperature: Averages: Daily maximum	Temperature: Averages: Daily minimum	Temperature: Averages: Annual	Temperature: Extremes: Highest	Date	Temperature: Extremes: Lowest	Date	Heating degree days	Precipitation: Total	Precipitation: Greatest in 24 hours	Date (s)	Snow, Sleet: Total	Snow, Sleet: Greatest in 24 hours	Date (s)	Relative humidity: 1:00am E S T	7:00am E S T	1:00pm E S T	7:00pm E S T	Wind: Average speed	Wind: Resultant speed	Wind: Resultant direction	Fastest mile (1.6 kilometers): Speed	Direction	Date	Possible sunshine	Average sky cover sunrise to sunset	Number of days: Sunrise to sunset: Clear, 0-0.3	Partly cloudy, 0.4-0.7	Cloudy, 0.8-1.0	Precipitation 25mm or more	Snow, Sleet 25.4mm or more	Thunderstorms	Heavy fog	Max temp. 32.2 °C and above	Max temp. 0 °C and below	Min. temp 0 °C and below	Min. temp −17.8 °C and below
	°C	°C	°C.	°C		°C		Base 18.3 °C.	Mm	Mm.		Mm.	Mm.		%	%	%	%	M.p.s	M.p.s		M.p.s.			%	Tenths											
ALABAMA																																					
BIRMINGHAM	22.4	9.5	15.9	37.2	JUL 1	- 9.4	DEC 15	1820	1300	112	JUL 9-10	43	25	JAN 14	78	80	53	60	3.0	.3	36	16.5	W	DEC 27+	65	6.0	101	98	167	113	1	65	9	55	1	81	0
HUNTSVILLE	21.1	9.2	15.2	38.3	AUG 23	- 12.8	JAN 8	2076	1078	66	MAY 11-12	231	61	JAN 14	82	86	58	63	3.7	*	36	19.2	23	SEP 4		6.0	102	97	167	109	4	46	16	49	4	93	0
MOBILE	25.3	13.6	19.4	38.9	AUG 22	- 4.4	DEC 16+	1136	1117	140	DEC 30-31	30	30	FEB 23	80	82	53	63	3.4	.4	6	15.6	24	NOV 28		5.6	110	120	136	122	1	63	37	104	0	31	0
MONTGOMERY	24.0	11.2	17.6	37.8	AUG 24+	- 6.7	DEC 16+	1478	901	67	NOV 17-18	T	T	NOV 11 +	78	85	53	59	2.6	.5	29	19.2	S	DEC 27	61	5.7	107	114	145	101	0	59	24	86	1	59	0
ALASKA																																					
ANCHORAGE	5.7	- 1.6	2.1	27.8	AUG 6	- 27.8	FEB 3	5909	307	21	MAY 30-31	2118	208	OCT 14-15	66	72	70	60	2.6	.2	36	19.7	4	JAN 31	45	7.3	67	73	226	105	2[illegible]	0	29	B 19	113	198	33
ANNETTE	11.6	4.4	8.0	27.2	AUG 9	- 15.0	DEC 28	3734	2814	88	JAN 21-22	1542	229	JAN 16-17	78	81	75	68	4.4	1.9	14	21.9	15	NOV 28		7.7	54	57	255	231	16	2	13	35	16	91	0
BARROW	- 9.2	-15.3	-12.2	24.4	AUG 8	- 45.0	FEB 7+	11148	84	5	NOV 7-8	856	69	NOV 7-8	82	83	83	81				17.9	10	DEC 26			V46	V56	V198	88	9	0	54	2	246	299	166
BARTER ISLAND	- 8.7	-15.3	-12.0	17.8	AUG 8+	- 46.1	FEB 6+	11055	145	14	MAY 11-12	1189	130	JUN 7-8	78		77	75				24.6	26	MAY 12			X61	X63	X177	56	15	0	81	0	238	299	173
BETHEL	2.7	- 6.1	- 1.7	28.3	JUL 25	- 34.4	JAN 20	7277	243	18	AUG 21	1184	86	APR 11-12	79	88	86	72	5.1	1.2	2	19.7	21	DEC 15		7.4	60	67	239	98	17	2	58	15	148	240	69
COLD BAY	6.1	1.2	3.7	22.2	JUL 25	- 18.3	FEB 10	5323	720	124	OCT 22	1580	290	OCT 22	81	84	84	76	7.0	.8	29	26.4	17	JAN 24		8.7	14	59	293	199	23	0	28	1	55	153	1
FAIRBANKS	2.3	- 9.4	- 3.6	31.7	JUL 24	- 48.9	FEB 5	8030	196	32	DEC 18-19	1803	373	DEC 18-19	61	70	65	55	2.4	.6	35	10.3	23	MAY 30+		6.7	74	103	189	81	15	5	29	63	157	236	120
JUNEAU	8.1	.1	4.1	25.0	AUG 4+	- 30.0	FEB 2	5178	1220	50	FEB 5-6	2710	274	DEC 2-3	86	91	85	77	4.0	2.4	11	25.9	11	NOV 28	36	8.0	53	41	272	203	35	0	28	25	63	161	11
KING SALMON	4.4	- 4.4	.0	28.9	AUG 5	- 33.9	DEC 2	6653	386	22	SEP 27	1539	216	JAN 22	67	73	72	60	4.3	.9	5	21.5	8	SEP 26		7.4	58	77	231	120	20	3	41	15	111	209	52
KOTZEBUE	- 3.0	-10.3	- 6.7	27.8	JUL 8	- 46.7	FEB 24+	9108	170	12	MAY 10-11	1308	107	APR 4-5	74	77	77	73	5.7	1.1	8	21.0	10	JAN 25		6.4	88	94	184	97	16	5	20	12	204	264	128
MC GRATH	1.7	- 9.8	- 4.1	30.6	AUG 6+	- 46.7	FEB 6+	8161	232	15	DEC 18-19	2027	168	DEC 17-18	62	74	70	55	2.3	.5	31	13.4	20	DEC 19		6.9	72	89	205	114	27	12	13	40	162	241	125
NOME	.1	- 9.0	- 4.4	30.0	JUL 8	- 38.3	FEB 4	8285	276	29	AUG 4-5	1161	94	JAN 24-25	67	71	69	63	3.8	1.1	5	17.9	3	FEB 18	44	6.6	97	63	206	126	12	1	30	6	184	269	99
ST. PAUL ISLAND	3.3	- 1.3	1.1	12.8	JUL 8+	- 21.7	MAR 3	6270	536	24	JUL 26-27	1697	135	OCT 31	88	90	90	86	8.0	1.7	1	27.3	29	NOV 11		8.9	13	49	304	225	21	0	71	0	87	203	1
SHEMYA	5.3	1.4	3.4	15.6	JUL 31	- 6.1	DEC 22+	5405	439	28	AUG 22-23	886	97	DEC 13-14	[illegible]5	87	87	82	8.7	.6	27	27.7	22	DEC 11+		8.8	8	65	293	186	7	0	57	0	26	165	0
YAKUTAT	6.8	- 1.4	2.7	25.0	AUG 5	- 26.1	FEB 2	5688	2959	93	FEB 25-26	5286	460	APR 12-13	90	92	84	77	3.0	1.7	11	24.6	14	OCT 2		8.1	42	50	274	234	43	1	35	7	70	200	13
ARIZONA																																					
FLAGSTAFF	15.5	- 1.4	7.1	32.2	JUN 21+	- 26.7	DEC 22	4114	420	34	OCT 3	2314	315	JAN 27-28	63	71	40	40	3.4	1.0	21	13.0	21	SEP 20		4.5	168	85	113	77	23	55	11	2	15	228	9
PHOENIX	29.4	13.1	21.3	46.1	JUN 22+	- 4.4	DEC 22	771	169	22	JUL 30-31	T	T	DEC 20	45	58	34	24	2.9	.6	14	25.0Y	E	AUG 3	88	3.4	213	81	72	34	0	26	1	167	0	13	0
TUCSON	27.6	12.5	20.1	43.3	JUN 22	- 7.2	DEC 22	829	227	47	NOV 13-14	10	10	DEC 20-21	45	55	32	25	4.0	1.3	17	22.4	E	JUL 18	86	3.6	210	76	80	51	0	32	1	135	0	16	0
WINSLOW	19.5	3.2	11.4	39.4	JUL 21	- 22.8	DEC 22+	3093	115	18	OCT 3-4	246	84	DEC 17	48	57	37	31	3.4	1.5	22	17.9	9	JUL 4		4.0	181	99	86	40	4	29	8	66	29	122	21
YUMA	30.6	15.0	22.8	46.7	JUN 21	- 2.8	DEC 22	494	42	22	JUL 5-6	0	0		40	52	31	21	3.4	.4	26	17.4	SE	AUG 31+	92	3.0	237	62	67	10	0	7	0	136	0	3	0
ARKANSAS																																					
FORT SMITH	22.1	9.3	15.7	37.8	AUG 9+	- 13.9	JAN 7	1973	1314	128	MAY 12-13	218	135	MAR 11-12	77	81	53	54	3.4	.3	6	17.9	NW	NOV 15	62	6.3	92	92	182	97	3	49	20	77	6	90	0
LITTLE ROCK	21.3	9.7	15.5	36.1	AUG 22	- 12.2	JAN 7	1930	1541	127	MAY 13-14	135	56	FEB 14-15	77	81	56	60	3.8	.4	24	17.9	S	APR 3+	67	6.1	112	74	180	106	4	60	17	56	8	78	0
CALIFORNIA																																					
BAKERSFIELD	25.6	12.5	19.1	42.2	JUL 11+	- 3.9	DEC 22	1029	131	20	OCT 13-14	T	T	DEC 20	53	64	49	36	2.2	1.1	34	11.2	32	JUN 5		3.9	197	66	103	30	0	1	28	114	0	7	0
BISHOP	23.9	3.5	13.7	40.0	JUN 26+	- 15.6	DEC 22	2274	46	10	JUL 30	56	46	DEC 26			26	17								3.9	199	82	85	24	1			90	1	131	0
BLUE CANYON	14.9	6.1	10.5	30.6	AUG 30+	- 10.6	DEC 20	3056	1640	92	OCT 11-12	5337	572	DEC 24-25			46					16.5	18	DEC 10		5.0	158	64	144	93	37			0	14	86	0
EUREKA U	14.4	8.4	11.4	27.8	AUG 30	- 1.7	DEC 21+	2484	905	59	JAN 14-15	T	T	DEC 19 +								18.8	SE	DEC 22	53	7.1	62	91	213	121	0			0	0	4	0

See reference notes at end of table

ANNUAL CLIMATOLOGICAL DATA
METRIC UNITS

YEAR 1968

State and Station	Temperature – Averages – Daily maximum	Daily minimum	Annual	Extremes – Highest	Date	Lowest	Date	Heating degree days	Precipitation – Total	Greatest in 24 hours	Date (s)	Snow, Sleet – Total	Greatest in 24 hours	Date (s)	Relative humidity – 1:00 am EST	7:00 am EST	1:00 pm EST	7:00 pm EST
	°C	°C	°C.	°C		°C		Base 18.3°C.	Mm.	Mm.		Mm.	Mm.		%	%	%	%
CALIFORNIA																		
FRESNO	24.9	9.5	17.2	42.2	JUL 19+	-3.9	DEC 22	1372	267	28	NOV 2-3	30	30	DEC 20	65	78	58	40
LONG BEACH	24.0	12.2	18.1	38.9	AUG 23	-.6	DEC 21	623	144	51	MAR 7-8	0	0		70	76	56	49
LOS ANGELES	21.1	13.4	17.3	35.0	SEP 24	.0	DEC 21	629	192	90	MAR 7-8	0	0		74	76	60	63
LOS ANGELES U	23.9	14.1	19.0	37.8	AUG 23	.6	DEC 21	472	193	77	MAR 7-8	0	0					
MT SHASTA R	16.8	2.6	9.7	36.7	JUL 28	-15.6	JAN 11	3276	927	75	DEC 9-10	4392	635	JAN 9-10				
OAKLAND	18.1	10.8	14.5	34.4	SEP 16	.0	DEC 21	1448	437	66	JAN 29-30	0	0		79	83	74	68
RED BLUFF	24.0	10.2	17.1	43.3	AUG 30	-6.7	JAN 4	1397	612	47	JAN 9-10	206	203	DEC 22-23	61	70	53	38
SACRAMENTO	23.2	8.9	16.1	41.7	AUG 30	-4.4	JAN 4+	1472	378	41	JAN 29-30	T	T	DEC 23 +	75	83	65	48
SANDBERG R	17.1	7.1	12.1	33.9	AUG 29+	-10.0	DEC 20	2647	120	16	FEB 9	284	84	JAN 27	52	54	43	43
SAN DIEGO	21.7	13.9	17.8	33.9	SEP 24	2.2	DEC 22	584	93	35	MAR 7-8	0	0		71	72	59	59
SAN FRANCISCO	18.4	9.1	13.7	36.7	AUG 29	-1.7	DEC 21	1700	458	62	JAN 29-30	T	T	DEC 25 +	81	86	70	63
SAN FRANCISCO U	16.9	10.8	13.9	35.6	AUG 29	2.2	JAN 7	1634	456	48	JAN 29-30	0	0				78	
SANTA MARIA	20.9	8.3	14.6	37.2	SEP 25	-2.8	DEC 21	1383	207	31	OCT 13-14	0	0				61	59
STOCKTON	22.6	9.1	15.9	41.1	JUL 5	-5.6	DEC 21	1547	441	69	JAN 30	T	T	DEC 20	66	73	60	46
COLORADO																		
ALAMOSA	13.9	-5.4	4.3	30.6	JUL 21+	-33.9	DEC 19	5113	206	30	JUL 26-27	681	160	DEC 17-18		79	46	41
COLORADO SPRINGS	16.1	1.3	8.7	36.1	JUN 28+	-18.3	DEC 22	3647	315	22	JUL 28	861	157	NOV 5-6	55	61	37	38
DENVER	17.6	1.1	9.4	36.1	JUN 20	-24.4	DEC 22	3518	308	36	AUG 9-10	1212	178	APR 3	63	70	40	40
GRAND JUNCTION	17.3	2.8	10.1	38.9	JUN 20	-25.0	JAN 8+	3516	189	16	AUG 9-10	343	79	DEC 26	53	62	43	37
PUEBLO	19.6	3.2	11.4	38.9	JUN 28+	-22.2	JAN 7+	2972	277	47	JUL 2	876	150	MAR 10-11	55	65	39	34
CONNECTICUT																		
BRIDGEPORT	15.3	6.8	11.1	33.9	JUN 30	-19.4	JAN 9	3048	1160	94	DEC 4	323	54	JAN 6-7	75	74	58	66
HARTFORD	15.5	4.0	9.8	37.2	JUL 1	-23.9	JAN 12+	3486	1032	60	APR 24-25	958	122	DEC 15	74	75	51	60
NEW HAVEN	15.1	5.6	10.3	33.3	JUN 30	-20.6	JAN 9	3221	1019	69	DEC 4	467	56	DEC 22		75	60	
DELAWARE																		
WILMINGTON	17.7	7.1	12.4	35.6	AUG 25	-17.2	JAN 2	2749	806	60	MAY 28-29	112	25	MAR 12	73	74	51	62
DIST.OF COLUMBIA																		
WASH NATL AP	19.6	8.7	14.2	36.7	AUG 24	-13.9	JAN 12	2319	935	57	JUN 12	208	66	MAR 29-1	67	70	48	55
FLORIDA																		
APALACHICOLA U	23.8	15.3	19.6	34.4	AUG 24+	-2.8	DEC 16	979	990	113	SEP 16-17	T	T	JAN 14				
DAYTONA BEACH	25.7	15.4	20.6	35.6	JUL 29+	-2.8	DEC 17	687	1478	109	AUG 29-30	0	0		80	82	56	70
FORT MYERS	28.0	17.4	22.7	36.1	JUL 29	.0	DEC 16	297	1785	148	JUN 3-4	0	0		87	89	57	75
JACKSONVILLE	26.1	15.0	20.6	36.7	AUG 25+	-3.3	DEC 16	855	1364	201	AUG 27-28	0	0		81	84	53	68
KEY WEST	27.5	22.3	24.9	33.3	AUG 21	10.6	DEC 17	36	1318	93	JUN 1-2	0	0		79	81	69	75
LAKELAND U	26.6	16.3	21.4	36.1	AUG 17	-2.8	DEC 16	518	1406	126	JUN 3-4	0	0					
MIAMI	27.3	19.7	23.5	33.9	SEP 6+	1.1	DEC 16	181	2118	138	MAY 19-20	0	0		79	84	60	69

State and Station	Wind – Average speed	Resultant speed	Resultant direction	Fastest mile (1.6 kilometers) – Speed	Direction	Date	Possible sunshine	Average sky cover sunrise to sunset	Number of days – Sunrise to sunset – Clear, 0-0.3	Partly cloudy, 0.4-0.7	Cloudy, 0.8-1.0	Precipitation 25mm or more	Snow, Sleet 25.4mm or more	Thunderstorms	Heavy fog	Max temp. 32.2°C and above	Max temp. 0°C and below	Min temp. 0°C and below	Min temp. -17.8°C. and below
	M.p.s.	M.p.s.		M.p.s.			%	Tenths											
CALIFORNIA																			
FRESNO	2.9	1.2	31	13.0	NW	NOV 12+	75	4.2	187	75	104	42	1	4	52	116	0	22	0
LONG BEACH	3.0	.9	24	15.6	34	NOV 25		4.9	153	110	103	28	0	4	35	25	0	1	0
LOS ANGELES	3.6	1.7	25	17.0Y	N	NOV 25		5.0	145	114	107	32	0	2	28	4	0	1	0
LOS ANGELES U				12.5	N	NOV 25		4.4	172	100	94	32	0			22	0	0	0
MT SHASTA R												94	25			17	7	136	0
OAKLAND	3.3	1.7	28	15.6	17	DEC 13		5.3	131	108	127	70	0	3	19	2	0	1	0
RED BLUFF	3.8	.3	31	20.1	SE	JAN 29	76	5.0	157	73	136	77	2	7	18	92	0	24	0
SACRAMENTO	3.4	1.3	22	17.0	N	JUN 29	81	4.6	173	77	116	58	0	3	40	76	0	16	0
SANDBERG R				31.7	34	FEB 2		3.9	201	67	98	30	4			11	6	73	0
SAN DIEGO	3.1	1.3	28	14.3	SW	MAR 8	70	5.0	147	107	112	32	0	0	31	2	0	0	0
SAN FRANCISCO	4.8	3.0	28	20.1	S	JAN 10		5.2	134	100	132	68	0	2	13	3	0	4	0
SAN FRANCISCO U				15.6	SE	DEC 15	70					76	0			1	0	0	0
SANTA MARIA								4.4	173	104	89	39	0			6	0	12	0
STOCKTON				14.8	32	APR 21		4.8	158	82	126	58	0	1	55	73	0	21	0
COLORADO																			
ALAMOSA								4.7	142	144	80	56	9			0	46	235	60
COLORADO SPRINGS	4.4	1.0	3	21.0	35	JUL 18		5.7	113	108	145	78	13	49	22	9	26	173	4
DENVER	3.7	.5	19	17.4	W	DEC 12	70	5.5	114	121	131	79	15	34	9	24	16	180	9
GRAND JUNCTION	3.8	.7	12	18.8	NE	MAY 30	64	5.5	118	111	137	70	5	32	13	47	34	153	17
PUEBLO	4.2	.4	34	21.9	N	APR 3	77	5.2	124	133	109	63	13	29	7	59	18	145	7
CONNECTICUT																			
BRIDGEPORT	5.6	1.8	30	22.8	24	MAR 24		6.0	96	119	151	119	6	22	33	6	27	92	2
HARTFORD	4.1	1.3	30	17.9	NW	MAR 1		6.4	82	111	173	123	14	15	35	21	43	130	9
NEW HAVEN				22.4	W	AUG 9	64	5.9	100	118	148	130	8			3	26	101	2
DELAWARE																			
WILMINGTON	4.5	1.3	27	17.4	28	JAN 4		6.1	98	112	156	99	1	32	31	26	21	97	0
DIST.OF COLUMBIA																			
WASH NATL AP	4.0	.9	28	19.2	W	JUN 24	59	6.0	96	118	152	97	5	35	6	40	14	85	0
FLORIDA																			
APALACHICOLA U				16.1	NW	NOV 11	69	4.8	141	127	98	81	0	42	31	39	0	8	0
DAYTONA BEACH	3.9	.4	6	16.5	35	JUN 10+		5.8	87	163	116	110	0	72	31	45	0	6	0
FORT MYERS	3.6	.8	7	16.5	18	JUN 14		5.2	104	169	93	118	0	91	21	89	0	1	0
JACKSONVILLE	3.8	.3	31	23.2	N	JUN 6	65	5.5	111	131	124	112	0	47	24	76	0	13	0
KEY WEST	4.7	2.1	9	21.9	SE	OCT 16	76	5.8	82	161	123	129	0	76	0	23	0	0	0
LAKELAND U							67	5.0	120	168	78	108	0			60	0	1	0
MIAMI	3.9	1.2	9	14.8	31	FEB 24		6.0	69	174	123	143	0	77	9	44	0	0	0

See reference notes at end of table

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State and Station	Temperature							Heating degree days	Precipitation						Relative humidity				Wind						Possible sunshine	Average sky cover sunrise to sunset	Number of days										
	Averages			Extremes								Snow, Sleet										Fastest mile (1.6 kilometers)					Sunrise to sunset							Max. temp.		Min. temp	
	Daily maximum	Daily minimum	Annual	Highest	Date	Lowest	Date		Total	Greatest in 24 hours	Date (s)	Total	Greatest in 24 hours	Date (s)	1:00am EST	7:00am EST	1:00pm EST	7:00pm EST	Average speed	Resultant speed	Resultant direction	Speed	Direction	Date			Clear, 0-0.3	Partly cloudy, 0.4-0.7	Cloudy, 0.8-1.0	Precipitation 25mm or more	Snow, Sleet 25.4mm or more	Thunderstorms	Heavy fog	32.2°C and above	0°C and below	0°C and below	-17.8°C and below
	°C	°C.	°C.	°C		°C		Base 18.3°C.	Mm.	Mm.		Mm.	Mm.		%	%	%	%	M.p.s.	M.p.s.		M.p.s.			%	Tenths											
FLORIDA																																					
ORLANDO	27.0	15.7	21.3	35.6	JUL 29+	- 1.7	DEC 16	561	1323	156	JUN 4-5	0	0		85	88	54	68	4.1	.4	4	20.6	26	NOV 11		5.7	92	157	117	106	0	78	23	92	0	5	0
PENSACOLA	24.1	13.7	18.9	35.6	JUL 28	- 4.4	DEC 15	1176	1046	71	JUN 10	T	T	FEB 24 +	79	83	58	68	3.6	.4	6	22.8	W	JUN 10	66	5.8	100	121	145	107	0			50	0	28	0
TALLAHASSEE	26.4	11.9	19.2	37.2	AUG 24+	- 7.2	DEC 16	1134	1288	166	SEP 8	T	T	FEB 8 +	88	91	51	67	2.9	.4	3	13.9	22	AUG 12		5.2	114	149	103	108	0	80	46	107	0	53	0
TAMPA	26.6	15.4	21.0	35.0	AUG 22+	- 2.8	DEC 17	603	999	65	OCT 18-19	0	0		85	88	57	70	3.7	.6	4	16.5	19	OCT 18	70	5.6	102	147	117	104	0	68	13	61	0	3	0
WEST PALM BEACH	27.2	17.7	22.4	33.9	APR 24	- .6	MAR 2	278	1966	99	JUN 3-4	0	0		79	81	59	71	4.1	1.1	10	15.6	13	OCT 17		6.1	84	137	145	116	0	76	9	35	0	1	0
GEORGIA																																					
ATHENS	21.2	9.4	15.3	38.3	AUG 23	- 8.3	FEB 12	1903	1428	66	JUL 3-4	157	56	NOV 11	76	82	54	62	3.0	.7	30	15.6	16	MAY 25		5.6	117	104	145	108	3	55	38	39	4	84	0
ATLANTA	21.1	9.4	15.3	36.7	AUG 24	- 9.4	FEB 22+	1942	1241	69	MAR 11-12	132	58	FEB 29	79	84	56	63	3.4	.7	32	17.4	SW	DEC 28	67	5.9	103	112	151	114	2	48	33	33	2	88	0
AUGUSTA	23.9	9.6	16.8	40.0	AUG 23	- 8.9	FEB 12	1622	930	51	MAY 16-17	71	36	FEB 21-22+	82	84	48	64	2.9	.5	28	17.9	32	JUL 16		5.7	110	120	136	110	1	50	19	67	1	80	0
COLUMBUS	23.4	10.7	17.1	38.3	AUG 23	- 7.8	DEC 15+	1582	917	84	MAR 11-12	T	T	DEC 15 +	81	86	54	62	2.5	.6	34	13.0	30	FEB 8		5.7	125	93	148	101	0			71	1	74	0
MACON	23.9	9.5	16.7	40.0	AUG 23	- 8.3	FEB 14+	1652	857	57	MAY 14-15	74	48	FEB 23-24	77	81	50	58	3.0	.6	31	18.8	S	MAR 22		5.8	110	106	150	116	2	55	23	39	2	89	0
ROME	21.8	7.5	14.7	39.4	AUG 23	- 11.7	FEB 12	2129	1106	62	DEC 21-22	185	173	FEB 28-29																117	2			56	2	106	0
SAVANNAH	24.7	11.8	18.2	37.8	AUG 24	- 7.2	DEC 16	1331	948	94	JUN 6-7	91	91	FEB 8	84	86	51	67	3.4	.3	24	16.1	W	JUL 31	66	5.9	109	103	154	100	1	58	41	72	1	64	0
HAWAII																																					
HILO	28.4	19.8	24.2	33.3	FEB 20	15.6	DEC 12+	0	3407	231	FEB 2-3	0	0		85	87	79	71	2.8	.4	18	13.4	SE	JAN 20	38	7.2	47	125	194	247	0	15	0	3	0	0	0
HONOLULU	29.5	21.5	25.5	33.3	OCT 14+	15.0	DEC 30+	0	946	88	JAN 15-16	0	0		72	79	74	59	4.6	3.0	5	19.2	N	JAN 16	63	5.7	107	137	122	114	0	18	0	72	0	0	0
KAHULUI	29.4	19.2	24.3	35.0	SEP 1	12.8	FEB 10+	0	882	125	MAR 14	0	0		80	87	79	63	5.0	3.1	5	19.2	N	MAR 14	65	5.6	122	103	141	116	0	11	0	94	0	0	0
LIHUE	26.7	20.3	23.5	30.0	AUG 23	13.3	FEB 10+	0	1750	293	DEC 30-1	0	0		83	87	83	73	4.6	2.4	5	17.0	SW	FEB 20	59	6.3	63	172	131	178	0	16	0	0	0	0	0
IDAHO																																					
BOISE	17.7	4.8	11.2	40.0	JUL 27	- 14.4	DEC 21+	2987	279	19	AUG 13-14	437	86	DEC 22-23	57	65	49	41	4.1	.2	15	18.8	NW	JUL 19	67	5.8	114	99	153	84	5	10	6	45	13	103	0
LEWISTON	17.2	5.7	11.4	40.6	JUL 28+	- 30.0	DEC 30	2867	361	21	NOV 8-9	544	213	DEC 27-28		76	60	48								6.9	81	80	205	110	7			36	11	78	3
POCATELLO	14.7	.0	7.4	36.1	JUL 29+	- 23.9	DEC 31+	4161	358	24	AUG 17	1176	157	JAN 27-28	61	70	52	43	4.2	2.3	22	25.5	W	JUL 16	65	6.2	85	131	150	104	15	20	10	30	37	187	9
ILLINOIS																																					
CAIRO U	19.1	9.9	14.6	35.6	JUL 27	- 16.7	JAN 7	2302	1221	75	MAY 10-11	175	112	JAN 12-13								23.7	SW	NOV 28	61	5.8	124	91	151	115	2			44	24	81	0
CHICAGO MIDWAY	15.7	6.0	10.8	35.6	JUN 23+	- 23.9	JAN 7	3247	755	97	AUG 16-17	833	97	DEC 28	69	73	56	58	5.3	1.7	22	18.8	NE	NOV 28+	55	6.3	90	107	169	121	12	44	10	24	42	110	7
MOLINE	15.3	3.8	9.6	35.6	AUG 23+	- 27.2	JAN 1	3643	809	56	JUL 23-24	605	127	NOV 28	74	78	56	59	4.8	1.5	23	19.7	NW	DEC 5+	59	6.2	96	105	165	108	9	42	14	23	51	140	14
PEORIA	15.7	4.7	10.2	34.4	AUG 23+	- 26.1	JAN 7	3411	861	95	JUN 25	437	76	JAN 12-13	76	81	59	62	4.8	1.2	23	18.3	NW	DEC 4	58	6.3	96	94	176	117	7	48	20	16	45	120	10
ROCKFORD	14.4	3.7	9.1	33.9	AUG 6	- 27.2	JAN 7	3710	1016	91	AUG 16	495	114	NOV 28	79	83	60	63	4.6	1.2	24	20.6	23	JUN 29		6.1	104	97	165	113	5	43	14	12	54	136	17
SPRINGFIELD	16.5	5.4	11.0	35.6	AUG 23+	- 25.6	JAN 7	3253	804	67	JUN 14-15	625	137	JAN 12-13	74	78	57	60	5.1	1.5	22	18.8	W	DEC 23+	60	5.9	116	83	167	111	10	42	17	35	42	120	10
INDIANA																																					
EVANSVILLE	18.5	6.9	12.7	36.1	AUG 24	- 22.2	JAN 8	2730	1098	50	DEC 27-28	450	122	MAR 22	76	78	58	61	3.6	.9	24	16.1	SW	DEC 28+	61	6.0	108	98	160	111	6	49	9	45	29	105	3
FORT WAYNE	14.8	4.3	9.6	33.3	AUG 21+	- 27.2	JAN 8	3612	916	82	MAY 15-16	630	124	MAR 22-23	78	80	61	65	4.7	1.9	24	24.1	SW	JUN 11	62	6.8	78	91	197	133	6	38	18	17	50	133	8
INDIANAPOLIS	16.4	5.7	11.1	33.3	AUG 24+	- 24.4	JAN 1	3170	1043	80	MAY 23	739	203	JAN 12-13	77	81	58	63	3.7	1.2	24	18.8	NW	DEC 5	55	6.5	86	93	187	128	8	38	20	25	39	115	6
SOUTH BEND	14.1	4.7	9.4	33.9	AUG 23	- 23.3	JAN 1	3607	998	119	JUN 24-25	2022	145	FEB 10-11	77	81	63	65	4.5	1.6	24	16.5	24	APR 8		7.0	71	88	207	150	29	39	25	9	55	113	7
IOWA																																					
BURLINGTON	15.9	4.6	10.3	36.1	AUG 23+	- 25.0	JAN 7	3432	682			378			73	78	58	60	4.7	1.3	25	20.6	30	DEC 4		6.0	104	105	157	95	9	36	15	20	42	137	11

See reference notes at end of table

ANNUAL CLIMATOLOGICAL DATA
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State and Station	Temperature: Averages: Daily maximum	Temperature: Averages: Daily minimum	Temperature: Averages: Annual	Temperature: Extremes: Highest	Temperature: Extremes: Date	Temperature: Extremes: Lowest	Temperature: Extremes: Date	Heating degree days	Precipitation: Total	Precipitation: Greatest in 24 hours	Precipitation: Date (s)	Precipitation: Snow, Sleet: Total	Precipitation: Snow, Sleet: Greatest in 24 hours	Precipitation: Snow, Sleet: Date (s)	Relative humidity: 1:00 a.m. E S T	Relative humidity: 7:00 a.m. E S T	Relative humidity: 1:00 p.m. E S T	Relative humidity: 7:00 p.m. E S T	Wind: Average speed	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile (1.6 kilometers): Speed	Wind: Fastest mile (1.6 kilometers): Direction	Wind: Fastest mile (1.6 kilometers): Date	Possible sunshine	Average sky cover sunrise to sunset	Number of days: Sunrise to sunset: Clear, 0-0.3	Number of days: Sunrise to sunset: Partly cloudy, 0.4-0.7	Number of days: Sunrise to sunset: Cloudy, 0.8-1.0	Number of days: Precipitation 25mm or more	Number of days: Snow, Sleet 25.4mm or more	Number of days: Thunderstorms	Number of days: Heavy fog	Number of days: Max temp.: 32.2 °C and above	Number of days: Max temp.: 0 °C and below	Number of days: Min. temp.: 0 °C and below	Number of days: Min. temp.: -17.8 °C and below
	°C.	°C.	°C.	°C		°C		Base 18.3°C.	Mm.	Mm.		Mm.	Mm.		%	%	%	%	M.p.s.	M.p.s.		M.p.s.			%	Tenths											
IOWA																																					
DES MOINES	15.1	4.0	9.6	35.6	AUG 23+	- 26.1	DEC 31+	3674	719	45	AUG 8	747	300	NOV 10	72	77	58	57	5.0	1.0	26	32.6	W	JUL 8	59	5.8	110	107	149	108	6	49	16	23	52	139	14
DUBUQUE	13.6	2.9	8.2	35.0	AUG 23	- 28.3	JAN 7	3968	1015	66	AUG 4-5	521	147	DEC 28		81	62	66								6.5	87	103	176	126	6			5	60	147	17
SIOUX CITY	15.7	3.2	9.4	37.2	AUG 5	- 28.3	DEC 31+	3726	615	67	OCT 15-16	719	229	DEC 21-22	72	78	57	56	4.7	.5	29	23.7	NW	DEC 22	64	5.9	108	110	148	102	8	49	14	34	51	149	17
WATERLOO	13.7	2.0	7.9	33.9	AUG 23+	- 28.9	JAN 7	4114	1133	236	JUL 16-17	577	152	DEC 27-28	78	82	59	62	4.8	.8	25	19.7	2	AUG 6+		6.2	98	107	161	118	9	51	19	15	62	161	26
KANSAS																																					
CONCORDIA	17.8	5.1	11.4	39.4	JUN 28	- 24.4	JAN 7	3163	762	116	AUG 9-10	353	152	DEC 18	74	82	56	56	5.7	1.0	20	27.3	NW	JUL 17	67	5.2	136	109	121	88	6	60	14	45	35	131	6
DODGE CITY	19.5	5.7	12.6	40.0	AUG 8+	- 21.7	DEC 31	2812	706	116	OCT 15-16	173	56	DEC 18	66	73	48	46	5.8	.9	19	22.4	S	MAR 17	75	5.6	114	111	141	82	3	49	17	58	26	115	4
GOODLAND	18.7	2.5	10.6	40.0	JUN 29	- 24.4	DEC 31	3280	348	67	JUN 15-16	650	157	DEC 12	67	74	45	43	5.7	1.0	25	24.6	30	MAY 6		5.1	136	112	118	70	7	39	17	50	21	152	7
TOPEKA	17.6	5.8	11.7	34.4	AUG 7+	- 22.8	JAN 7	3021	1031	80	AUG 9-10	284	94	FEB 24-25	75	81	59	59	4.2	.7	22	26.8	NW	JUL 23	63	5.9	108	107	151	86	5	58	11	24	34	124	7
WICHITA	19.4	6.6	13.0	41.1	AUG 9	- 20.6	DEC 31	2698	849	77	SEP 22-23	119	69	DEC 27	72	77	54	53	5.7	1.1	18	21.0	SE	MAY 6+	64	5.7	111	107	148	92	1	51	16	55	19	113	4
KENTUCKY																																					
COVINGTON	17.4	6.6	12.0	34.4	AUG 24+	- 23.3	JAN 8	2880	1081	84	MAY 23-24	704	249	MAR 22	73	77	56	61	3.8	1.2	24	15.6	20	NOV 28		6.7	75	102	189	132	6	35	22	26	33	101	6
LEXINGTON	17.6	6.9	12.3	33.9	AUG 23+	- 19.4	JAN 8	2765	1100	90	AUG 14	668	193	MAR 22-23	74	79	58	62	3.8	1.3	21	15.6	22	JUN 25		6.3	97	89	180	130	5	49	16	21	26	97	3
LOUISVILLE	18.3	7.7	13.1	35.6	AUG 24	- 18.9	JAN 1	2620	947	57	APR 3-4	754	307	MAR 22-23	74	79	56	58	3.6	1.0	25	23.2	W	DEC 23	57	6.4	88	105	173	131	7	38	4	35	26	101	2
LOUISIANA																																					
ALEXANDRIA	23.8	11.0	17.4	35.6	AUG 6+	- 8.9	FEB 24	1451	1265	89	JAN 8-9	117	79	FEB 23			60		2.9	.1	2	13.9	36	MAY 17		5.9	105	107	154	103	2	63	36	65	2	63	0
BATON ROUGE	25.0	12.8	18.9	35.0	AUG 21+	- 4.4	DEC 16+	1187	1147	71	AUG 11-12	25	25	FEB 23	84	89	58	64	3.4	.5	9	14.3	16	JUL 18		5.7	114	112	140	106	1	61	34	95	0	36	0
LAKE CHARLES	24.4	14.0	19.2	34.4	JUN 12	- 3.3	JAN 14	1052	1301	90	JUN 22	8	8	FEB 23	89	91	63	72	3.5	.8	10	14.3	20	SEP 15		6.0	100	117	149	105	0	85	31	58	1	20	0
NEW ORLEANS	24.5	13.2	18.8	35.6	JUL 29+	- 5.0	DEC 16	1136	1096	65	DEC 30-31	T	T	FEB 23	83	86	62	69	3.5	.5	7	13.4	16	DEC 1+		5.5	119	105	142	120	0	47	28	66	0	33	0
SHREVEPORT	23.3	12.2	17.8	36.1	JUN 12	- 7.8	JAN 8	1410	1469	131	SEP 14-15	74	38	MAR 21-22	80	85	59	62	3.4	.7	17	14.8	28	DEC 27	57	6.1	104	92	170	114	2	58	13	74	2	47	0
MAINE																																					
CARIBOU	9.4	- 1.5	4.0	33.9	JUL 16+	- 30.6	JAN 3	5269	804	51	OCT 20-21	3157	290	MAR 1		77	59	66								7.3	52	99	215	140	28			3	97	169	48
PORTLAND	12.7	1.5	7.1	35.6	JUL 16	- 28.9	JAN 11	4213	1045	60	DEC 4-5	1791	251	JAN 7	78	76	57	68	3.3	.9	27	17.9	W	FEB 17	56	6.0	102	106	158	128	17	10	68	2	57	147	26
MARYLAND																																					
BALTIMORE	18.5	7.4	12.9	36.7	AUG 24+	- 17.8	JAN 2	2635	1011	94	SEP 10	373	112	MAR 12	71	74	50	58	4.0	1.5	28	21.0	NW	FEB 17	58	5.8	104	120	142	102	5	33	23	39	19	98	1
MASSACHUSETTS																																					
BLUE HILL OBS R	13.7	4.1	8.9	34.4	JUL 16	- 22.8	JAN 9	3688	1267	168	MAR 17-18	1135	262	JAN 25-26	78	78	56	67				29.5	WSW	AUG 9	57					117	11			6	49	119	9
BOSTON	14.0	6.4	10.2	36.7	JUL 16	- 20.0	JAN 9+	3287	1074	105	MAR 17-18	848	218	JAN 6-7	70	71	57	63	6.0	1.8	28	24.1	NE	NOV 12	62	6.0	105	105	156	118	10	14	21	10	35	94	5
NANTUCKET	13.6	5.1	9.4	32.2	JUL 1	- 16.7	JAN 9	3353	993	74	MAR 12-13	546	137	FEB 8	87	84	71	84	5.9	1.6	29	28.2	NE	FEB 8	51	6.6	83	97	186	123	7	17	99	1	27	97	0
WORCESTER	12.9	3.0	7.9	33.3	JUL 1	- 25.0	JAN 9	3980	1189	99	MAR 17-18	1567	185	NOV 12	72	72	54	63	4.6	2.2	28	21.0	29	FEB 17		6.0	96	115	155	123	20	20	98	4	63	134	15
MICHIGAN																																					
ALPENA	12.0	.3	6.2	35.0	JUL 15	- 29.4	JAN 8	4579	865	81	AUG 19-20	2182	241	DEC 28-29	80	82	63	70	3.4	.8	25	15.6	SW	APR 8	51	6.8	69	111	186	156	27	33	27	8	68	176	26
DETROIT	14.9	6.1	10.6	35.6	AUG 23+	- 17.8	JAN 1	3362	930	90	JUN 25	653			70	73	56	60	4.6	1.6	26	20.6	30	AUG 16						108	8	34	8	19	48	116	1
DETROIT M WAYNE CO	14.8	4.3	9.6	33.9	AUG 23+	- 22.2	JAN 8	3557	895	73	MAY 26-27	777	168	JAN 13-14	76	79	57	64	4.5	1.5	26	22.4	SW	JUL 9	56	6.5	79	116	171	130	9	35	22	14	46	132	6
FLINT	13.2	3.2	8.2	32.2	AUG 24+	- 22.2	JAN 8	3940	861	113	AUG 16	1054	183	JAN 14-15	77	78	61	65	4.6	1.7	24	20.6	23	JUN 11		6.7	76	105	185	133	14	34	16	3	55	134	7

See reference notes at end of table

ANNUAL CLIMATOLOGICAL DATA
METRIC UNITS

State and Station	Temperature: Averages: Daily maximum °C	Daily minimum °C.	Annual °C.	Extremes: Highest °C	Date	Lowest °C	Date	Heating degree days Base 18.3°C	Precipitation: Total Mm	Greatest in 24 hours Mm.	Date (s)	Snow, Sleet: Total Mm	Greatest in 24 hours Mm.	Date (s)	Relative humidity: 1:00am EST %	7:00am EST %	1:00pm EST %	7:00pm EST %
MICHIGAN																		
GRAND RAPIDS	13.9	3.1	8.5	33.3	AUG 23+	- 26.1	JAN 1	3878	918	40	NOV 28-29	1435	173	DEC 5	77	79	61	66
HOUGHTON LAKE	11.8	.7	6.3	32.8	AUG 23	- 29.4	JAN 8	4544	718	44	JUN 24-25	2045	163	DEC 28 +	83	85	63	68
LANSING	13.9	2.6	8.3	34.4	JUL 17	- 22.8	JAN 8	3949	908	61	JUN 25-26	95[illegible]	188	MAR 22-23	77	78	60	66
MARQUETTE U	10.2	1.9	6.1	35.0	JUL 15	- 25.6	JAN 7	4579	958	70	SEP 8-9	3157	206	FEB 6-7				
MUSKEGON	13.2	4.1	8.7	33.3	JUL 17	- 18.9	JAN 1	3758	757	44	JUL 17-18	2301	150	DEC 28-29	75	78	62	65
SAULT STE MARIE	9.6	- 1.0	4.3	31.7	JUL 17+	- 33.3	JAN 8	5152	906	58	AUG 21-22	2946	320	FEB 2-3	85	85	69	75
MINNESOTA																		
DULUTH	9.2	- 1.6	3.8	32.2	JUN 4	- 36.1	JAN 6	5332	973	67	NOV 16-17	2273	399	NOV 16-17	76	79	62	64
INTERNATIONAL FALLS	8.7	- 3.1	2.8	31.1	JUL 7+	- 43.3	JAN 6	5711	737	59	JUL 15-16	1735	188	APR 22-23	79	83	65	65
MINNEAPOLIS	12.5	2.1	7.3	35.6	AUG 23+	- 29.4	JAN 7+	4314	963	51	SEP 22-23	1209	193	DEC 21-22	74	79	61	60
ROCHESTER	12.1	.8	6.5	33.3	JUN 4	- 30.0	JAN 7	4496	823	59	JUN 25-26	846	188	DEC 21-22	78	81	61	65
ST CLOUD	11.5	.1	5.8	34.4	AUG 23+	- 32.8	JAN 6	4791	855	63	OCT 16-17	1120	259	DEC 21-22	77	81	59	60
MISSISSIPPI																		
JACKSON	23.8	10.3	17.1	36.1	AUG 2+	- 10.0	FEB 12	1597	1148	60	MAY 10-11	226	135	MAR 22-23	84	89	57	65
MERIDIAN	24.3	10.1	17.2	38.3	JUL 27	- 7.8	FEB 24+	1552	1153	89	DEC 21-22	114	76	FEB 23	88	90	54	66
MISSOURI																		
COLUMBIA	17.7	7.0	12.3	35.0	AUG 23	- 23.9	JAN 7	2841	936	111	JUN 24-25	318	71	FEB 28	73	80	5[illegible]	58
KANSAS CITY	18.4	7.4	12.9	36.7	AUG 7	- 21.7	DEC 31+	2782	812	60	MAY 22-23	241	76	NOV 28	71	78	57	55
ST JOSEPH	18.5	5.7	12.1	35.6	AUG 7	- 25.6	JAN 7	2919	843						77	83	58	58
ST LOUIS	18.0	7.0	12.5	36.7	AUG 23	- 21.7	JAN 7+	2847	825	63	MAY 25	414	183	MAR 11-12	74	81	57	58
SPRINGFIELD	18.4	6.3	12.4	35.6	JUL 27	- 21.7	JAN 7	2767	1164	77	NOV 2	528	292	MAR 11-12	77	81	57	62
MONTANA																		
BILLINGS	14.5	3.2	8.8	37.2	JUL 29	- 31.7	DEC 29	3698	422	44	JUN 8-9	1196	127	MAR 17-18	55	62	50	42
GLASGOW	12.2	- 1.2	5.5	37.8	JUL 12	- 37.2	DEC 29	4819	194	41	AUG 15-16	465	132	APR 6-7	66	75	54	48
GREAT FALLS	13.2	.6	6.9	36.1	JUL 29	- 41.7	DEC 29	4267	416	34	MAY 21-22	1237	175	MAR 17-18	59	63	49	44
HAVRE	12.8	- 1.8	5.5	36.7	JUL 29+	- 43.3	DEC 29	4783	330	59	AUG 14-15	879	89	FEB 21-22	67	76	54	47
HELENA	12.8	- .8	6.0	35.0	JUL 29+	- 38.3	DEC 30	4588	335	34	SEP 19-20	1072	244	APR 1-2	65	74	55	48
KALISPELL	12.2	- .6	5.8	35.6	JUL 9+	- 37.2	DEC 30	4612	507	35	AUG 14-15	1666	178	JAN 31-1		84	64	55
MILES CITY	13.8	.4	7.1	39.4	JUL 12	- 33.3	DEC 30	4375	448			1001			67	75	55	50
MISSOULA	13.4	.6	7.0	38.3	JUL 28	- 32.8	DEC 30	4251	326	24	AUG 14-15	1158	216	DEC 27-28	69	78	61	50
NEBRASKA																		
GRAND ISLAND	16.9	3.3	10.2	38.3	AUG 6+	- 26.7	DEC 31+	3505	803	107	JUN 23-24	742	305	DEC 18-19	74	81	54	54
LINCOLN U	16.8	5.5	11.2	37.2	JUN 29+	- 25.0	DEC 31+	3260	737	65	SEP 15-16	475	229	DEC 18-19				
NORFOLK	15.3	2.7	9.0	37.2	JUN 20	- 31.7	JAN 7	3866	584	71	OCT 15-16	592	267	DEC 21-22		75	51	50
NORTH PLATTE	16.7	.3	8.6	38.9	AUG 7+	- 28.9	DEC 31+	3933	433	47	JUN 23-24	462	218	DEC 21-22	71	77	49	47

State and Station	Wind: Average speed M.p.s	Resultant speed M.p.s.	Resultant direction	Fastest mile (1.6 kilometers): Speed M.p.s	Direction	Date	Possible sunshine %	Average sky cover sunrise to sunset Tenths	Number of days: Sunrise to sunset: Clear, 0-0.3	Partly cloudy, 0.4-0.7	Cloudy, 0.8-1.0	Precipitation .25mm or more	Snow, Sleet 25.4mm or more	Thunderstorms	Heavy fog	Max temp: 32.2°C and above	0°C and below	Min. temp: 0°C and below	-17.8°C and below
MICHIGAN																			
GRAND RAPIDS	4.5	1.4	24	23.2	NW	JUN 29	53	6.8	72	107	187	137	22	35	29	13	61	139	13
HOUGHTON LAKE	4.0	1.1	26	14.3	23	OCT 27		6.7	65	116	185	148	23	38	33	3	78	171	27
LANSING	4.4	1.6	25	21.9	NW	JUN 23	55	6.6	77	118	171	146	10	32	16	11	55	148	14
MARQUETTE U				17.9	SW	JUL 1	50	7.4	48	103	215	181	34			2	81	146	13
MUSKEGON	5.0	1.3	25	15.6	24	DEC 13+		6.7	80	98	188	147	31	35	27	4	59	119	4
SAULT STE MARIE	4.3	.3	34	21.0	W	FEB 22	48	7.2	59	93	214	176	35	36	46	0	87	174	37
MINNESOTA																			
DULUTH	4.7	.5	32	20.1	NW	DEC 5+	50	7.2	52	106	208	150	24	36	74	1	93	178	47
INTERNATIONAL FALLS	4.1	.4	30	14.8	3	DEC 12		7.1	60	99	207	148	26	39	21	0	108	192	61
MINNEAPOLIS	4.7	.6	28	19.7	NW	FEB 16	57	6.5	87	95	184	122	17	41	10	14	73	148	28
ROCHESTER	5.7	1.5	24	17.9	25	MAY 8		6.4	94	90	182	126	8	50	33	3	72	158	31
ST CLOUD								6.6	84	91	191	115	14			10	87	166	44
MISSISSIPPI																			
JACKSON	3.4	.3	15	18.8	S	MAR 20	58	5.7	127	76	163	111	2	61	18	79	0	74	0
MERIDIAN	2.6	.3	27	14.3	14	AUG 24+		6.1	103	88	175	104	2	61	21	79	1	77	0
MISSOURI																			
COLUMBIA	4.6	1.0	22	18.8	NW	DEC 4	61	6.2	105	83	178	108	3	49	5	29	33	107	4
KANSAS CITY	4.4	1.1	21	19.2	SW	DEC 22	63	5.8	111	105	150	94	3	42	7	43	32	104	6
ST JOSEPH	4.3	.8	22	18.3	29	MAY 15		5.4	131	103	132	[illegible]		40	19	34	28	128	6
ST LOUIS	4.5	1.1	23	20.1	NE	MAR 12	60	6.3	88	102	176	110	4	45	6	41	33	107	3
SPRINGFIELD	4.4	1.3	19	20.1	N	APR 22	58	6.0	114	88	164	110	5	56	21	27	17	114	3
MONTANA																			
BILLINGS	5.0	1.9	27	35.3	NW	JUN 13	56	6.5	78	107	181	111	18	26	31	18	40	124	17
GLASGOW								6.8	70	108	188	83	7			16	69	189	36
GREAT FALLS	5.0	2.9	23	21.0	SW	DEC 3+	63	6.8	75	92	199	101	14	22	9	13	41	155	26
HAVRE	5.0	1.7	26	24.1	NW	AUG 11	70	7.2	52	104	210	97	14	22	5	20	56	188	41
HELENA	3.6	2.1	27	20.6	W	SEP 18	56	6.7	78	96	192	97	13	19	12	10	48	181	24
KALISPELL								7.2	65	74	227	137	23			17	49	190	14
MILES CITY	4.9	1.1	31									130	15	35	11	31	61	174	26
MISSOULA	2.6	.6	31	16.5	NW	JUL 19	55	7.2	61	84	221	136	13	15	30	20	47	182	12
NEBRASKA																			
GRAND ISLAND	5.4	.8	25	23.2	32	JUL 16		5.7	121	102	143	82	7	50	14	40	41	148	16
LINCOLN U				23.2	S	AUG 26+	65	5.6	119	112	135	100	2			41	43	117	8
NORFOLK								5.9	112	98	156	83	7			29	58	157	16
NORTH PLATTE	4.6	.4	35	21.5	NW	DEC 12	68	5.4	112	129	125	70	6	39	10	33	40	181	18

See reference notes at end of table

ANNUAL CLIMATOLOGICAL DATA
METRIC UNITS

State and Station	Temperature – Averages – Daily maximum (°C.)	Daily minimum (°C.)	Annual (°C.)	Extremes – Highest (°C)	Date	Lowest (°C)	Date	Heating degree days (Base 18.3°C.)	Precipitation – Total (Mm.)	Greatest in 24 hours (Mm.)	Date (s)	Snow, Sleet – Total (Mm.)	Greatest in 24 hours (Mm.)	Date (s)
NEBRASKA														
OMAHA	16.7	4.4	10.6	36.7	JUL 21	- 26.7	JAN 7	3394	856	80	OCT 16-17	483	102	NOV 9-10
SCOTTSBLUFF	16.6	.8	8.7	38.3	JUL 20	- 30.0	DEC 31+	3791	327	21	MAY 6-7	665	137	MAR 9-10
VALENTINE	15.4	.4	7.9	40.0	AUG 5	- 33.3	JAN 7	4134	520	52	JUN 24	777	229	APR 3
NEVADA														
ELKO	17.8	1.0	9.4	38.3	JUL 19	- 23.9	DEC 22+	3532	372	47	JUN 5-6	1509	305	JAN 27
ELY	15.7	- 2.1	6.8	33.9	JUL 21+	- 26.1	DEC 22	4263	255	28	OCT 14	1666	170	DEC 1
LAS VEGAS	26.4	11.3	18.9	43.9	JUN 27+	- 9.4	DEC 22	1293	28	8	JUN 8	0	0	
RENO	19.6	.1	9.8	37.8	JUL 28+	- 19.4	DEC 21	3291	138	18	JAN 30	724	277	JAN 30
WINNEMUCCA	18.4	.7	9.6	39.4	JUL 28	- 19.4	DEC 20	3458	215	25	NOV 2-3	665	208	DEC 22-23
NEW HAMPSHIRE														
CONCORD	13.2	.3	6.8	35.0	JUL 16	- 29.4	JAN 2	4346	1050	50	DEC 14-15	1394	173	NOV 12
MT WASHINGTON OBS	.4	- 7.1	- 3.3	19.4	JUL 18	- 43.3	JAN 8	7875	2315	154	NOV 12-13	5779	953	DEC 15
NEW JERSEY														
ATLANTIC CITY	16.9	5.1	11.0	37.2	JUL 1	- 17.8	DEC 10+	3126	850	90	MAY 28-29	282	109	DEC 15
NEWARK	16.9	7.5	12.2	36.7	JUL 16+	- 17.2	JAN 9	2842	937	104	MAY 28-29	305	84	JAN 31-1
TRENTON U	16.8	7.7	12.3	36.1	JUL 17+	- 15.6	JAN 9	2764	952	113	JUN 12-13	274	94	DEC 15
NEW MEXICO														
ALBUQUERQUE	20.5	5.6	13.1	38.3	JUN 22+	- 15.6	DEC 22	2484	271	24	JUL 31	274	61	DEC 17
CLAYTON	19.3	3.3	11.3	40.0	JUN 28	- 17.2	JAN 6	2901	272	36	JUN 4	356	152	MAR 10-11
ROSWELL	23.7	4.7	14.2	42.8	JUN 28	- 14.4	DEC 23	2162	402	69	JUL 4-5	643	213	NOV 26-27
NEW YORK														
ALBANY	14.7	2.1	8.4	36.7	JUN 9	- 32.2	JAN 12	3889	820	56	APR 24-25	1194	231	NOV 12-13
BINGHAMTON	11.8	2.7	7.2	31.7	JUL 18	- 26.1	JAN 9	4224	1077	86	SEP 10-11	1471	241	NOV 12-13
BUFFALO	13.2	4.1	8.7	34.4	JUL 18	- 23.9	JAN 12	3808	972	77	JUN 25-26	1646	173	MAR 12-13
J.F. KENNEDY	15.3	7.5	11.4	36.7	JUL 16	- 17.8	JAN 9	3047	1047	73	MAY 29	391	91	DEC 15
NEW YORK U	16.7	7.8	12.3	36.7	JUL 17	- 18.3	JAN 9	2797	1107	124	MAY 28-29	452	140	MAR 1
NEW YORK LA GUARDIA	15.9	8.1	12.1	35.6	JUL 1	- 17.2	JAN 9	2860	1004	77	MAY 28-29	351	104	DEC 15
ROCHESTER	13.8	3.5	8.7	33.3	JUL 18+	- 23.9	JAN 12	3785	806	61	AUG 23-24	2301	224	MAR 12-13
SYRACUSE	13.3	3.2	8.3	32.8	JUL 1	- 30.0	JAN 9	3907	1123	79	JUN 25-26	2416	226	NOV 12-13
NORTH CAROLINA														
ASHEVILLE	18.7	5.8	12.2	34.4	AUG 24	- 12.8	JAN 8	2601	1137	130	MAR 11-12	582	145	NOV 11-12+
CAPE HATTERAS R	20.3	12.0	16.2	34.4	AUG 23+	- 5.0	DEC 18+	1677	1400	90	JUL 9-10	89	89	FEB 24-25
CHARLOTTE	20.7	8.7	14.7	37.2	AUG 23+	- 10.0	JAN 8	2063	1017	83	JUN 8-9	234	74	JAN 24-25
GREENSBORO	20.7	8.1	14.4	36.7	AUG 24	- 11.7	FEB 22	2140	835	57	MAR 11-12	384	127	NOV 11-12
RALEIGH	21.3	8.1	14.7	36.7	AUG 22+	- 13.3	FEB 12	2068	904	50	JUL 11	157	41	JAN 10-11

State and Station	Relative humidity – 1:00am EST (%)	7:00am EST (%)	1:00pm EST (%)	7:00pm EST (%)	Wind – Average speed (M.p.s.)	Resultant speed (M.p.s.)	Resultant direction	Fastest mile (1.6 kilometers) – Speed (M.p.s.)	Direction	Date	Possible sunshine (%)	Average sky cover sunrise to sunset (Tenths)	Number of days – Sunrise to sunset – Clear, 0-0.3	Partly cloudy, 0.4-0.7	Cloudy, 0.8-1.0	Precipitation 25mm or more	Snow, Sleet 25.4mm. or more	Thunderstorms	Heavy fog	Max temp. 32.2°C and above	Max temp. 0°C and below	Min. temp 0°C and below	Min. temp -17.8°C and below
NEBRASKA																							
OMAHA	74	80	57	57	4.7	.4	26	29.1	NW	MAY 15	67	5.8	106	114	146	101	7	52	10	34	42	137	9
SCOTTSBLUFF	70	79	48	44	4.8	1.3	33	19.7	32	DEC 12		5.6	115	105	146	87	10	39	6	29	23	173	15
VALENTINE								30.4	N	JUN 20	67	5.8	115	101	150	87	9			30	55	177	22
NEVADA																							
ELKO	56	65	47	36	2.3	.8	26	15.6	33	MAY 5		6.0	104	105	157	90	18	26	7	55	11	170	4
ELY	60	68	43	37	4.0	1.6	21	17.9	S	AUG 20	73	5.6	109	121	136	83	23	46	6	12	16	234	19
LAS VEGAS	30	37	25	19	3.7	1.3	24	18.8	SW	DEC 11+	86	3.6	204	83	79	14	0	12	0	120	0	45	0
RENO	49	66	42	30	2.6	.8	27	35.8	SW	MAR 12+	78	5.2	132	98	136	41	9	6	4	54	5	198	3
WINNEMUCCA	50	59	42	34	3.8	.6	24	17.0	SW	SEP 18	60	6.0	103	93	170	69	9	16	4	47	5	185	2
NEW HAMPSHIRE																							
CONCORD	79	79	53	66	2.9	1.2	29	23.2	SW	AUG 25	55	6.3	83	121	162	133	19	24	60	5	51	169	34
MT WASHINGTON OBS	86	84	84	86	14.7			60.8Y	W	DEC 5	32	7.9	49	57	260	212	66	18	327	0	169	246	74
NEW JERSEY																							
ATLANTIC CITY	80	79	52	68	4.8	1.5	27	17.4	6	NOV 12	55	6.0	93	128	145	95	3	30	49	23	28	117	3
NEWARK	71	72	52	60	4.8	1.7	27	17.4	4	NOV 12+		5.9	103	122	141	113	4	24	15	23	25	92	0
TRENTON U								21.9	NW	MAR 1	60	6.0	99	109	158	111	3			22	27	85	0
NEW MEXICO																							
ALBUQUERQUE	47	59	37	29	4.1	.1	33	24.1	E	JUL 2	77	4.4	166	104	96	62	5	42	1	42	5	114	0
CLAYTON		64	34	36								5.1	140	101	125	58	5			30	10	147	0
ROSWELL	61	75	42	35	3.5	.4	19	18.3	NW	FEB 22	73	4.8	154	106	106	71	8	27	19	98	4	133	0
NEW YORK																							
ALBANY	74	73	53	64	4.2	1.6	27	19.2	W	FEB 17	54	6.9	59	111	196	138	14	25	32	15	52	144	23
BINGHAMTON	81	85	65	71	4.4	1.7	26	23.2	W	DEC 5	51	7.4	43	101	222	168	16	29	60	0	75	138	20
BUFFALO	79	80	64	70	5.1	2.4	24	19.2	SW	DEC 29	54	7.1	62	95	209	176	22	39	17	5	61	123	6
J.F. KENNEDY	72	71	57	65	5.7	1.5	28	20.6	27	DEC 5		6.0	93	129	144	119	7	21	36	12	29	91	1
NEW YORK U	66	68	50	57	3.8	1.2	29	22.8	NE	NOV 12	60					109	5	18		17	26	87	1
NEW YORK LA GUARDIA	64	66	51	56	5.2	1.6	30	29.9	NE	NOV 12		6.1	90	123	153	111	6	24	15	15	27	89	0
ROCHESTER	79	79	61	68	4.1	2.0	25	19.2	W	FEB 18+	54	7.1	62	96	208	154	35	31	10	8	56	124	9
SYRACUSE	78	79	62	68	4.2	1.4	26	19.2	W	MAR 24	50	6.9	74	90	202	167	31	32	7	3	58	130	14
NORTH CAROLINA																							
ASHEVILLE	86	90	57	69	3.4	1.2	35	17.9	34	MAR 1	61	5.9	104	106	156	120	6	50	87	11	9	116	0
CAPE HATTERAS R	80	79	64	76	5.1	1.1	32	26.8	NNW	OCT 20	71	5.7	114	103	149	112	1	50	9	13	1	49	0
CHARLOTTE	77	83	52	60	3.0	.4	29	17.0	SW	DEC 28	73	5.6	128	82	156	100	3	32	18	33	4	92	0
GREENSBORO	76	80	51	60	3.2	.6	28	17.4	SW	DEC 28	59	5.9	103	106	157	110	4	41	22	37	3	99	0
RALEIGH	79	84	52	63	4.0	.7	27	15.6	21	DEC 28	62	5.6	116	113	137	101	4	40	26	41	4	101	0

See reference notes at end of table

ANNUAL CLIMATOLOGICAL DATA
METRIC UNITS

State and Station	Temperature – Averages – Daily maximum °C	Daily minimum °C	Annual °C	Extremes – Highest °C	Date	Lowest °C	Date	Heating degree days (Base 18.3°C.)	Precipitation – Total Mm.	Greatest in 24 hours Mm.	Date (s)	Snow, Sleet – Total Mm.	Greatest in 24 hours Mm.	Date (s)
NORTH CAROLINA														
WILMINGTON	22.8	10.9	16.9	37.8	AUG 23+	- 7.8	FEB 14	1612	959	69	JUL 11-12	94	51	FEB 22
NORTH DAKOTA														
BISMARCK	11.2	- 2.0	4.6	35.6	JUN 3	- 40.6	JAN 4	5104	483	67	AUG 23-24	884	145	MAR 18-19
FARGO	11.2	- .8	5.2	37.2	AUG 5	- 36.1	JAN 4	5007	523	26	OCT 17-18	927	137	APR 3
WILLISTON	11.9	- 2.0	4.9	38.9	JUL 10	- 37.2	DEC 30	5018	328	47	JUN 9-10	699	102	JAN 27
OHIO														
AKRON	15.6	4.9	10.3	34.4	AUG 24	- 22.2	JAN 8	3354	901	44	JUL 16-17	1044	264	JAN 13-14
CINCINNATI OBS	17.2	6.9	12.1	34.4	AUG 21	- 20.6	JAN 8	2877	1174	94	MAY 23-24	577	236	MAR 22
CLEVELAND	14.2	4.3	9.2	33.9	AUG 6	- 23.3	JAN 8	3627	882	45	JUL 16-17	1179	124	NOV 19-20
COLUMBUS	16.2	5.4	10.8	35.0	JUL 18+	- 22.8	JAN 8	3194	960	69	MAY 26-27	719	137	JAN 13
DAYTON	15.9	5.4	10.7	33.3	AUG 21+	- 23.9	JAN 8	3225	872	74	MAY 23-24	848	287	MAR 22-23
MANSFIELD	15.1	4.9	10.0	33.9	AUG 24	- 23.3	JAN 8	3428	816	47	MAY 26-27	1199	305	JAN 13-14
TOLEDO	15.3	3.8	9.6	35.6	AUG 24+	- 25.6	JAN 8	3614	840	51	DEC 27-28	950	168	MAR 22-23
YOUNGSTOWN	13.7	3.4	8.6	33.3	AUG 24	- 22.8	FEB 21+	3841	1055	60	OCT 18-19	1433	147	DEC 24 +
OKLAHOMA														
OKLAHOMA CITY	20.5	8.5	14.5	39.4	AUG 10+	- 17.2	DEC 31	2206	902	54	MAY 6-7	627	160	MAR 20
TULSA	21.0	8.6	14.8	39.4	AUG 9	- 18.3	JAN 7	2218	909	62	SEP 23-24	404	249	MAR 11-12
OREGON														
ASTORIA	14.4	6.2	10.3	30.0	SEP 5	- 7.2	DEC 30	2895	2220	67	NOV 7-8	208	94	JAN 29
BURNS U	15.7	.7	8.2	38.3	JUL 28	- 16.7	JAN 27	3872	273	17	AUG 13-14	780	178	DEC 25-26
EUGENE	17.9	6.2	12.1	37.2	JUL 31	- 10.6	DEC 31	2397	1436	75	DEC 3-4	150	53	DEC 29-30
MEACHAM	10.9	1.8	6.4	34.4	JUL 5	- 28.9	DEC 30	4436	865	51	NOV 8-9	2865	178	DEC 23-24
MEDFORD	20.1	5.5	12.8	41.7	JUN 25	- 8.3	JAN 28	2436	388	30	FEB 22-23	213	109	JAN 26-27
PENDLETON	17.9	6.3	12.1	42.2	JUL 6	- 24.4	DEC 30	2688	285	17	DEC 3-4	335	84	DEC 31
PORTLAND	16.5	6.6	11.6	37.2	JUL 31	- 13.3	DEC 30	2573	1293	54	DEC 3-4	531	152	DEC 30
SALEM	17.0	5.0	11.0	37.2	JUL 31	- 13.3	DEC 31	2729	1381	72	FEB 18-19	556	170	DEC 29-30
SEXTON SUMMIT R	13.2	4.0	8.6	32.2	AUG 31+	- 10.6	DEC 21	3676	860	39	OCT 29-30	2316	236	JAN 29-30
PACIFIC AREA														
JOHNSTON	29.0	24.2	26.6	31.7	OCT 13	20.6	APR 5+	0	1074	114	MAY 4-5	0	0	
KOROR R	31.1	24.3	27.7	33.9	JUL 3	22.2	NOV 9+	0	3339	100	FEB 14-15	0	0	
KWAJALEIN	30.3	24.8	27.6	32.8	OCT 13+	21.7	AUG 1+	0	3054	166	OCT 19-20	0	0	
MAJURO	29.7	24.7	27.2	32.2	OCT 14+	21.7	DEC 20	0	3455	137	DEC 19-20	0	0	
PAGO PAGO	29.6	23.2	26.4	32.8	JAN 23	18.3	AUG 17+	0	2968	229	FEB 4-5	0	0	
PONAPE R	30.6	22.9	26.8	32.8	DEC 29+	20.6	NOV 29+	0	4855	226	FEB 11-12	0	0	
TAGUAC GUAM R	29.4	21.8	25.6	32.8	AUG 22	16.7	FEB 18+	0	2447	122	OCT 21-22	0	0	

State and Station	Relative humidity – 1:00am EST %	7:00am EST %	1:00pm EST %	7:00pm EST %	Wind – Average speed M.p.s.	Resultant speed M.p.s.	Resultant direction	Fastest mile (1.6 kilometers) – Speed M.p.s.	Direction	Date
NORTH CAROLINA										
WILMINGTON	80	80	52	69	3.6	.4	27	16.1	SE	JAN 13
NORTH DAKOTA										
BISMARCK	75	79	57	56	4.6	1.1	33	20.6	NW	DEC 4
FARGO	80	84	64	64	5.5	.9	34	27.7	SE	JAN 11
WILLISTON	73	80	57	54	4.1	.9	31	21.0	N	MAR 30+
OHIO										
AKRON	76	79	60	66	4.4	1.6	24	17.9	24	DEC 28+
CINCINNATI OBS								15.6	SW	DEC 28
CLEVELAND	75	78	61	66	4.6	1.9	23	21.9	SW	DEC 28
COLUMBUS	75	78	58	62	4.0	1.1	23	18.8	W	DEC 28
DAYTON	73	77	56	62	4.4	1.5	24	19.2	SW	APR 4
MANSFIELD	76	80	60	66	5.1	2.2	23	17.9	24	DEC 28
TOLEDO	80	82	58	66	4.3	1.6	25	17.9	SW	APR 8
YOUNGSTOWN	82	84	65	70	4.4	1.5	25	17.0	25	DEC 28+
OKLAHOMA										
OKLAHOMA CITY	78	84	58	58	4.9	1.0	17	21.0	NE	FEB 26
TULSA	74	79	55	55	4.7	1.4	19	19.2	SW	DEC 12
OREGON										
ASTORIA	84	86	78	72	3.8	1.0	21	17.0	19	FEB 3
BURNS U	61	72	54	40	3.2	1.3	30			
EUGENE	84	90	76	63	3.4	.8	21	14.3	20	DEC 11+
MEACHAM			64					2.5	29	FEB 23
MEDFORD	68	80	65	45	2.3	.7	31	16.1	14	DEC 13
PENDLETON	60	68	55	45	4.5	1.9	25	20.6	28	JUL 19
PORTLAND	76	85	73	61	3.7	.5	16	20.1	S	JAN 9
SALEM	83	89	74	62	3.0	1.0	21	15.6	19	DEC 7
SEXTON SUMMIT R	74	77	72	61				26.4	19	NOV 29
PACIFIC AREA										
JOHNSTON	76	78	77	68	6.7	5.5	8	21.5	E	SEP 22
KOROR R	75	87	89	78	3.2	.8	6	16.1	SW	OCT 16
KWAJALEIN	77	79	84	84	5.5	3.8	7	17.9	20	OCT 26
MAJURO	76	79	82	83	4.0	2.8	8	15.2	E	JUL 6
PAGO PAGO	84	89	88	77	4.0	2.5	10	25.0	NW	FEB 10
PONAPE R	79	89	91	77	3.1	1.7	9	10.7	SW	APR 7
TAGUAC GUAM R	78	90		78				19.7	W	OCT 22

State and Station	Possible sunshine %	Average sky cover sunrise to sunset (Tenths)	Number of days – Sunrise to sunset – Clear, 0-0.3	Partly cloudy, 0.4-0.7	Cloudy, 0.8-1.0	Precipitation 25mm or more	Snow, Sleet 25.4mm or more	Thunderstorms	Heavy fog	Max. temp. 32.2 °C and above	Max. temp. 0 °C and below	Min. temp 0 °C and below	Min. temp −17.8 °C. and below
NORTH CAROLINA													
WILMINGTON	67	5.5	127	101	138	116	2	32	20	49	1	72	0
NORTH DAKOTA													
BISMARCK	66	6.7	79	100	187	103	10	30	8	8	81	195	48
FARGO	61	6.6	69	130	167	117	14	32	9	14	92	177	44
WILLISTON	66	6.4	83	116	167	87	10	23	7	16	76	194	49
OHIO													
AKRON		6.8	65	113	188	157	13	46	28	16	44	119	10
CINCINNATI OBS	55					141	5			30	38	100	3
CLEVELAND	49	7.0	65	92	209	165	19	36	12	8	56	130	6
COLUMBUS	49	6.7	68	110	188	133	6	54	18	20	43	116	7
DAYTON	56	6.6	84	94	188	130	9	39	21	12	39	112	7
MANSFIELD		6.6	80	103	183	152	14	35	27	11	51	120	7
TOLEDO	56	6.7	71	113	182	140	12	37	21	21	49	146	8
YOUNGSTOWN		7.0	67	100	199	173	20	45	32	5	65	134	11
OKLAHOMA													
OKLAHOMA CITY	63	5.9	107	98	161	92	9	52	15	53	11	92	0
TULSA	63	5.8	112	96	158	98	5	45	7	60	10	88	1
OREGON													
ASTORIA		7.7	45	76	245	219	3	5	50	0	2	40	0
BURNS U		6.0	100	112	154	92	7			23	15	203	0
EUGENE		7.2	54	94	218	145	3	6	62	18	1	38	0
MEACHAM		7.0	78	71	217	154	36			6	53	165	3
MEDFORD		6.0	110	84	172	110	3	6	57	58	4	83	0
PENDLETON		6.5	83	97	186	97	6	5	20	39	9	61	3
PORTLAND	47	7.5	60	60	246	184	6	4	41	9	5	38	0
SALEM		7.1	64	78	224	180	6	5	38	15	3	66	0
SEXTON SUMMIT R		5.7	129	71	166	121	27			4	27	113	0
PACIFIC AREA													
JOHNSTON	57	5.8	106	137	123	168	0	5	0	0	0	0	0
KOROR R	70	9.0	0	54	312	252	0	24	0	94	0	0	0
KWAJALEIN		9.1	4	58	304	245	0	9	0	13	0	0	0
MAJURO	58	8.1	18	104	244	265	0	16	0	3	0	0	0
PAGO PAGO	48	7.2	43	140	183	246	0	29	0	14	0	0	0
PONAPE R	46	8.6	11	66	289	288	0	35	0	53	0	0	0
TAGUAC GUAM R	53	7.8	8	147	211	263	0			1	0	0	0

See reference notes at end of table.

ANNUAL CLIMATOLOGICAL DATA
METRIC UNITS

YEAR 1968

State and Station	Temperature: Averages: Daily maximum	Daily minimum	Annual	Temperature: Extremes: Highest	Date	Lowest	Date	Heating degree days	Precipitation: Total	Greatest in 24 hours	Date (s)	Snow, Sleet: Total	Greatest in 24 hours	Date (s)	Relative humidity: 1:00am EST	7:00am EST	1:00pm EST	7:00pm EST	Wind: Average speed	Resultant speed	Resultant direction	Fastest mile (1.6 kilometers): Speed	Direction	Date	Possible sunshine	Average sky cover sunrise to sunset	Number of days: Sunrise to sunset: Clear, 0-0.3	Partly cloudy, 0.4-0.7	Cloudy, 0.8-1.0	Precipitation .25mm or more	Snow, Sleet 25.4mm or more	Thunderstorms	Heavy fog	Max. temp. 32.2°C and above	Max. temp. 0°C and below	Min. temp. 0°C and below	Min. temp. -17.8°C. and below
	°C.	°C.	°C.	°C		°C		Base 18.3°C.	Mm.	Mm.		Mm.	Mm.		%	%	%	%	M.p.s.	M.p.s.		M.p.s.			%	Tenths											
PACIFIC AREA																																					
TRUK MOEN ISLAND	30.2	24.1	27.2	32.8	DEC 16	21.1	DEC 15+	0	3952	166	OCT 30-31	0	0		77	86	87	77	4.2	1.9	6	17.0	NW	APR 8	64	8.8	4	68	294	274	0	30	0	8	0	0	0
WAKE	29.7	23.8	26.8	32.8	AUG 27+	18.9	JAN 30	0	1040	96	APR 9-10	0	0		66	71	79	81	6.8	4.8	8	20.6	S	OCT 6	73	6.1	86	150	130	168	0	10	0	22	0	0	0
YAP R	30.3	23.8	27.1	32.8	JUN 8	21.1	NOV 5	0	2362	96	OCT 13-14	0	0		75	87	89	77	3.7	1.4	6	13.9	NE	FEB 24	57	8.8	3	71	292	240	0	12	0	8	0	0	0
PENNSYLVANIA																																					
ALLENTOWN	16.1	4.4	10.2	35.6	JUL 18	- 21.7	JAN 2	3336	976	64	APR 24	371	163	NOV 12	74	77	53	61	3.9	1.6	28	18.3	31	JAN 7		6.2	91	120	155	110	2	29	35	19	33	122	8
ERIE	13.5	4.7	9.1	34.4	JUL 18	- 20.6	JAN 12	3643	872	47	DEC 27-28	2207	229	JAN 14-15	74	75	64	67	5.4	2.1	24	17.4	30	NOV 19		7.0	54	116	196	170	28	41	19	2	55	121	6
HARRISBURG	16.8	6.2	11.5	36.7	AUG 22	- 20.6	JAN 2	3022	844	95	SEP 10	292	76	NOV 12	73	76	54	60	3.9	1.4	28	19.2	NW	FEB 17	60	6.5	79	107	180	115	5	32	19	32	31	103	1
PHILADELPHIA	17.5	7.1	12.3	36.1	AUG 25	- 14.4	FEB 21+	2808	900	77	JUN 12	226	66	DEC 15	71	72	51	59	4.4	1.3	29	20.1	W	DEC 5+	58	6.2	96	111	159	103	4	24	20	27	22	97	0
PITTSBURGH	15.0	3.9	9.5	33.9	JUL 22	- 22.2	JAN 8	3556	916	55	AUG 7	1232	163	MAR 12	72	76	56	59	4.1	1.8	26	21.5	25	DEC 28	54	7.1	52	119	195	156	13	35	18	11	51	129	12
PITTSBURGH U	16.2	6.1	11.2	35.0	JUL 18	- 20.0	JAN 8	3090	797	45	SEP 5-6	655	104	JAN 13-14											51					145	8			13	42	105	3
READING U	17.1	7.4	12.3	36.1	JUL 1	- 17.2	JAN 2	2786	892	64	SEP 10-11	234	48	NOV 12								25.5	NW	MAR 1	56	5.8	107	113	146	115	5			25	29	87	0
SCRANTON	14.7	4.5	9.6	34.4	JUL 18	- 23.3	JAN 12	3508	781	54	SEP 5-6	719	203	NOV 12	77	81	59	64	3.9	1.2	25	17.4	W	MAY 3	55	6.7	72	111	183	136	8	27	24	12	45	116	7
WILLIAMSPORT	15.8	4.3	10.1	35.0	AUG 22	- 23.9	JAN 12	3320	960	78	SEP 5-6	467	183	NOV 12	84	84	60	69	3.8	1.3	28	17.9	32	JUN 15		6.7	68	121	177	133	4	35	46	15	33	117	5
RHODE ISLAND																																					
BLOCK ISLAND	13.1	6.3	9.7	31.1	JUL 17	- 18.9	JAN 9	3335	890	92	MAR 17-18	409	122	JAN 6-7												6.1	103	115	148	114	6			0	32	89	3
PROVIDENCE	14.9	4.6	9.8	35.0	JUL 16	- 20.6	JAN 9	3421	1051	115	MAR 17-18	660	145	JAN 25	73	71	52	63	4.6	1.6	29	17.9	30	DEC 17	57	5.9	107	107	152	125	9	18	18	9	33	114	6
SOUTH CAROLINA																																					
CHARLESTON	23.7	11.3	17.5	37.2	AUG 8	- 7.8	FEB 14+	1489	1164	70	JUN 9-10+	46	33	FEB 22	79	80	51	66	3.8	.4	25	30.8Y	N	AUG 24	60	5.6	116	112	138	106	1	51	28	55	0	68	0
COLUMBIA	23.5	9.8	16.7	41.1	AUG 23	- 9.4	FEB 14+	1692	1236	72	JAN 9-10	69	33	JAN 12	82	86	49	62	3.0	.5	30	14.3	31	JUN 12	65	5.4	134	96	136	107	1	49	16	73	1	86	0
GNVLE-SPARTANBURG	21.2	8.6	14.9	37.2	AUG 23	- 10.6	FEB 12	1995	1097	103	JUN 7-8	117	48	NOV 11	75	79	50	61	3.1	.6	32	15.2	NW	DEC 16	59	5.6	120	100	146	109	2	46	26	36	4	91	0
SOUTH DAKOTA																																					
ABERDEEN	12.3	- .4	5.9	37.2	AUG 21	- 34.4	JAN 4	4732	537	66	MAR 18-19	1013	267	APR 3	77	81	60	59	5.1	1.0	34	21.9	36	APR 4+		6.3	95	108	163	100	11	34	7	17	85	186	31
HURON	13.6	.6	7.1	37.2	JUL 20+	- 31.7	JAN 4	4377	665	87	JUN 24-25	1085	231	DEC 21-22	74	78	57	56	5.2	.6	29	32.2	NW	AUG 7	64	6.3	87	115	164	94	16	37	8	18	73	173	30
RAPID CITY	14.6	.6	7.6	35.6	AUG 7+	- 29.4	DEC 30	4070	469	48	JUN 23-24	828	142	APR 13	66	70	49	48	4.9	2.0	34	25.0	NW	DEC 12+	59	6.1	100	104	162	99	10	38	7	10	50	172	15
SIOUX FALLS	14.2	1.2	7.7	38.3	JUN 20	- 30.0	DEC 31+	4255	707	60	JUN 24-25	1255	422	DEC 21-22	75	80	56	57	5.3	.8	28	25.9	25	JUN 21		5.9	104	111	151	97	13	49	15	28	64	168	31
TENNESSEE																																					
BRISTOL	18.9	6.1	12.6	34.4	AUG 23+	- 17.2	JAN 8	2627	833	39	MAR 9-10	592	122	FEB 29	78	83	54	61	2.4	.7	29	17.9	24	DEC 28		6.5	75	113	178	133	7	45	57	25	18	116	0
CHATTANOOGA	20.9	8.6	14.8	38.9	AUG 23	- 12.2	FEB 12	2175	891	45	DEC 21-22	267	119	JAN 12-13	81	85	55	60	2.7	.4	27	15.2	SW	DEC 28	53	6.2	98	102	166	109	4	48	43	56	5	98	0
KNOXVILLE	19.8	8.2	14.1	37.2	AUG 23+	- 13.3	FEB 22	2264	908	36	SEP 9	325	94	FEB 28-29	78	83	56	60	2.7	.6	29	17.0	SW	DEC 28	59	6.6	83	97	186	118	5	44	28	31	4	91	0
MEMPHIS	21.2	10.6	15.9	36.7	AUG 23	- 11.7	JAN 7	1926	1317	74	JUN 24-25	605	409	MAR 21-22	70	76	54	56	3.8	.6	21	21.0	SE	SEP 9	64	6.1	108	[illegible]	169	98	7	55	8	57	6	75	0
NASHVILLE	20.3	7.8	14.1	37.2	AUG 23	- 15.6	JAN 8	2348	1116	85	NOV 27-28	472	208	MAR 22	77	83	55	59	3.8	.9	23	18.8	SW	NOV 28+	56	6.3	90	108	168	113	6	51	24	46	10	100	0
OAK RIDGE R	19.7	7.8	13.8	37.2	AUG 23+	- 12.2	FEB 22+	2339	1006	54	MAR 11-12	203	84	JAN 13								20.1Y		NOV 28		6.5	99	78	189	117	2			33	3	91	0
TEXAS																																					
ABILENE	23.3	11.3	17.3	36.7	OCT 2+	- 11.1	DEC 31+	1557	727	67	JUL 18-19	310	79	NOV 27	69	76	54	49	5.1	1.9	18	20.1	NW	MAY 10	71	5.8	118	86	162	[illegible]	5	41	14	80	5	59	0
AMARILLO	21.2	6.7	14.0	40.0	JUN 29+	- 16.1	DEC 31+	2285	456	44	JAN 21-22	345	84	FEB 22	64	73	46	41	6.2	1.7	20	22.4	NE	MAY 31+	71	5.1	143	100	123	79	5	48	31	60	9	96	0
AUSTIN	24.6	13.4	19.0	36.7	AUG 23+	- 5.6	JAN 7	1166	983	71	JUL 8-9	T	T	MAR 21+	78	85	58	57	4.2	.9	15	18.8	W	DEC 27	56	6.1	85	136	145	97	0	48	17	84	2	27	0

See reference notes at end of table

ANNUAL CLIMATOLOGICAL DATA
METRIC UNITS

State and Station	Temperature: Averages: Daily maximum	Averages: Daily minimum	Averages: Annual	Extremes: Highest	Extremes: Date	Extremes: Lowest	Extremes: Date	Heating degree days
	°C.	°C	°C.	°C		°C		Base 18.3°C
TEXAS								
BROWNSVILLE	27.6	18.1	22.8	35.6	AUG 15+	.0	FEB 24+	433
CORPUS CHRISTI	25.6	16.2	20.9	35.6	AUG 12+	- 2.2	JAN 13+	729
DALLAS	23.4	13.1	18.3	38.3	AUG 10	- 10.6	JAN 7	1367
DEL RIO	26.1	13.9	20.0	39.4	AUG 12	- 3.9	DEC 23	1002
EL PASO	24.2	9.4	16.8	41.1	JUN 21	- 10.6	DEC 23	1563
FORT WORTH	23.4	11.9	17.7	38.3	AUG 10	- 11.1	JAN 7	1442
GALVESTON U	22.9	17.8	20.4	33.9	JUN 13	- 1.1	JAN 8	808
HOUSTON	25.6	15.2	20.4	35.6	AUG 22+	- 2.2	JAN 14	862
LUBBOCK	21.4	6.6	14.1	39.4	JUN 28	- 14.4	JAN 7	2157
MIDLAND	23.7	9.4	16.6	38.9	JUN 28	- 9.4	JAN 7	1619
PORT ARTHUR	24.9	14.1	19.5	36.1	AUG 12	- 4.4	JAN 14	973
SAN ANGELO	25.0	11.1	18.1	40.0	AUG 12	- 8.9	DEC 23	1389
SAN ANTONIO	25.1	13.6	19.3	37.2	AUG 12+	- 4.4	DEC 24+	1096
VICTORIA	25.7	15.3	20.5	35.6	AUG 22+	- 2.8	JAN 14	849
WACO	24.0	13.4	18.7	37.8	AUG 10	- 7.2	JAN 7	1248
WICHITA FALLS	23.8	9.8	16.8	41.7	AUG 10	- 13.3	JAN 7	1708
UTAH								
MILFORD	18.1	.7	9.4	38.9	JUN 27	- 30.6	DEC 22	3575
SALT LAKE CITY	17.1	3.2	10.1	38.9	JUL 19	- 17.8	JAN 13+	3412
WENDOVER	16.2	4.9	10.6	38.3	JUL 19	- 16.7	DEC 22	3332
VERMONT								
BURLINGTON	10.8	.0	5.4	33.3	JUL 16	- 32.8	JAN 11	4819
VIRGINIA								
LYNCHBURG	19.2	6.7	13.0	36.7	AUG 22+	- 16.1	FEB 22	2517
NORFOLK	19.6	9.7	14.7	37.2	AUG 25	- 10.0	FEB 11	2159
RICHMOND	21.1	7.9	14.5	37.2	AUG 25+	- 14.4	FEB 22	2202
ROANOKE	19.0	7.0	13.0	36.1	JUL 1+	- 13.9	DEC 11	2450
WASHINGTON								
OLYMPIA	15.6	4.5	10.1	35.0	JUL 31	- 14.4	DEC 30	3042
QUILLAYUTE	13.7	5.2	9.4	31.1	JUL 30	- 11.1	DEC 29+	3209
SEATTLE-TACOMA	15.4	7.3	11.4	33.3	JUL 2	- 14.4	DEC 30	2597
SPOKANE	14.1	2.7	8.4	38.3	JUL 6	- 31.7	DEC 30	3792
STAMPEDE PASS R	7.1	.9	4.1	29.4	JUL 3	- 29.4	DEC 30	5213
WALLA WALLA U	17.8	7.4	12.6	41.1	JUL 6	- 25.0	DEC 30	2529
YAKIMA	16.9	2.8	9.9	38.3	JUL 6	- 23.3	DEC 30+	3257

State and Station	Precipitation: Total	Greatest in 24 hours	Date (s)	Snow, Sleet: Total	Snow, Sleet: Greatest in 24 hours	Snow, Sleet: Date (s)	Relative humidity: 1:00 a m EST	7:00 a m EST	1:00 p m EST	7:00 p m EST
	Mm.	Mm.		Mm.	Mm.		%	%	%	%
TEXAS										
BROWNSVILLE	753	63	OCT 4-5	0	0		86	88	63	70
CORPUS CHRISTI	1055	118	MAY 7-8	0	0		86	90	68	71
DALLAS	919	67	MAR 19-20	10	1	FEB 22-23	69	78	56	53
DEL RIO	436	56	JUL 2-3	T	T	MAR 3	70	82	58	48
EL PASO	305	67	JUL 5-6	310	17	NOV 26-27	48	59	39	30
FORT WORTH	977	81	MAY 7	76	6	FEB 22-23	79	87	61	59
GALVESTON U	1299	126	JUN 20-21	0	0					
HOUSTON	1561	161	MAY 10	25	2	MAR 22	82	85	59	64
LUBBOCK	493	43	MAR 19-20	394	19	MAR 20	70	82	51	44
MIDLAND	470	121	MAY 9	183	5	NOV 8	65	76	46	39
PORT ARTHUR	1473	184	APR 8-9	36	3	MAR 22	86	88	63	71
SAN ANGELO	592	40	APR 8-9	259	147	NOV 8	74	82	53	50
SAN ANTONIO	772	81	JAN 19-20	T	T	FEB 22	79	85	59	56
VICTORIA	1253	139	MAY 7-8	T	T	JAN 9	86	89	61	67
WACO	932	102	MAY 9-10	25	25	FEB 22	76	83	62	58
WICHITA FALLS	776	66	NOV 26	315	97	MAR 11	77	85	55	53
UTAH										
MILFORD	207	22	OCT 14-15	1041	99	MAR 19			42	
SALT LAKE CITY	536	29	OCT 14-15	2159	241	DEC 11	63	67	47	42
WENDOVER	139	11	MAY 21	201	81	APR 21-22	47	54	43	
VERMONT										
BURLINGTON	832	55	APR 24-25	2670	221	DEC 27-28	78	76	59	66
VIRGINIA										
LYNCHBURG	722	67	MAY 26-27	485	170	NOV 11-12		74	47	58
NORFOLK	958	79	MAR 17-18	231	97	DEC 7-8	73	73	55	63
RICHMOND	841	50	MAR 12-13	292	119	MAR 29-1	77	78	48	61
ROANOKE	891	163	OCT 18-19	838	295	JAN 13	70	72	47	54
WASHINGTON										
OLYMPIA	1632	60	FEB 18-19	973	216	DEC 28	85	89	78	64
QUILLAYUTE	3287	211	JAN 18-19	290	102	DEC 30-31	92	95	83	75
SEATTLE-TACOMA	1274	47	DEC 3	765	330	DEC 30-31	74	81	75	63
SPOKANE	413	26	NOV 10-11	843	191	DEC 31	65	75	61	50
STAMPEDE PASS R	2711	75	DEC 3	10043	526	NOV 26-27		91	82	
WALLA WALLA U	433	26	DEC 31	597	307	DEC 31				
YAKIMA	240	20	JAN 14-15	681	132	DEC 22	65	74	55	43

State and Station	Wind: Average speed	Resultant speed	Resultant direction	Fastest mile (1.6 kilometers): Speed	Fastest mile: Direction	Fastest mile: Date	Possible sunshine	Average sky cover sunrise to sunset	Number of days: Sunrise to sunset: Clear, 0-0.3	Partly cloudy, 0.4-0.7	Cloudy, 0.8-1.0	Precipitation 25mm or more	Snow, Sleet 25.4mm or more	Thunderstorms	Heavy fog	Max. temp.: 32.2°C and above	Max. temp.: 0°C and below	Min. temp.: 0°C and below	Min. temp.: -17.8°C and below
	M.p.s.	M.p.s.		M.p.s.			%	Tenths											
TEXAS																			
BROWNSVILLE	5.2	2.3	13	29.5	NW	MAY 4	60	6.2	85	129	152	86	0	40	20	108	0	4	0
CORPUS CHRISTI	5.0	2.3	12	20.1	NE	MAY 11+	55	6.7	56	139	171	95	0	40	25	52	0	9	0
DALLAS	4.8	1.6	16	20.1	NE	MAR 11	61	6.0	102	102	162	111	0	49	3	72	4	39	0
DEL RIO	4.4	2.5	12	17.0	36	JUN 25		6.2	92	106	168	65	0	39	15	116	0	17	0
EL PASO	3.2	.7	24	27.3	W	FEB 20	82	4.0	197	79	90	59	4	36	1	75	0	63	0
FORT WORTH	4.3	1.2	18	23.7	32	DEC 27		6.1	107	90	169	113	2	54	10	72	5	48	0
GALVESTON U				18.8	NW	MAR 11	54					101	0			8	0	2	0
HOUSTON	4.5	1.1	13	18.3	17	MAY 11	53	6.4	82	105	179	126	1	68	30	81	0	10	0
LUBBOCK	5.2	1.3	19	22.8	26	DEC 21		5.4	131	103	132	79	5	56	30	45	6	100	0
MIDLAND	5.0	1.5	17	21.5	30	JUN 9		5.0	153	87	126	64	4	34	18	84	2	73	0
PORT ARTHUR	4.1	1.0	11	25.0	SW	SEP 17	58	6.1	96	113	157	116	1	68	29	67	0	19	0
SAN ANGELO	4.9	1.8	18	17.9	30	DEC 27		5.5	127	99	140	75	2	34	14	110	1	56	0
SAN ANTONIO	4.1	1.2	13	18.8	N	APR 23	55	6.3	75	140	151	106	0	37	15	96	0	28	0
VICTORIA	4.5	1.4	12	27.3Y	ESE	MAY 11		6.7	71	115	180	106	0	57	35	85	0	15	0
WACO	4.8	1.6	16	15.6	29	DEC 27+		5.9	102	115	149	93	1	42	11	80	2	27	0
WICHITA FALLS	5.5	1.5	15	22.8	26	DEC 18		6.1	105	86	175	80	5	60	15	94	8	75	0
UTAH																			
MILFORD								5.0	140	103	123	75	18			48	15	195	12
SALT LAKE CITY	3.6	1.1	17	24.1	NW	MAY 5	70	5.8	122	89	155	100	23	39	12	47	24	143	2
WENDOVER												63	2			42	27	124	0
VERMONT																			
BURLINGTON	3.5	.6	24	17.0	S	DEC 13	62	7.1	59	106	201	148	32	27	28	4	87	163	46
VIRGINIA																			
LYNCHBURG				17.9	SW	DEC 28	61	5.6	120	106	140	99	5			35	16	109	0
NORFOLK	4.6	.5	27	23.2	SE	MAY 27	72	5.6	118	108	140	118	2	35	14	30	11	82	0
RICHMOND	3.3	.5	27	17.9	SW	DEC 28	65	5.9	106	114	146	102	5	35	23	53	10	98	0
ROANOKE	4.2	1.5	29	16.5	26	DEC 28+		5.7	110	117	139	112	8	39	20	27	17	99	0
WASHINGTON																			
OLYMPIA	3.0	1.6	21	15.6	19	JAN 9		7.5	48	86	232	184	11	6	88	6	3	73	0
QUILLAYUTE	3.3	.8	18	15.2	S	JAN 9	31	7.8	43	70	253	224	4	7	50	0	3	52	0
SEATTLE-TACOMA	4.0	1.2	19	15.6	21	JAN 10	47	7.7	48	72	246	167	8	6	43	3	3	22	0
SPOKANE	4.6	1.9	19	22.4	SW	DEC 3	54	6.7	77	97	192	113	9	2	46	17	30	138	4
STAMPEDE PASS R												238	102			0	87	184	4
WALLA WALLA U				13.9	NW	APR 30	54	6.9	81	74	211	115	3			33	10	47	3
YAKIMA	3.4	1.7	28	19.2	24	JUL 11		6.1	102	97	167	71	7	3	17	20	12	131	4

See reference notes at end of table

ANNUAL CLIMATOLOGICAL DATA
METRIC UNITS

YEAR 1968

State and Station	Temperature: Averages: Daily maximum	Daily minimum	Annual	Extremes: Highest	Date	Lowest	Date	Heating degree days	Precipitation: Total	Greatest in 24 hours	Date (s)	Snow, Sleet: Total	Greatest in 24 hours	Date (s)	Relative humidity: 1:00 a m EST	7:00 a m EST	1:00 p m EST	7:00 p m EST
	°C	°C	°C.	°C		°C		Base 18.3°C.	Mm.	Mm		Mm.	Mm.		%	%	%	%
WEST INDIES																		
SAN JUAN P.R.	29.6	22.8	26.2	33.9	MAY 3	16.7	FEB 7+	0	1351	94	NOV 26-27	0	0		86	82	71	81
SWAN ISLAND	29.4	24.4	26.9	32.2	SEP 5+	20.6	FEB 11+	0	1473	171	NOV 19-20	0	0					
WEST VIRGINIA																		
BECKLEY	15.2	4.4	9.8	31.1	JUN 30	- 21.7	JAN 8	3327	876	47	MAY 26-27	1605	231	JAN 13-14	79	82	58	68
CHARLESTON	17.9	6.1	12.0	34.4	JUL 18	- 21.1	FEB 22	2772	1021	56	MAR 11-12	851	157	JAN 13-14	79	82	55	63
ELKINS	15.9	2.4	9.2	31.7	JUN 30	- 27.2	JAN 2	3542	987	47	MAY 23-24	2050	226	NOV 12		89	59	69
HUNTINGTON	17.7	6.2	11.9	35.0	AUG 20	- 21.1	JAN 8	2803	918	63	MAR 11-12	490	71	FEB 20-21	80	84	58	62
PARKERSBURG U	17.3	6.4	11.9	34.4	AUG 21	- 21.7	JAN 8	2864	1102	63	MAY 24	538	229	JAN 13				
WISCONSIN																		
GREEN BAY	12.6	1.8	7.2	34.4	AUG 23	- 31.1	JAN 7	4279	761	58	JUN 25-26	1082	150	DEC 19	78	81	62	67
LA CROSSE	14.0	3.1	8.6	36.7	AUG 6	- 30.0	DEC 25	3916	906			838			78	82	59	62
MADISON	13.8	1.8	7.8	34.4	AUG 6	- 27.8	JAN 7	4074	780	56	JUN 25-26	523	109	DEC 28	79	83	60	64
MILWAUKEE	13.5	3.7	8.6	34.4	AUG 23+	- 26.1	JAN 7	3821	800	52	JUN 25-26	549	135	DEC 28	76	79	61	65
WYOMING																		
CASPER	13.9	- .8	6.6	35.0	AUG 7+	- 33.3	DEC 30	4403	302	24	MAY 22-23	1610	198	APR 2-3	65	70	46	43
CHEYENNE	14.9	.6	7.8	33.9	JUL 20	- 25.6	JAN 6	3966	303	39	MAY 22-23	892	191	APR 2-3	54	57	37	40
LANDER	12.9	- 1.1	5.9	33.9	JUL 15	- 30.0	DEC 31	4646	319	35	JUN 5-6	2654	396	APR 16-17	58	65	49	45
SHERIDAN	13.6	- 1.3	6.2	35.0	AUG 5+	- 33.3	DEC 30	4518	447	39	JUN 8-9	1643	119	JAN 5	67	73	52	50

State and Station	Wind: Average speed	Resultant speed	Resultant direction	Fastest mile (1.6 kilometers): Speed	Direction	Date	Possible sunshine	Average sky cover sunrise to sunset	Number of days: Sunrise to sunset: Clear, 0-0.3	Partly cloudy, 0.4-0.7	Cloudy, 0.8-1.0	Precipitation 25mm or more	Snow, Sleet 25.4mm or more	Thunderstorms	Heavy fog	Max temp: 32.2°C and above	Max temp: 0°C and below	Min. temp: 0°C and below	Min. temp: -17.8°C and below
	M.p.s.	M.p.s.		M.p.s.			%	Tenths											
WEST INDIES																			
SAN JUAN P.R.	3.5	2.5	8	14.3	NE	NOV 27+	70	5.6	68	216	82	186	0	50	0	25	0	0	0
SWAN ISLAND								6.5	59	163	144	166	0			5	0	0	0
WEST VIRGINIA																			
BECKLEY	4.3	1.5	24	19.7	19	MAR 22		6.8	75	95	196	165	21	42	33	0	42	121	5
CHARLESTON	3.0	1.2	23	15.6	28	APR 14		6.8	66	111	189	151	12	41	124	15	27	106	3
ELKINS				17.9	30	APR 14		7.5	53	86	227	168	26			0	36	145	13
HUNTINGTON	2.9	1.1	23	19.7	18	APR 23		6.7	75	104	187	137	6	47	65	24	36	111	2
PARKERSBURG U				18.3	SW	DEC 5+	52					130	7			16	34	105	2
WISCONSIN																			
GREEN BAY	4.7	1.2	26	24.1	SW	MAY 8	53	6.4	86	111	169	125	13	41	22	2	69	158	20
LA CROSSE	4.3	.7	24									115	9	47	29	16	62	145	22
MADISON	4.6	1.3	25	24.1	W	JUN 10	57	6.3	99	91	176	129	7	39	18	13	59	154	23
MILWAUKEE	4.9	1.4	25	18.8	SW	JUN 29+	59	6.1	103	93	170	136	6	39	21	10	53	137	11
WYOMING																			
CASPER	5.7	3.1	24	20.6	29	SEP 14		6.1	102	103	161	99	20	30	8	15	51	198	16
CHEYENNE	5.6	3.0	30	29.1	W	DEC 3	62	5.6	104	136	126	71	14	38	13	9	25	184	4
LANDER	3.1	1.0	25	27.3	SW	APR 12	70	6.1	88	117	161	57	24	32	9	9	56	197	24
SHERIDAN	2.8	1.2	30	19.2	NW	JUL 30	61	6.4	84	105	177	119	26	38	5	11	48	203	29

Data from airport unless otherwise specified. U indicates Urban, R indicates Rural, sites.

Precipitation data in column headed "Greatest in 24 hours" are computed on a 24-hour basis without regard to calendar day - data may include precipitation with a measurable amount from the last day of the previous month or the first day of the following month.

Wind directions under resultant direction are in tens of degrees.

Value entered in column "Fastest Mile" is the highest observed 1-minute wind speed when the direction is in tens of degrees. These stations are not equipped with a recording anemometer from which "Fastest Mile" data can be evaluated.

Data in this table are obtained by conversion from data in the English Units table.

\+ And also on an earlier date or dates.

B Number of days maximum 21.1°C. or above for Alaskan Stations.

Y Peak gust.

V Sun below horizon November 19 - January 23, inclusive.

X Sun below horizon November 24 - January 17, inclusive.

* less than 0.05

NORMALS, MEANS AND EXTREMES

State and Station	Elevation ground (feet)	Temp. Normal (1931-1960) January Daily maximum	January Daily minimum	July Daily maximum	July Daily minimum	Annual	Extremes Length, yrs	Record highest	Record lowest	Normal degree days (1931-1960) January	Seasonal	Precipitation Normal (1931-1960) Wettest month	Driest month	Annual	Extremes Wettest month	Driest month	Maximum in 24 hours	Snow, sleet Mean total January	Seasonal	Extreme Maximum in 24 hours
ALABAMA							85	112	-24							0.00	20.33			
BIRMINGHAM	620	56.6	36.3	92.5	70.7	64.1	5	102	- 4	592	2551	6.00	2.95	53.05	17.67	T	6.57	0.5	1.5	8.4
HUNTSVILLE	624	52.4	33.4	92.4	69.8	62.0	8	104	-11	694	3070	5.57	2.72	48.67	12.55	T	5.84	2.4	8.2	17.1
MOBILE	211	62.3	43.7	92.0	73.1	68.2	7	102	8	415	1560	9.67	3.03	68.13	19.29	0.05	13.36	0.1	0.4	3.5
MONTGOMERY	183	58.5	37.7	91.9	71.7	65.0	5	102	5	543	2291	6.16	2.28	50.69	21.32	0.02	8.81	0.1	0.1	2.5
ALASKA							85	100	-76							0.00	37.67			
ANCHORAGE PK 1966	2/ 85	20.5	4.3	64.6	49.5	35.2	44	86	-38	1631	10864	2.57	0.42	14.71	5.91	0.00	2.06	10.7	59.4	17.7
ANCHORAGE	114	19.9	4.3	66.0	50.3	35.8	4	82	-30	1640	10648	2.57	0.42	14.71	4.60	0.27	1.66	10.6	78.4	16.4
ANNETTE	110	38.4	30.3	63.2	51.4	45.6	8	90	1	949	7069	16.88	5.67	118.36	34.87	0.71	7.59	13.2	51.9	14.2
BARROW	31	- 9.4	-23.0	44.9	33.3	9.6	48	78	-56	2517	20174	0.90	0.11	4.26	2.81	0.00	1.00	2.4	29.3	15.0
BARTER ISLAND	39	- 9.9	-23.6	47.5	35.0	10.4	19	75	-59	2536	19862	1.05	0.17	6.28	4.91	T	2.25	6.5	47.4	17.0
BETHEL	125	10.8	- 3.7	61.8	47.5	28.7	10	86	-39	1903	13196	4.20	0.58	18.42	5.81	0.02	1.31	4.7	49.1	6.5
COLD BAY	96	32.6	22.9	54.3	45.0	37.9	24	78	- 9	1153	9880	4.59	1.46	34.30	9.97	0.02	4.90	7.7	48.8	11.4
CORDOVA 1963	41	31.6	14.5	60.3	46.1	38.2	20	84	-33	1299	9764	12.51	3.48	80.98	27.72	0.08	7.92	25.0	124.7	22.9
FAIRBANKS	436	- 0.8	-21.4	71.7	47.6	25.8	5	91	-56	2359	14279	2.20	0.25	11.29	6.20	T	3.42	11.1	66.3	20.1
JUNEAU	12	30.1	20.0	62.7	47.8	40.1	25	84	-22	1237	9075	8.33	2.87	54.62	13.29	0.27	4.66	22.0	103.2	31.0
KING SALMON	49	20.8	5.9	63.0	46.8	33.8	5	84	-30	1600	11343	3.43	0.64	19.18	7.30	0.00	2.00	6.3	44.8	9.5
KOTZEBUE	10	1.3	-12.7	58.6	46.8	20.7	26	85	-52	2192	16105	2.16	0.28	8.18	5.18	T	1.78	5.5	46.8	8.6
MC GRATH	344	0.8	-18.7	68.6	48.7	25.8	26	88	-67	2294	14283	3.79	0.47	18.58	6.26	T	2.39	15.0	88.5	15.2
NOME	13	11.5	- 2.7	54.6	44.4	26.1	2	86	-37	1879	14171	3.80	0.69	17.88	7.82	T	2.38	10.0	56.3	8.4
ST. PAUL ISLAND	22	29.7	21.1	49.4	41.6	34.3	51	64	-26	1228	11199	3.29	0.96	23.60	9.32	0.08	1.93	12.9	57.3	13.8
SHEMYA	122	33.9	28.6	49.2	43.6	38.4	23	63	16	1045	9687	2.76	1.32	27.27	8.71	0.14	5.26	11.5	57.6	15.3
YAKUTAT	28	34.4	20.2	60.5	47.7	40.0	4	77	-24	1169	9092	19.59	5.06	131.81	43.88	0.52	7.13	37.1	217.4	32.4
ARIZONA							74	127	-37							0.00	13.09			
FLAGSTAFF	7006	40.4	14.1	81.4	49.6	45.6	19	94	-20	1169	7152	2.84	0.51	18.31	7.30	T	3.43	16.9	81.6	27.3
PHOENIX	1117	64.0	35.3	104.6	75.0	69.0	8	115	20	474	1765	1.12	0.09	7.20	5.56	0.00	3.07	T	T	0.6
PRESCOTT 1964	5014	51.0	23.1	90.8	61.1	55.7	22	103	- 5	865	4362	2.66	0.24	12.23	9.61	0.00	3.08	5.9	16.7	12.4
TUCSON	2584	62.6	37.0	98.5	74.1	67.7	28	111	16	471	1800	2.88	0.13	11.00	7.93	0.00	3.93	0.3	1.3	6.4
WINSLOW	4895	45.2	16.8	95.7	64.6	55.7	9	105	-13	1054	4782	1.43	0.26	7.23	4.80	0.00	2.12	2.7	10.6	17.0
YUMA	194	66.8	40.0	106.9	78.7	72.5	4	116	27	363	1217	0.50	0.01	3.03	2.68	0.00	2.42	0.0	T	T
ARKANSAS							78	120	-29							0.00	12.00			
FORT SMITH	447	50.2	29.4	94.7	71.2	61.8	4	110	0	781	3292	5.26	2.66	42.22	14.01	T	7.13	1.8	5.1	5.6
LITTLE ROCK	257	50.6	30.5	92.7	71.1	61.7	9	108	- 4	756	3219	5.28	2.82	48.66	14.46	T	7.71	2.5	5.7	11.3
TEXARKANA 1968	391	54.9	35.2	93.3	71.9	64.3	3	101	9	626	2533	5.30	2.73	49.19	16.65	T	6.55	1.5	2.7	7.5
CALIFORNIA							84	134	-45							0.00	26.12			
BAKERSFIELD	475	57.4	37.4	100.3	68.2	65.1	5	111	25	546	2122	1.17	T	6.36	4.61	0.00	1.68	T	T	T
BISHOP	4108	53.7	19.8	98.0	55.2	56.2	21	109	- 6	874	4227	1.18	0.09	5.84	5.79	0.00	3.35	3.3	6.5	9.0
BLUE CANYON	5280	43.6	30.5	77.0	59.0	50.7	25	93	5	865	5507	11.70	0.06	60.37	45.12	0.00	9.33	49.2	237.2	38.5
BURBANK 1965	724	64.9	42.3	86.2	61.4	63.6	2	106	32	366	1646	3.22	T	14.53	13.84	0.00	7.76	0.2	0.2	4.7
EUREKA U	43	53.6	41.1	60.5	52.0	52.3	58	85	22	546	4643	6.71	0.10	38.43	13.97	0.00	5.83	0.2	0.2	3.0
FRESNO	328	55.4	36.7	100.0	62.6	63.0	5	110	21	586	2492	2.19	T	11.14	6.73	0.00	1.91	0.1	0.2	1.5
LONG BEACH	34	65.3	40.8	82.0	61.1	62.8	9	111	25	375	1711	2.31	T	9.84	9.05	0.00	6.86	T	T	T
LOS ANGELES	97	63.8	45.0	75.9	62.3	61.9	10	110	30	347	1799	2.88	0.01	12.63	11.07	0.00	6.19	T	T	T
LOS ANGELES U	270	65.0	46.6	83.3	62.6	64.4	28	110	28	310	1349	3.33	T	14.68	12.42	0.00	6.11	T	T	0.3
MT SHASTA R	3544	41.4	25.1	85.3	50.7	49.9	26	103	- 2	983	5722	6.36	0.18	36.72	17.60	0.00	5.90	86.3	113.5	37.4
OAKLAND	6	55.4	40.6	72.7	55.9	57.5	5	94	32	527	2870	3.83	T	17.93	11.29	0.00	5.45	T	T	1.0
POINT ARGUELLO 1963	364	59.0	40.3	65.5	51.5	55.2	4	97	24	474	3595	2.35	0.02	11.27	8.36	T	2.28	T	T	T
RED BLUFF	342	53.4	37.5	99.6	67.9	63.5	24	114	20	605	2515	4.29	0.04	22.05	11.38	0.00	4.00	1.0	1.8	9.9
SACRAMENTO	17	53.2	37.2	93.4	57.4	60.4	8	115	23	614	2773	3.24	T	16.29	12.64	0.00	5.59	T	T	T
SACRAMENTO U 1964	19	54.4	38.3	90.0	58.0	60.7	32	112	22	577	2587	3.58	T	18.02	12.20	0.00	5.07	---	---	---
SANDBERG R	4517	46.0	33.8	85.6	63.2	55.5	36	102	3	778	4209	2.58	0.02	12.10	11.12	0.00	4.95	8.6	25.9	38.5
SAN DIEGO	13	64.6	45.4	76.8	63.4	63.2	8	111	31	313	1439	2.15	0.01	10.40	7.60	0.00	3.07	T	T	T
SAN FRANCISCO	8	55.4	41.7	71.9	53.5	56.9	5	98	29	508	3012	4.09	0.01	18.69	12.30	0.00	4.58	T	T	1.5
SAN FRANCISCO U	52	55.8	45.5	64.3	53.3	56.8	32	101	30	443	3001	4.55	0.01	20.78	11.47	0.00	3.65	T	T	T
SANTA CATALINA 1968	1568	59.7	47.4	77.9	59.4	60.9	5	103	34	353	2052	3.16	0.02	14.36	7.49	0.00	4.22	0.0	T	T
SANTA MARIA	236	62.3	38.1	71.6	52.8	57.0	5	100	21	459	2967	2.84	0.03	13.37	9.69	0.00	3.07	T	T	T
STOCKTON	22	52.4	37.0	95.4	60.9	61.3	9	113	19	629	2676	2.66	T	13.37	8.05	0.00	3.01	0.0	T	T
COLORADO							81	118	-60							0.00	11.08			
ALAMOSA	7536	35.6	- 0.8	82.5	47.2	41.9	23	91	-50	1476	8529	1.07	0.17	6.56	3.50	T	1.82	4.2	32.6	15.8
COLORADO SPRINGS	6145	41.9	15.2	84.2	56.7	48.5	8	99	-21	1128	6423	2.37	0.24	13.19	8.00	T	3.09	4.4	37.7	18.0
DENVER	5283	42.1	14.8	88.4	57.4	49.5	9	100	-25	1132	6283	2.70	0.47	14.81	7.31	T	3.43	8.6	58.3	19.4
GRAND JUNCTION	4843	34.8	17.1	92.5	63.8	52.5	5	102	-13	1209	5641	1.07	0.42	8.29	3.48	0.00	1.35	7.8	26.7	9.1
PUEBLO	4684	45.3	14.7	92.1	60.8	52.7	4	102	-13	1085	5462	1.85	0.30	11.84	6.17	T	3.77	5.9	31.8	16.8

State and Station	Relative humidity (percent) January 7 00 a m EST	January 1 00 p m EST	January 7 00p m EST	July 7 00 a m EST	July 1 00 p m EST	July 7 00 p m EST	Wind Speed (m p h) Mean speed January	Mean speed July	Fastest mile	Sunshine (percent of possible) January	July	Annual mean number of days: Sunrise to sunset Clear	Partly cloudy	Cloudy	Precipitation .01 inch or more	Snow, sleet, hail 1.0 inch or more	Thunderstorms	Heavy fog	Temperature Max 90 and above	Min 32 and below	Min Zero and below
ALABAMA																					
BIRMINGHAM	82	60	66	90	64	69	8.7	6.0	65	40	60	102	111	152	117	1	56	8	34	65	*
HUNTSVILLE	80	62	67	86	56	60	8.4	5.5	63	---	---	109	101	155	113	2	53	12	64	70	1
MOBILE	80	64	71	88	61	71	11.1	7.2	51	---	---	104	117	144	123	*	81	36	80	22	0
MONTGOMERY	83	62	65	91	63	68	7.8	6.0	60	47	64	105	109	152	108	*	62	21	62	41	0
ALASKA																					
ANCHORAGE PK 1966	--	--	--	--	--	--	---	---	---	---	---	--	---	---	113	21	--	--	#12	201	41
ANCHORAGE	72	72	71	80	73	62	5.7	6.9	44	39	43	67	67	231	121	24	1	29	#14	192	45
ANNETTE	79	80	75	87	77	67	12.6	8.1	60	---	---	41	61	263	223	16	2	17	#27	78	0
BARROW	64	65	64	95	91	88	11.2	11.6	58	---	---	x60	x53	x186	74	8	*	65	# *	323	169
BARTER ISLAND	69	69	68	92	89	85	14.0	10.5	78	---	---	v50	v66	v194	97	14	*	72	# *	310	167
BETHEL	76	76	75	92	86	67	14.1	11.9	62	---	---	61	61	243	138	17	1	62	#12	226	79
COLD BAY	85	86	83	92	90	81	17.5	15.5	73	---	---	13	49	303	208	16	*	24	# *	162	1
CORDOVA 1963	83	82	81	92	86	80	4.6	4.1	---	---	---	51	52	262	215	35	2	12	# 8	189	18
FAIRBANKS	71	71	74	77	67	51	2.8	6.1	40	---	---	68	83	214	101	21	5	19	#52	229	125
JUNEAU	80	80	77	89	80	69	8.5	7.7	58	31	30	47	36	282	220	28	*	21	#20	149	9
KING SALMON	75	76	75	86	80	65	10.9	10.3	71	---	---	59	63	243	150	15	1	34	#11	212	53
KOTZEBUE	72	72	72	88	85	78	14.5	12.6	93	---	---	87	71	207	112	15	1	21	# 4	252	120
MC GRATH	69	68	69	86	75	56	2.7	6.1	75	---	---	67	65	233	135	28	6	14	#29	232	114
NOME	78	76	76	76	71	66	12.0	10.1	55	37	31	82	66	217	131	18	*	26	# 5	261	79
ST. PAUL ISLAND	87	87	86	96	96	91	20.4	13.1	82	---	---	20	65	280	204	19	*	51	# 0	190	5
SHEMYA	85	84	83	96	97	93	20.9	13.6	90	---	---	6	60	299	212	19	0	80	# 0	127	0
YAKUTAT	81	82	79	99	88	82	8.0	7.0	75	---	---	42	45	278	226	50	2	34	# 3	202	21
ARIZONA																					
FLAGSTAFF	76	54	52	72	34	41	7.8	6.0	40	---	---	169	94	102	73	19	50	7	1	212	10
PHOENIX	67	44	31	49	30	21	4.8	6.6	75	77	84	211	84	70	34	0	22	2	163	17	0
PRESCOTT 1964	71	49	44	59	30	31	7.1	8.3	72	73	74	184	99	82	60	6	46	4	48	130	*
TUCSON	62	40	33	57	32	28	7.8	8.1	59	81	76	195	90	80	50	1	40	1	143	21	0
WINSLOW	78	65	55	56	29	27	7.3	9.1	59	---	---	179	95	91	53	4	37	5	71	137	7
YUMA	57	39	27	49	32	23	7.3	9.5	54	85	90	249	65	51	15	0	7	1	170	2	0
ARKANSAS																					
FORT SMITH	80	58	61	88	56	53	8.2	6.5	58	47	70	126	97	142	93	3	56	14	67	83	*
LITTLE ROCK	81	60	63	88	59	62	9.0	7.1	65	45	69	121	98	146	102	2	56	16	73	68	*
TEXARKANA 1968	79	62	62	90	60	62	8.2	6.2	---	---	---	126	95	144	98	1	62	18	64	44	0
CALIFORNIA																					
BAKERSFIELD	81	73	58	45	31	19	5.0	7.0	44	---	---	199	82	84	37	0	3	23	104	13	0
BISHOP	--	46	33	--	19	14	---	---	---	---	---	204	87	74	28	2	13	*	97	143	*
BLUE CANYON	--	60	--	--	32	--	m10.7	m7.1	70	---	---	174	66	125	88	39	12	68	1	99	0
BURBANK 1965	62	45	37	82	50	38	4.5	5.9	---	---	---	187	102	76	38	*	4	28	49	1	0
EUREKA U	--	--	--	--	--	--	6.9	6.8	56	41	52	79	101	185	117	*	5	49	0	5	0
FRESNO	91	84	65	63	38	21	5.3	7.1	43	53	96	201	70	94	43	*	5	41	109	29	0
LONG BEACH	69	54	47	83	62	53	5.6	6.7	44	---	---	154	128	83	28	0	4	61	20	1	0
LOS ANGELES	64	50	56	86	68	68	6.6	7.4	62	---	---	142	116	107	35	0	3	48	5	*	0
LOS ANGELES U	63	51	50	84	54	53	6.8	5.4	49	72	81	185	106	74	35	0	6	17	18	0	0
MT SHASTA R	--	75	70	--	40	30	---	---	---	---	---	163	85	117	89	20	13	7	21	134	*
OAKLAND	81	76	71	85	75	67	6.3	9.2	49	---	---	144	115	106	63	*	2	18	1	*	0
POINT ARGUELLO 1963	--	--	--	--	--	--	7.3	6.9	---	---	---	116	89	160	68	0	2	140	1	9	0
RED BLUFF	81	72	59	49	29	18	8.9	8.0	68	53	96	176	70	119	70	1	11	18	96	23	0
SACRAMENTO	91	88	71	76	48	28	8.3	9.4	70	45	97	192	68	105	57	0	5	36	79	20	0
SACRAMENTO U 1964	--	--	--	--	--	--	---	---	---	---	---	---	---	---	58	--	---	--	66	10	0
SANDBERG R	28	55	53	42	25	29	17.3	12.9	77	---	---	210	79	76	39	7	4	79	20	57	0
SAN DIEGO	69	51	53	82	69	66	5.5	6.9	51	71	68	152	120	93	42	0	3	29	3	*	0
SAN FRANCISCO	87	79	66	88	66	62	6.9	13.7	62	---	---	161	104	100	62	*	2	19	3	4	0
SAN FRANCISCO U	--	c82	c68	--	c85	c75	6.7	11.2	47	56	66	---	---	---	67	0	2	--	1	*	0
SANTA CATALINA 1968	--	--	--	--	--	--	---	---	---	---	---	173	94	98	42	0	4	158	15	0	0
SANTA MARIA	81	61	57	88	64	62	6.7	6.5	---	---	---	178	106	81	46	0	2	87	7	26	0
STOCKTON	90	87	69	63	40	24	6.5	7.8	46	---	---	191	70	104	49	0	3	43	85	26	0
COLORADO																					
ALAMOSA	76	59	58	83	39	37	---	---	---	---	---	149	140	76	66	12	44	15	1	227	48
COLORADO SPRINGS	55	38	45	72	38	43	10.1	9.6	60	---	---	132	121	112	86	11	59	21	16	159	8
DENVER	60	43	48	71	36	36	9.4	8.7	56	73	71	114	136	115	87	18	41	11	31	164	11
GRAND JUNCTION	77	63	64	50	30	23	5.4	9.3	66	60	77	141	105	119	71	9	36	8	56	133	7
PUEBLO	61	45	42	73	39	37	7.8	8.4	80	75	77	139	124	102	70	9	43	8	50	153	8

NORMALS, MEANS AND EXTREMES

State and Station	Elevation ground (feet)	Temperature (°F) Normal (1931-1960) January Daily maximum	January Daily minimum	July Daily maximum	July Daily minimum	Annual	Extremes Length, yrs	Record highest	Record lowest	Normal degree days (1931-1960) January	Seasonal	Precipitation (inches) Normal (1931-1960) Wettest month	Driest month	Annual	Extremes Wettest month	Driest month	Maximum in 24 hours	Snow, sleet Mean total January	Seasonal	Extreme Maximum in 24 hours
CONNECTICUT							81	105	-32							0.00	12.12			
BRIDGEPORT	7	37.4	22.9	82.6	64.8	51.5	3	100	- 3	1079	5617	4.45	2.96	44.89	13.29	0.07	4.67	7.5	27.7	15.0
HARTFORD	169	34.7	17.3	85.0	61.8	49.8	9	102	-26	1209	6172	4.01	2.94	42.92	21.87	0.35	12.12	12.2	55.0	14.8
NEW HAVEN	6	37.1	22.0	80.5	63.2	50.2	25	100	- 8	1097	5897	4.62	3.19	46.02	10.95	0.12	5.55	9.3	37.1	17.2
DELAWARE							76	110	-17							0.00	7.83			
WILMINGTON	78	41.3	25.5	86.2	65.8	54.1	21	102	- 4	980	4930	5.59	2.91	44.56	12.09	0.16	6.24	5.9	22.5	15.6
DIST.OF COLUMBIA																				
WASHINGTON NATL AP	10	44.3	29.5	87.0	69.3	57.0	8	101	3	871	4224	4.90	2.47	40.78	14.31	T	6.39	5.3	18.3	14.4
FLORIDA							79	109	- 2							0.00	38.70			
APALACHICOLA U	13	62.3	47.9	87.6	75.4	68.8	39	102	13	347	1308	8.53	2.44	56.23	22.55	0.01	11.71	T	T	1.2
DAYTONA BEACH	31	69.6	48.7	88.2	72.0	70.3	25	102	21	248	879	7.00	1.95	49.90	19.89	T	9.29	0.0	T	T
FORT MYERS	15	74.8	52.2	91.0	73.3	73.7	9	98	26	146	442	9.08	1.20	53.34	16.32	0.00	10.85	0.0	0.0	0.0
JACKSONVILLE	20	66.8	45.0	92.0	73.2	69.5	27	105	12	332	1239	7.68	1.69	53.36	19.36	0.04	10.17	T	0.1	1.5
KEY WEST INTL AP	4	73.7	65.4	87.4	79.1	76.8	16	95	46	40	108	6.73	1.53	39.99	18.45	0.00	8.89	0.0	0.0	0.0
LAKELAND U	214	71.2	52.2	90.5	72.6	72.3	28	101	20	195	661	8.30	1.59	51.37	15.67	0.00	10.12	T	T	T
MIAMI U 1961	8	74.4	62.6	86.8	76.4	75.3	49	95	27	57	173	7.88	1.73	47.26	25.34	T	15.10	0.0	0.0	0.0
MIAMI BEACH 1964	9	74.2	63.9	87.0	77.6	76.2	24	98	35	56	141	7.36	1.65	46.26	18.02	0.01	8.35	0.0	0.0	0.0
MIAMI INTL AP	7	75.8	57.9	88.8	74.7	75.1	4	94	34	74	214	9.47	1.67	59.76	24.40	0.01	9.95	0.0	0.0	0.0
ORLANDO	108	70.7	50.0	92.0	73.0	72.0	5	97	24	220	766	8.00	1.57	51.37	19.57	T	9.67	T	T	T
PENSACOLA U 1961	13	61.1	46.9	86.9	75.0	68.0	22	103	13	383	1435	7.59	3.84	61.60	18.80	T	9.16	T	0.2	2.1
PENSACOLA 1/	112	62.3	44.6	89.2	74.1	68.4	5	97	11	400	1463	8.02	2.98	62.87	15.52	0.00	10.02	T	T	T
TALLAHASSEE	55	65.1	42.7	90.5	72.0	68.0	8	100	10	375	1485	8.05	2.43	56.86	20.12	T	9.26	T	T	T
TAMPA	19	71.3	51.0	89.7	73.4	72.2	5	97	24	202	683	8.62	1.46	51.57	20.59	T	12.11	T	T	T
WEST PALM BEACH	15	75.5	58.3	90.8	74.3	75.3	4	96	31	87	253	9.66	2.35	61.70	24.86	0.04	15.23	0.0	0.0	0.0
GEORGIA							77	112	-17							0.00	19.55			
ATHENS	802	54.6	34.5	90.2	69.2	61.9	25	105	- 1	642	2929	5.10	2.86	48.53	14.98	T	9.93	0.7	1.8	5.0
ATLANTA	1010	52.0	37.3	87.0	70.7	61.4	8	98	- 3	639	2983	5.37	2.44	47.14	15.72	T	5.67	0.8	1.8	8.3
AUGUSTA	136	59.4	35.7	91.3	70.0	64.0	4	104	6	549	2397	4.50	2.01	39.18	11.43	T	5.98	0.1	0.5	3.3
COLUMBUS	385	59.0	36.6	91.5	70.6	64.4	23	104	3	552	2383	6.01	1.77	48.67	12.53	0.00	5.63	T	T	T
MACON	354	60.2	38.2	92.8	71.0	65.6	4	104	3	505	2136	5.64	2.01	44.08	11.77	0.00	4.97	0.2	0.4	3.7
ROME	637	52.8	31.3	90.6	67.4	60.4	23	106	- 5	710	3326	5.87	2.93	52.26	17.37	T	7.53	0.6	2.0	8.2
SAVANNAH	46	62.5	40.9	91.2	71.4	66.4	4	100	9	437	1819	6.62	2.05	48.91	20.10	0.02	6.36	T	0.3	3.6
THOMASVILLE U 1963	283	63.4	44.0	92.0	72.0	68.2	41	106	8	394	1529	6.81	2.08	51.01	18.83	T	9.00	T	T	2.0
HAWAII							64	100	18							0.00	51.35			
HILO	27	78.7	62.8	82.4	67.4	73.1	22	94	53	----	----	15.18	6.79	136.62	50.82	0.36	15.59	0.0	0.0	0.0
HONOLULU U 1964	12	----	----	----	----	75.1	42	88	57	----	----	3.86	0.62	23.96	18.70	0.06	17.41	0.0	0.0	0.0
HONOLULU	7	79.1	65.8	84.6	73.0	75.9	6	93	56	----	----	3.76	0.33	21.89	20.79	T	17.07	0.0	0.0	0.0
KAHULUI	48	80.8	63.4	86.4	70.1	75.2	4	95	54	----	----	3.14	0.18	16.33	10.90	0.00	5.82	0.0	0.0	0.0
LIHUE	103	78.2	63.5	83.1	72.0	74.5	18	90	51	----	----	5.51	1.46	43.00	22.91	0.30	11.54	0.0	0.0	0.0
IDAHO							76	118	-60							0.00	7.17			
BOISE	2838	36.1	22.1	91.4	59.0	51.0	29	111	-17	1113	5809	1.33	0.16	11.43	4.00	0.00	2.24	7.8	21.2	13.0
IDA FALLS 42NW R1966	4790	26.5	0.2	89.0	49.2	41.7	16	103	-43	1600	8760	1.24	0.33	7.02	5.04	0.00	1.78	---	---	---
IDA FALLS 46W R 1966	4932	27.5	3.2	87.9	50.1	42.4	17	101	-40	1538	8475	1.10	0.26	7.57	4.42	0.00	1.73	6.4	26.7	8.5
LEWISTON	1413	37.7	23.7	89.8	57.8	51.6	22	115	-22	1063	5542	1.73	0.43	13.24	4.80	T	1.73	7.1	18.3	12.8
POCATELLO	4454	31.6	13.0	89.6	55.1	47.0	5	100	-19	1324	7033	1.21	0.51	10.85	3.98	0.00	1.30	10.6	37.8	10.1
SALMON 1960	3949	28.2	4.1	89.6	46.8	44.0	48	---	---	1513	7922	1.28	0.42	8.64	3.88	0.00	1.50	---	---	---
ILLINOIS							79	117	-35							0.00	16.17			
CAIRO U	314	44.6	30.2	90.3	71.8	59.6	26	104	- 5	856	3821	4.79	2.88	45.23	14.95	T	7.56	2.7	9.0	8.0
CHICAGO MIDWAY	607	33.0	19.0	84.1	67.1	50.8	5	98	-16	1209	6155	4.07	1.60	33.18	14.17	0.20	6.24	9.4	38.3	19.8
MOLINE	582	31.6	13.6	88.0	63.2	50.1	9	100	-26	1314	6408	4.37	1.35	32.79	11.00	0.01	6.29	7.3	27.7	11.7
PEORIA	652	33.7	17.6	87.0	65.0	51.4	9	102	-20	1218	6025	4.27	1.71	34.84	13.09	0.03	5.06	5.4	22.4	9.0
ROCKFORD	724	30.2	13.7	86.3	62.1	48.6	5	99	-20	1333	6830	4.30	1.44	35.62	11.81	0.01	5.56	8.4	32.6	10.9
SPRINGFIELD	588	36.3	20.5	89.6	66.4	53.6	9	106	-22	1135	5429	4.45	1.82	34.83	9.91	0.15	5.12	4.7	21.2	10.3
INDIANA							82	116	-35							0.00	10.50			
EVANSVILLE	381	42.7	25.6	90.3	67.2	57.0	8	104	-18	955	4435	4.31	2.57	41.45	13.50	0.01	6.05	3.5	12.1	10.6
FORT WAYNE	791	34.4	19.6	85.1	63.2	50.3	8	101	-18	1178	6205	4.17	2.09	35.31	9.72	0.14	4.60	6.7	30.2	13.6
INDIANAPOLIS	792	37.1	21.0	86.0	64.3	52.1	10	99	-18	1113	5699	4.62	2.28	39.25	12.69	0.17	3.90	4.8	20.3	12.5
SOUTH BEND	773	33.0	18.1	84.5	62.6	49.4	5	97	-13	1221	6439	3.62	1.88	35.70	9.75	0.02	4.70	15.2	63.8	15.6

State and Station	Relative humidity (percent) January 7:00 a m EST	January 1:00 p m EST	January 7:00 p m EST	July 7:00 a m EST	July 1:00 p m EST	July 7:00 p m EST	Wind Speed (m p h) Mean speed January	Mean speed July	Fastest mile	Sunshine (percent of possible) January	July	Annual mean number of days Sunrise to sunset Clear	Partly cloudy	Cloudy	Precipitation .01 inch or more	Snow, sleet, hail 1.0 inch or more	Thunderstorms	Heavy fog	Temperature Max 90 and above	Min 32 and below	Zero and below
CONNECTICUT																					
BRIDGEPORT	74	64	68	75	57	66	12.7	9.6	67	---	---	104	106	155	116	8	21	29	7	108	1
HARTFORD	73	58	64	79	50	62	9.9	7.8	53	56	62	83	109	173	125	14	22	33	19	138	8
NEW HAVEN	76	63	--	81	66	--	8.3	6.3	57	55	68	100	109	156	128	11	27	28	3	113	1
DELAWARE																					
WILMINGTON	76	61	70	80	53	67	9.7	7.6	58	---	---	97	109	159	116	6	30	40	[illegible]	104	*
DIST.OF COLUMBIA																					
WASHINGTON NATL AP	69	54	59	76	51	60	10.3	8.4	78	50	63	105	104	156	111	5	29	13	38	81	0
FLORIDA																					
APALACHICOLA U	87	69	80	85	72	76	8.4	6.6	67	59	63	134	112	119	106	0	70	25	18	4	0
DAYTONA BEACH	89	60	79	89	67	80	9.3	7.9	58	---	---	94	136	135	115	0	81	33	55	5	0
FORT MYERS	88	59	75	86	60	74	8.6	7.0	92	---	---	103	158	104	116	0	98	22	111	1	0
JACKSONVILLE	87	56	74	87	57	75	8.6	8.0	82	58	59	99	127	139	115	*	60	33	86	11	0
KEY WEST INTL AP	83	69	78	76	66	72	12.3	10.1	122	69	74	103	163	99	112	0	60	1	54	0	0
LAKELAND U	--	--	--	--	--	--	7.3	5.7	---	62	59	99	154	112	120	0	100	19	83	1	0
MIAMI U 1961	--	--	--	--	--	--	---	---	122	70	61	155	96	114	---	--	--	--	--	---	---
MIAMI BEACH 1964	--	--	--	--	--	--	11.7	10.9	122	67	63	147	121	97	123	0	--	--	14	0	0
MIAMI INTL AP	85	61	71	86	65	73	9.4	7.8	74	---	---	79	170	116	128	0	77	7	31	0	0
ORLANDO	88	57	70	92	60	75	9.1	7.7	50	---	---	96	146	123	115	0	79	28	91	2	0
PENSACOLA U 1961	86	64	79	85	64	74	8.1	6.7	91	56	66	---	---	---	112	*	65	--	39	9	0
PENSACOLA 1/	82	64	75	89	66	70	8.3	6.2	59	48	57	105	111	149	120	0	--	--	38	17	0
TALLAHASSEE	88	60	73	92	60	73	8.5	6.1	58	---	---	99	133	133	118	0	81	51	[illegible]	33	0
TAMPA	87	59	73	88	64	73	9.2	7.7	67	67	60	98	141	126	109	0	88	25	[illegible]	4	0
WEST PALM BEACH	82	59	73	86	66	77	9.9	7.5	86	---	---	73	156	136	131	0	78	8	45	1	0
GEORGIA																					
ATHENS	82	58	66	91	60	70	9.0	6.5	52	---	---	111	109	145	111	1	51	34	52	53	*
ATLANTA	79	60	64	91	65	71	10.8	7.5	70	48	62	111	108	146	115	1	50	29	17	61	*
AUGUSTA	83	55	67	89	58	72	6.9	5.9	62	---	---	109	104	152	105	*	55	24	61	67	0
COLUMBUS	86	60	72	88	59	70	7.6	5.4	52	---	---	112	99	154	110	0	59	19	76	47	0
MACON	84	57	65	89	59	69	8.5	7.2	70	56	64	115	103	147	112	*	56	23	66	63	0
ROME	81	58	73	88	54	67	---	---	---	---	---	105	117	143	122	1	61	26	61	82	*
SAVANNAH	86	55	70	91	60	75	8.9	7.5	66	56	65	106	116	143	110	*	65	37	57	46	0
THOMASVILLE U 1963	85	60	70	85	60	78	5.3	4.1	---	54	57	122	119	124	116	*	72	13	77	15	0
HAWAII																					
HILO	84	80	67	88	81	67	7.9	7.2	46	45	41	30	121	214	282	0	8	0	1	0	0
HONOLULU U 1964	--	--	--	--	--	--	---	---	---	---	---	---	---	---	147	0	--	--	0	0	0
HONOLULU	78	78	63	70	66	53	9.9	13.3	67	65	76	95	167	103	101	0	8	0	32	0	0
KAHULUI	84	83	64	85	73	55	12.1	16.7	43	66	74	105	162	98	97	0	6	0	31	0	0
LIHUE	84	84	68	80	75	65	10.4	12.6	73	52	63	54	169	142	204	0	10	0	*	0	0
IDAHO																					
BOISE	82	75	72	53	34	22	8.6	8.5	61	42	89	124	92	149	90	8	16	19	42	127	2
IDA FALLS 42NW R1966	--	--	--	--	--	--	4.7	8.0	50	---	---	---	---	---	66	--	--	--	30	219	41
IDA FALLS 46W R 1966	--	--	--	--	--	--	5.6	7.9	51	---	---	---	---	---	68	10	13	14	25	212	33
LEWISTON	80	75	72	60	36	23	---	---	---	---	---	95	76	194	103	6	16	21	37	96	3
POCATELLO	79	73	69	61	31	21	10.8	9.6	72	38	84	113	98	154	90	13	25	15	34	182	10
SALMON 1960	--	--	--	--	--	--	---	---	---	---	---	---	---	---	---	--	--	--	--	---	--
ILLINOIS																					
CAIRO U	80	67	--	84	59	--	9.8	6.5	60	46	76	111	102	152	114	3	53	7	51	66	*
CHICAGO MIDWAY	71	65	67	76	56	56	11.4	8.2	60	44	70	94	105	166	120	12	36	14	19	117	6
MOLINE	73	65	69	85	57	59	10.5	7.4	77	48	72	101	101	163	110	9	47	20	24	137	18
PEORIA	77	68	71	86	59	59	11.2	8.2	75	45	69	101	101	163	109	7	48	20	18	131	12
ROCKFORD	78	68	74	85	56	56	9.9	8.0	54	---	---	97	103	165	112	11	41	23	12	144	14
SPRINGFIELD	77	67	70	84	57	58	13.1	8.4	75	45	73	111	93	161	112	7	50	17	27	122	9
INDIANA																					
EVANSVILLE	79	66	68	86	57	59	9.5	6.5	59	42	76	103	101	161	114	4	47	14	42	109	5
FORT WAYNE	79	71	75	82	54	56	11.4	8.0	65	40	72	81	105	179	130	9	42	19	15	134	12
INDIANAPOLIS	79	67	69	86	58	61	11.3	7.4	90	41	71	92	100	173	121	7	44	20	18	120	9
SOUTH BEND	77	70	71	79	54	56	11.9	8.3	63	---	---	75	103	187	139	22	43	23	11	126	6

NORMALS, MEANS AND EXTREMES

State and Station	Elevation ground (feet)	Temperature (°F)								Normal degree days (1931-1960)		Precipitation (inches)									Relative humidity (percent)						Wind Speed (mph)			Sunshine (percent of possible)		Annual mean number of days									
		Normal (1931-1960) January		July			Extremes					Normal (1931-1960)			Extremes			Snow, sleet Mean total		Extreme	January			July			Mean speed					Sunrise to sunset							Temperature Max	Min	
		Daily maximum	Daily minimum	Daily maximum	Daily minimum	Annual	Length, yrs	Record highest	Record lowest	January	Seasonal	Wettest month	Driest month	Annual	Wettest month	Driest month	Maximum in 24 hours	January	Seasonal	Maximum in 24 hours	7:00 a m EST	1:00 p m EST	7:00 p m EST	7:00 a m EST	1:00 p m EST	7:00 p m EST	January	July	Fastest mile	January	July	Clear	Partly cloudy	Cloudy	Precipitation .01 inch or more	Snow, sleet, hail 1.0 inch or more	Thunderstorms	Heavy fog	90 and above	32 and below	Zero and below
IOWA							96	118	-47							0.00	12.99																								
BURLINGTON	703	32.7	16.1	87.6	65.6	51.2	71	111	-27	1259	6114	5.01	1.39	34.60	15.10	0.06	6.28	7.2	25.6	13.0	80	69	74	85	57	59	11.2	8.0	73	53	77	105	102	158	104	9	52	18	33	128	11
DES MOINES	938	28.5	11.3	87.3	65.2	49.2	8	100	-23	1398	6808	4.71	1.10	30.37	14.19	0.03	5.50	8.3	31.7	19.8	81	73	74	83	59	57	11.8	9.2	76	51	72	103	97	165	104	10	50	18	17	140	18
DUBUQUE	1056	27.3	11.1	83.7	61.5	46.6	3	97	-24	1420	7376	4.22	1.40	35.71	15.46	T	8.85	8.7	40.4	15.5	77	67	73	86	60	62	---	---	---	---	---	93	99	173	111	13	45	28	7	142	20
SIOUX CITY	1095	27.9	9.5	89.5	65.2	49.1	9	104	-26	1435	6951	4.33	0.74	24.77	9.69	T	4.28	6.0	31.5	11.4	78	70	72	87	60	56	11.0	8.9	91	59	76	109	103	153	98	10	47	18	19	151	24
WATERLOO	868	26.8	8.9	85.7	61.8	47.2	9	99	-34	1460	7320	4.83	0.92	31.48	12.60	T	9.31	6.7	29.2	12.2	79	71	74	88	60	62	10.7	8.1	54	---	---	97	103	165	93	9	41	23	14	158	28
KANSAS							82	121	-40							0.00	12.59																								
CONCORDIA U 1961	1375	37.6	18.6	91.2	68.7	54.5	77	116	-25	1144	5323	4.23	0.59	25.40	13.74	T	6.46	4.5	21.4	17.2	78	63	68	67	47	48	7.7	7.0	65	60	78	142	126	97	86	7	45	10	48	118	6
CONCORDIA	1470	37.3	17.6	92.1	68.4	54.1	7	108	-13	1163	5479	4.20	0.70	25.39	14.14	0.02	5.46	2.8	16.5	13.2	81	65	67	82	52	49	12.1	11.5	67	62	73	138	98	129	87	5	65	16	47	130	7
DODGE CITY	2582	42.4	19.7	92.8	67.5	55.4	5	107	-10	1051	4986	3.03	0.47	19.25	9.13	T	4.55	4.0	17.6	9.3	75	54	55	78	48	43	14.0	13.2	78	69	78	140	105	120	77	6	54	23	61	123	3
GOODLAND	3645	40.9	13.9	91.8	61.3	50.8	2	104	-12	1166	6141	2.67	0.39	16.50	8.09	0.00	2.95	5.5	32.4	15.2	79	54	56	86	52	45	12.3	11.9	66	---	---	143	124	98	76	11	51	28	39	161	5
TOPEKA	876	38.5	19.0	91.6	68.1	54.9	4	105	- 9	1122	5182	4.51	1.02	32.36	15.20	T	5.52	5.4	19.8	9.3	76	64	65	83	61	59	10.8	9.2	81	55	68	114	100	151	93	6	60	14	25	124	4
WICHITA	1321	41.6	22.3	92.4	69.4	57.1	16	113	-12	1023	4620	4.21	0.81	28.41	10.46	T	4.98	4.2	13.9	13.0	80	63	65	80	51	46	12.8	11.3	66	59	73	124	102	139	82	4	56	16	63	111	2
KENTUCKY							80	114	-34							0.00	10.40																								
COVINGTON	869	40.5	22.7	87.4	63.3	53.4	7	102	-19	1035	5265	3.89	2.26	38.02	12.18	0.18	5.21	7.1	24.5	9.8	78	65	68	84	55	59	10.7	7.1	40	---	---	81	100	184	128	7	44	19	24	111	7
LEXINGTON	966	42.9	26.1	88.2	66.5	55.6	5	98	-10	946	4683	4.94	2.28	44.73	16.65	0.24	5.88	5.8	16.0	9.5	76	66	67	84	56	62	12.0	7.6	46	---	---	98	106	161	128	6	48	18	20	98	3
LOUISVILLE	477	43.5	26.5	88.5	66.6	55.7	8	101	-20	930	4660	4.59	2.25	41.32	14.91	0.23	6.97	5.6	17.9	13.0	78	64	64	87	58	60	9.6	6.6	61	40	67	98	101	166	122	5	45	10	27	97	3
LOUISIANA							78	114	-16							0.00	22.00																								
ALEXANDRIA	92	60.7	39.9	91.8	72.6	66.4	9	104	5	471	1921	5.73	3.13	56.69	13.09	0.08	6.18	0.2	0.9	7.3	88	65	72	96	62	70	6.9	4.7	46	---	---	105	110	150	99	*	65	42	72	49	0
BATON ROUGE	64	63.5	42.3	92.0	73.4	68.1	10	102	10	409	1560	6.27	2.45	54.46	14.51	0.06	12.08	T	0.2	1.0	85	65	67	91	63	71	9.6	6.1	58	---	---	97	122	146	104	0	70	38	82	28	0
LAKE CHARLES	9	62.3	45.0	90.5	74.0	68.6	4	98	22	381	1459	7.29	3.06	56.04	17.36	T	14.10	T	T	0.3	89	69	77	93	62	69	10.5	6.3	58	---	---	93	127	145	90	0	68	50	69	14	0
NEW ORLEANS U 1961	9	63.5	48.3	90.3	75.8	70.4	47	102	17	341	1175	7.09	3.66	63.54	25.11	T	14.01	T	0.1	1.3	†85	†67	†73	†84	†63	†71	7.5	5.6	98	49	61	110	135	120	119	*	74	15	68	4	0
N.O. AUDUBON PK 1964	6	64.8	46.2	91.4	73.7	69.5	3	97	17	344	1254	8.12	3.15	62.96	10.15	0.00	4.03	0.0	2.3	4.5	80	68	72	96	72	80	5.4	3.2	26	37	47	99	129	137	115	1	79	18	84	14	0
NEW ORLEANS INTL AP	3	64.4	44.8	90.6	72.6	68.6	22	100	14	363	1385	6.72	2.84	53.90	19.09	0.00	9.86	T	0.2	2.7	86	67	73	90	65	73	9.6	6.4	69	---	---	113	122	130	112	*	69	32	69	12	0
SHREVEPORT	254	56.7	38.3	94.2	73.2	66.1	16	107	3	552	2184	4.94	2.28	46.28	12.39	0.00	7.17	0.5	1.5	4.0	83	63	65	90	56	56	10.6	8.1	44	51	74	125	98	142	95	1	53	20	91	34	0
MAINE							81	105	-48							0.00	7.72																								
CARIBOU	624	19.8	1.1	75.1	53.9	38.4	29	96	-41	1690	9767	4.07	2.02	36.31	8.45	0.12	6.23	22.9	108.1	18.2	74	68	73	83	58	71	12.4	9.8	---	---	---	56	103	206	159	30	20	27	2	191	43
PORTLAND	47	31.8	11.7	79.5	56.7	45.0	28	100	-39	1339	7511	4.37	2.42	42.85	12.27	0.26	7.71	19.4	72.8	21.0	78	63	72	80	59	75	9.3	7.6	76	55	66	111	97	157	126	18	18	54	5	162	16
MARYLAND							73	109	-40							0.00	14.75																								
BALTIMORE U 1964	14	44.1	30.4	87.4	70.7	57.6	94	107	- 7	859	4111	4.60	2.98	44.21	17.69	0.05	7.82	6.1	22.7	24.5	72	58	66	71	52	65	10.3	8.8	66	48	65	121	123	121	122	6	32	15	26	71	*
BALTIMORE INTL AP	148	44.2	25.3	87.2	66.4	55.2	18	102	- 7	936	4654	5.19	2.89	43.05	18.35	T	7.82	6.1	25.3	15.5	73	57	64	81	52	63	10.3	8.6	80	52	67	109	112	144	111	9	28	30	32	103	1
FREDERICK 1961	294	41.4	24.0	87.9	65.4	54.7	12	102	-11	1001	4854	4.03	2.58	40.23	11.26	0.15	5.56	5.2	22.0	16.0	--	64	--	--	57	--	---	---	---	---	---	---	---	---	123	8	--	9	28	119	1
MASSACHUSETTS							81	106	-34							0.00	11.14																								
BLUE HILL OBS	629	34.4	19.5	80.2	61.6	48.7	83	101	-21	1178	6368	4.54	3.27	47.50	18.78	0.06	9.93	15.9	60.7	27.2	77	62	69	81	57	74	17.4	13.0	92	45	57	---	---	---	135	16	--	--	5	132	4
BOSTON	15	36.8	23.0	81.9	65.4	51.4	4	98	- 4	1088	5634	4.22	2.88	42.77	17.09	0.35	8.40	12.9	41.7	19.4	68	58	63	73	54	64	14.8	11.3	65	53	65	100	106	159	128	11	19	23	8	99	2
NANTUCKET	43	39.2	26.8	74.3	61.7	49.5	3	90	2	992	5891	4.54	2.71	43.66	12.92	0.01	6.53	9.1	35.3	20.1	80	67	75	88	76	92	14.7	11.0	73	42	61	87	92	186	125	9	20	98	*	112	0
PITTSFIELD 1968	1170	30.5	13.1	79.2	56.4	44.9	29	95	-25	1339	7578	4.89	2.51	44.42	10.32	0.42	4.25	19.0	78.0	17.0	--	--	--	--	--	--	---	---	---	---	---	57	127	181	152	24	28	45	3	163	14
WORCESTER	986	31.2	16.8	79.0	60.5	46.8	13	94	-19	1271	6969	4.26	2.92	45.41	8.56	0.83	4.79	17.8	78.9	24.0	73	60	67	73	55	67	13.1	8.9	76	---	---	95	108	162	129	19	20	85	2	147	7
MICHIGAN							82	112	-51							0.00	9.91																								
ALPENA U 1959	587	28.1	14.2	76.8	57.9	43.5	45	104	-28	1358	8073	3.20	1.45	26.63	7.43	0.16	4.40	16.0	64.4	16.7	80	70	76	77	61	68	11.7	9.2	61	29	70	82	119	164	144	19	29	20	3	155	10
ALPENA	689	28.9	10.4	80.4	51.4	42.1	10	98	-28	1404	8506	3.61	1.61	29.92	8.14	0.16	3.18	19.9	78.8	16.1	77	68	72	82	51	59	7.7	6.3	43	40	71	73	107	185	147	23	33	21	6	187	29
DETROIT CITY AP	619	33.0	20.7	83.9	64.8	50.1	35	105	-16	1181	6232	3.53	2.05	30.95	8.05	0.23	3.72	8.0	31.7	10.0	80	70	74	75	51	55	11.5	8.2	77	32	70	80	108	177	132	11	33	11	15	125	2
DETROIT METRO. AP	633	33.3	19.0	83.9	60.9	48.9	10	98	-13	1203	6516	3.54	1.92	30.80	7.70	0.27	3.71	7.9	35.6	10.3	78	69	73	82	52	57	11.2	8.3	52	42	68	78	108	179	130	12	34	25	12	141	7
DETROIT W R 1968	711	33.4	19.8	86.0	62.4	50.0	7	99	-13	1190	6258	3.48	1.94	30.67	8.71	0.25	4.78	7.2	32.7	8.7	78	70	72	82	49	52	12.0	8.7	60	---	---	78	107	180	125	12	33	28	15	143	7
ESCANABA U 1961	594	25.0	10.0	75.3	58.4	41.9	52	100	-31	1473	8657	3.22	1.37	28.08	9.93	0.07	5.05	13.5	55.7	14.5	78	70	74	80	65	69	10.2	9.0	68	41	66	102	108	155	129	18	33	19	*	163	20
FLINT	770	31.9	17.1	83.5	58.9	47.5	5	97	-22	1256	6885	3.39	1.70	30.14	8.68	0.07	6.04	10.8	41.4	19.8	73	68	70	82	55	56	11.8	8.2	81	---	---	68	109	188	130	13	33	19	6	142	8
GRAND RAPIDS	784	31.3	16.7	84.5	60.0	47.6	5	100	-16	1271	6998	3.46	1.75	31.19	8.21	0.60	2.66	22.0	78.7	12.6	81	72	76	80	53	54	11.5	8.3	58	37	66	69	104	192	141	26	37	27	12	147	8
HOUGHTON LAKE	1149	27.6	10.7	80.1	53.9	42.9	4	96	-24	1420	8342	3.12	1.29	28.34	5.76	0.40	1.81	19.4	79.6	9.2	83	72	79	83	53	55	10.0	7.4	37	---	---	73	98	194	149	25	37	32	4	178	25
LANSING	841	31.1	17.4	83.4	59.9	47.6	5	100	-24	1262	6909	3.73	1.95	31.18	7.94	0.35	4.35	11.0	46.4	20.4	84	76	80	80	51	54	12.4	8.6	63	35	72	81	105	179	138	14	33	22	14	154	13
MARQUETTE U	677	25.7	13.2	75.7	57.6	42.6	32	102	-21	1411	8393	3.46	1.65	31.61	10.20	0.21	4.65	19.2	104.4	16.1	75	68	72	76	63	66	8.9	7.1	59	34	67	62	102	201	157	31	28	17	5	160	11
MUSKEGON	625	32.3	19.7	81.9	60.6	48.2	9	99	-12	1209	6696	3.06	1.80	30.07	8.54	0.19	3.61	27.5	90.0	20.1	81	76	78	82	57	57	12.3	8.3	44	---	---	80	91	194	141	30	37	24	4	137	5
SAULT STE MARIE	721	23.1	8.4	75.6	53.5	40.6	28	98	-28	1525	9048	3.81	1.50	31.22	7.12	0.16	3.58	23.0	104.2	14.3	83	76	81	88	61	67	10.3	8.5	52	34	63	68	91	206	164	34	30	48	1	178	28
MINNESOTA							82	114	-59							0.00	10.75																								
DULUTH U 1959	1162	18.7	1.9	75.8	55.8	39.2	84	106	-41	1696	9574	3.72	1.00	26.67	11.52	0.07	5.35	11.1	56.0	23.0	78	74	74	87	61	66	12.3	10.5	75	46	67	110	119	136	126	16	31	37	2	173	41
DULUTH	1428	17.9	-0.6	77.1	53.9	37.9	8	95	-38	1745	10000	4.27	0.96	28.97	8.48	0.13	4.05	15.2	75.4	25.4	73	65	66	84	58	59	12.3	10.1	75	51	67	77	101	187	133	22	34	54	1	187	53
INTERNATIONAL FALLS	1179	14.2	-8.1	78.4	52.8	36.2	29	98	-46	1919	10606	3.87	0.71	24.69	11.26	0.10	4.87	9.6	58.4	17.0	73	68	70	88	57	58	9.4	7.8	52	---	---	80	106	179	134	18	31	14	4	199	67
MINNEAPOLIS	834	22.4	2.3	83.9	60.7	43.7	9	99	-32	1631	8382	4.00	0.70	24.78	8.03	T	4.12	7.6	43.5	16.2	75	68	69	85	57	56	10.5	9.3	92	50	69	101	102	162	112	13	36	11	13	160	35
ROCHESTER	1297	23.0	4.2	84.0	60.5	44.0	9	97	-31	1593	8295	4.46	0.80	28.46	8.34	0.04	3.28	7.6	41.9	11.3	78	72	75	86	61	61	13.6	9.8	52	---	---	95	96	174	114	12	45	36	5	165	35
ST CLOUD	1034	20.4	-0.2	83.1	58.9	42.0	29	103	-40	1702	8879	4.49	0.72	25.92	9.34	0.01	4.62	7.4	42.3	14.5	76	68	71	87	55	56	8.2	7.0	---	---	---	95	105	165	108	13	36	20	11	178	44
MISSISSIPPI							80	115	-19							0.00	15.68																								
JACKSON	310	58.3	37.4	92.9	71.7	65.5	5	101	7	547	2203	5.74	2.04	50.82	11.88	0.00	6.97	0.3	2.1	5.3	86	64	72	93	59	66	9.4	6.6	45	46	63	108	103	154	107	1	56	26	74	54	0
MERIDIAN	290	59.4	36.8	92.6	70.3	64.8	4	102	6	543	2289	6.32	2.22	53.13	16.82	0.00	6.95	0.5	1.8	15.0	88	61	70	93	59	66	7.2	5.3	40	---	---	118	112	135	103	*	57	22	64	64	0
VICKSBURG U 1966	234	57.4	40.5	90.4	73.2	65.9	29	101	2	512	2041	5.73	2.04	49.50	16.58	T	9.97	0.9	1.6	10.0	83	62	70	93	62	71	9.3	6.7	56	45	67	111	114	140	105	1	62	12	65	23	0

NORMALS, MEANS AND EXTREMES

State and Station	Elevation ground (feet)	Temperature (°F) Normal (1931-1960) January Daily maximum	January Daily minimum	July Daily maximum	July Daily minimum	Annual	Extremes Length, yrs	Record highest	Record lowest	Normal degree days (1931-1960) January	Seasonal	Precipitation (inches) Normal (1931-1960) Wettest month	Driest month	Annual	Extremes Wettest month	Driest month	Maximum in 24 hours	Snow, sleet Mean total January	Seasonal	Extreme Maximum in 24 hours	Relative humidity (percent) January 7:00 a m EST	January 1:00 p m EST	January 7:00 p m EST	July 7:00 a m EST	July 1:00 p m EST	July 7:00 p m EST	Wind Speed (m p h) Mean speed January	Mean speed July	Fastest mile	Sunshine (percent of possible) January	July	Annual mean number of days Sunrise to sunset Clear	Partly cloudy	Cloudy	Precipitation .01 inch or more	Snow, sleet, hail 1.0 inch or more	Thunderstorms	Heavy fog	Temperature Max 90 and above	Min 32 and below	Min Zero and below
MISSOURI							81	118	-40							0.00	18.18																								
COLUMBIA	778	39.3	21.3	89.7	67.6	55.0	30	113	-18	1076	5046	4.70	1.71	36.96	13.30	0.09	4.37	4.4	19.4	10.3	79	65	68	85	55	56	11.1	8.0	63	52	74	116	96	153	107	6	55	14	40	109	4
KANSAS CITY	742	39.9	23.4	91.9	71.0	56.8	9	104	- 9	1032	4711	4.57	1.24	34.07	11.94	0.04	5.96	5.8	20.2	12.8	74	60	61	80	58	54	9.9	8.8	72	53	76	118	103	144	98	6	50	12	39	98	4
ST JOSEPH	811	37.2	17.1	91.0	67.8	53.8	5	101	-14	1172	5484	5.93	1.09	34.18	13.73	T	7.12	5.7	19.6	11.3	78	67	69	88	63	60	11.0	8.0	60	46	62	125	101	139	95	6	56	19	35	125	5
ST LOUIS	535	40.2	23.5	89.2	66.9	55.3	8	106	-11	1026	4900	4.29	1.97	35.31	7.97	0.25	3.29	4.4	17.2	11.2	78	60	65	84	57	55	10.1	7.6	60	52	71	106	102	157	104	6	43	9	34	106	4
SPRINGFIELD	1268	43.4	23.8	90.3	67.2	56.5	9	102	-10	973	4561	5.28	1.96	41.08	18.75	0.08	6.85	2.7	13.0	12.5	77	58	63	88	59	60	12.5	9.3	66	50	70	115	100	150	106	5	59	19	34	106	3
MONTANA							102	117	-70							0.00	10.10																								
BILLINGS	3567	33.2	13.1	88.5	60.8	47.5	10	105	-26	1296	7049	2.55	0.54	13.23	7.64	T	2.83	8.2	54.6	23.7	65	61	56	63	39	30	13.0	9.8	79	51	79	91	118	156	93	19	30	18	29	146	17
BUTTE 1961	5530	28.0	0.4	79.8	45.0	38.3	29	100	-52	1575	9760	2.28	0.55	12.69	5.40	T	2.02	7.1	51.0	13.0	--	--	--	--	--	--	6.9	8.0	---	---	---	79	107	179	105	19	41	6	4	228	43
GLASGOW	2284	19.6	- 0.1	85.3	56.1	41.4	4	102	-35	1711	8996	2.98	0.41	12.27	5.36	T	3.98	5.5	25.2	5.2	72	68	69	74	43	34	---	---	---	---	---	84	108	173	85	9	28	11	19	184	49
GREAT FALLS	3662	31.6	12.5	84.7	54.1	44.7	8	106	-43	1349	7750	2.90	0.60	14.07	8.13	T	3.20	9.1	55.5	11.0	67	63	63	65	37	28	16.1	10.3	82	52	81	85	105	175	99	19	27	13	18	149	28
HAVRE U 1961	2852	26.3	6.1	85.9	56.6	43.6	57	107	-57	1513	8213	2.98	0.39	12.31	7.09	T	2.94	7.3	37.4	22.9	82	71	--	74	38	--	8.8	7.2	70	49	78	121	124	120	90	13	25	5	22	172	38
HAVRE	2582	24.2	3.6	85.3	54.6	42.1	8	111	-46	1584	8700	2.73	0.43	11.89	4.72	T	2.34	5.7	33.7	16.2	74	69	76	72	37	23	10.7	9.0	71	51	84	90	97	178	86	12	22	6	25	183	43
HELENA	3828	28.8	8.4	84.4	52.3	43.4	5	100	-38	1438	8129	2.23	0.43	10.85	4.74	0.02	2.06	7.8	48.6	21.5	71	66	66	68	39	27	6.9	7.9	73	50	80	85	102	178	97	14	36	8	19	184	17
KALISPELL	2965	27.6	12.0	83.7	47.6	42.8	9	105	-35	1401	8191	2.21	0.96	15.42	4.72	T	2.35	18.4	66.5	15.4	85	83	80	83	42	33	7.1	6.9	40	---	---	74	84	207	132	22	25	35	16	194	15
MILES CITY	2629	27.4	5.6	90.2	60.4	45.8	31	110	-37	1504	7723	2.71	0.37	12.17	9.78	T	2.71	6.2	31.2	10.5	75	70	69	69	38	30	9.1	9.4	---	---	---	101	108	156	91	14	30	10	38	173	32
MISSOULA	3190	28.0	10.3	85.0	49.0	43.2	9	105	-30	1420	8125	1.91	0.72	12.83	4.19	T	1.82	12.6	48.2	11.2	84	81	77	76	43	29	5.1	6.7	72	29	80	74	82	209	124	16	25	28	22	192	11
NEBRASKA							93	118	-47							0.00	13.15																								
GRAND ISLAND	1841	34.1	11.0	90.7	63.7	50.1	8	106	-28	1314	6530	3.85	0.56	21.85	13.96	0.00	5.41	5.7	27.6	12.0	78	63	66	86	54	50	11.5	10.8	57	---	---	124	103	138	87	9	51	17	38	152	17
LINCOLN U	1150	34.0	16.2	92.3	67.9	52.8	4	105	-18	1237	5864	4.50	0.90	27.43	12.93	0.05	5.38	5.9	26.8	19.0	--	--	--	--	--	--	9.8	9.4	64	61	75	117	105	143	97	8	49	8	28	128	8
NORFOLK	1544	30.1	8.6	89.2	64.7	48.9	23	113	-26	1414	6979	4.26	0.73	23.95	12.22	T	3.46	5.4	28.0	10.5	76	63	68	84	53	50	---	---	---	---	---	117	102	146	87	9	50	11	33	158	21
NORTH PLATTE	2775	37.3	10.7	90.0	62.2	49.2	4	102	-25	1271	6684	3.25	0.40	18.27	8.01	T	3.80	5.1	31.1	9.7	79	64	63	86	57	53	9.5	10.0	72	61	74	120	109	136	83	10	51	17	24	178	20
OMAHA	977	31.7	12.9	89.7	67.3	51.5	5	107	-17	1324	6218	4.53	0.80	27.56	13.75	T	6.47	8.0	31.7	18.3	76	65	67	82	59	58	11.2	9.2	73	55	76	115	107	143	98	9	49	15	29	136	10
SCOTTSBLUFF	3957	38.7	11.9	89.2	60.1	48.7	4	101	-25	1231	6673	3.10	0.29	14.38	8.33	T	3.74	5.7	35.7	12.1	78	59	59	84	46	41	10.6	9.7	80	---	---	121	109	135	84	12	45	10	32	171	15
VALENTINE	2587	33.3	6.7	90.6	60.2	46.9	14	109	-29	1395	7425	3.11	0.34	17.30	8.96	T	3.19	3.6	22.5	9.0	81	68	66	84	50	42	10.1	10.1	72	68	77	119	108	138	78	8	45	5	38	178	25
NEVADA							80	122	-50							0.00	7.13																								
ELKO	5050	35.1	10.0	90.8	48.3	45.4	4	102	-14	1314	7433	1.16	0.30	9.05	3.35	0.00	1.85	10.8	39.2	16.7	81	73	62	56	26	20	5.5	6.3	58	---	---	134	98	133	77	15	21	6	51	193	13
ELY	6253	36.8	8.7	86.8	48.1	44.3	30	99	-27	1308	7733	0.95	0.49	8.33	3.53	0.00	1.50	8.9	46.6	13.1	70	59	55	50	23	21	10.7	10.6	74	65	81	134	107	124	70	15	32	2	15	217	20
LAS VEGAS	2162	54.2	32.0	103.5	75.8	65.7	9	114	8	688	2709	0.53	0.04	3.90	2.59	0.00	2.59	1.0	1.4	5.0	52	36	26	29	19	14	6.9	9.9	54	79	86	215	83	67	23	1	15	1	132	43	0
RENO	4404	44.6	16.2	89.4	45.9	48.4	5	101	- 4	1073	6332	1.19	0.17	7.15	5.25	0.00	2.37	6.5	24.7	16.9	72	64	48	68	30	19	6.0	6.6	80	66	92	165	93	107	48	8	13	8	48	191	1
WINNEMUCCA	4301	39.7	14.7	92.0	49.9	47.4	19	105	-24	1172	6761	1.05	0.15	8.63	2.86	0.00	1.79	6.4	24.6	9.9	78	66	58	44	21	14	7.6	8.4	66	45	85	135	88	142	66	9	15	4	51	193	7
NEW HAMPSHIRE							92	106	-46							0.00	8.00																								
CONCORD	342	31.7	10.6	82.8	56.4	45.6	3	102	-23	1358	7383	3.75	2.48	38.80	10.10	0.41	4.47	17.9	61.9	19.0	71	57	64	85	51	63	7.3	5.5	72	49	62	96	110	159	125	18	22	53	10	173	27
MT WASHINGTON OBS	6262	14.7	- 2.2	54.9	43.3	27.0	36	71	-47	1820	13817	7.00	5.21	74.09	18.23	0.75	7.03	30.8	204.0	37.5	82	83	82	91	87	90	46.2	25.0	231	33	31	52	79	234	205	61	16	308	0	243	65
NEW JERSEY							84	110	-34							0.00	15.37																								
ATLANTIC CITY	64	42.9	26.6	83.8	66.3	54.1	4	104	- 8	936	4812	4.90	2.83	42.36	13.09	0.10	6.46	5.1	17.2	14.4	76	58	70	85	55	73	12.3	9.2	60	55	61	102	105	158	112	5	25	45	19	121	3
NEWARK	7	39.5	25.0	86.1	66.5	53.7	3	105	1	1014	5067	4.43	2.80	42.38	11.84	0.21	4.71	7.2	29.8	26.0	71	57	62	71	50	58	11.3	8.9	82	---	---	100	113	152	122	8	25	22	21	89	0
TRENTON U	56	40.0	26.2	85.2	66.7	53.9	36	106	-14	989	4980	4.77	2.59	41.28	14.10	0.05	4.85	5.5	23.7	16.6	--	--	--	--	--	--	9.8	7.8	64	51	66	99	118	148	121	7	33	--	19	89	*
NEW MEXICO							77	116	-50							0.00	11.28																								
ALBUQUERQUE	5311	46.4	23.5	91.2	65.8	56.6	9	103	- 7	930	4348	1.33	0.38	8.13	3.33	0.00	1.92	1.9	9.7	14.2	65	47	36	61	36	28	7.8	9.0	90	72	76	175	112	78	58	4	43	4	58	116	1
CLAYTON	4969	46.2	20.2	88.4	60.6	53.1	24	104	-21	986	5158	2.74	0.33	14.51	7.77	0.00	4.67	3.3	18.1	12.7	63	42	47	77	41	42	---	---	---	---	---	166	98	101	66	6	54	11	38	142	3
RATON 1968	6379	45.3	12.6	86.6	52.9	48.9	23	98	-31	1116	6228	2.63	0.26	14.75	11.93	0.00	5.60	4.8	24.2	10.1	--	45	--	--	38	--	---	---	---	---	---	134	132	99	78	9	75	8	16	182	9
ROSWELL	3617	55.1	20.6	95.4	61.7	58.5	9	109	-24	840	3793	1.82	0.34	11.62	5.64	0.00	3.37	3.1	10.8	15.3	70	46	37	73	40	35	8.4	9.4	75	81	77	178	102	85	50	4	40	9	104	127	2
SILVER CITY 1968	5373	52.6	26.4	90.3	63.9	58.2	7	102	- 9	791	3705	2.40	0.28	10.76	4.47	0.00	2.08	2.6	8.4	7.0	--	43	39	--	36	36	---	---	---	---	---	187	110	68	60	3	54	1	43	105	*
NEW YORK							79	108	-52							0.00	11.17																								
ALBANY	275	31.0	14.4	83.7	60.5	47.6	3	98	-26	1311	6875	3.58	2.20	35.08	8.96	0.20	4.08	16.1	62.6	18.3	76	63	72	76	53	60	9.8	7.3	71	45	64	72	113	180	133	15	28	23	10	157	17
BINGHAMTON	1590	30.1	17.4	78.3	58.5	45.8	17	96	-20	1277	7286	3.85	2.18	36.24	9.46	0.26	3.88	21.0	87.9	23.0	81	74	76	84	56	65	11.8	8.5	72	36	67	49	104	212	162	25	31	51	3	149	9
BINGHAMTON U 1968	858	34.2	18.9	83.1	60.4	48.8	77	103	-28	1190	6451	3.81	2.38	36.68	9.59	0.16	4.55	12.8	52.2	21.0	--	--	--	--	--	--	---	---	---	---	---	---	---	---	151	15	--	--	9	133	7
BUFFALO	705	30.8	18.2	80.1	59.4	46.7	8	94	-20	1256	7062	3.60	2.54	35.65	9.13	0.11	3.88	21.5	86.5	24.3	77	72	76	79	55	61	14.6	10.7	91	33	70	61	107	197	164	25	30	22	4	137	5
NEW YORK U 1960	10	39.9	25.8	82.3	66.9	53.4	90	102	-14	995	5050	4.34	3.04	42.03	14.51	0.11	9.40	7.3	30.1	25.8	72	*62	66	76	*58	67	16.4	14.5	113	51	65	104	131	130	124	8	30	20	7	91	*
NEW YORK CENTRAL PK	132	39.5	26.9	85.3	68.2	54.5	100	106	-15	986	4871	4.44	2.84	42.37	16.85	0.02	11.17	7.7	29.8	26.4	68	60	61	75	55	63	11.0	7.8	70	50	66	107	125	133	121	8	18	--	16	82	1
NEW YORK J F KENNEDY	13	38.0	25.6	84.7	67.1	53.2	8	104	- 2	1029	5219	4.97	2.93	43.93	17.41	T	6.59	7.9	28.8	18.0	71	59	65	74	56	70	13.2	10.7	52	---	---	100	119	146	120	9	24	32	9	92	*
NEW YORK LA GUARDIA	11	39.6	27.5	84.8	68.8	54.7	7	107	- 2	973	4811	5.08	3.09	44.22	16.05	0.03	7.11	6.8	29.5	22.8	65	58	59	70	49	58	14.3	10.4	70	---	---	96	116	153	120	8	23	14	15	76	*
ROCHESTER	547	32.6	17.8	82.5	60.7	48.0	5	98	-11	1234	6748	3.01	2.38	31.50	9.70	0.22	3.13	20.9	82.3	18.7	72	66	70	78	49	56	11.6	7.9	73	36	71	66	110	189	153	25	30	13	10	135	6
SYRACUSE	410	31.5	16.5	82.4	62.0	48.0	5	97	-26	1271	6756	3.60	2.84	37.60	8.41	0.21	4.27	27.1	106.7	24.5	75	66	74	77	54	61	10.9	8.6	63	35	67	70	102	193	167	32	29	9	7	139	11
NORTH CAROLINA							82	109	-26							0.00	22.22																								
ASHEVILLE U 1964	2203	49.0	30.4	85.0	63.7	56.5	34	99	- 7	784	4042	4.31	2.22	37.88	13.75	T	6.78	2.5	12.2	15.8	81	59	66	89	57	70	9.4	5.6	52	48	60	105	124	136	128	3	50	47	13	84	*
ASHEVILLE	2140	47.5	27.7	83.5	61.3	54.7	4	94	- 7	849	4466	5.85	2.77	48.15	11.28	0.16	5.13	8.0	17.9	7.6	88	61	71	97	66	77	9.3	5.8	44	56	58	105	100	160	125	6	51	80	3	117	1
CAPE HATTERAS R	7	53.2	39.9	83.8	72.2	62.2	11	94	14	580	2612	6.42	2.99	54.47	14.63	0.45	8.11	0.3	1.9	7.0	81	67	77	85	70	83	12.5	10.3	72	56	68	105	101	159	120	1	45	17	3	33	0
CHARLOTTE	736	51.4	34.0	88.8	69.5	60.8	8	100	2	691	3191	4.88	2.53	43.38	10.89	T	4.84	2.3	4.9	10.2	79	56	62	90	59	68	8.0	6.6	59	57	69	116	100	149	110	2	42	24	35	74	0
GREENSBORO	897	49.6	29.8	87.7	66.9	58.2	5	100	3	784	3805	4.79	2.68	42.16	13.26	0.13	7.49	3.5	8.7	14.3	81	56	66	91	63	72	8.3	6.6	63	51	63	113	107	145	118	2	47	31	29	86	0
RALEIGH	434	51.9	31.3	88.1	67.6	59.5	4	98	3	725	3393	5.49	2.71	43.58	12.94	0.25	5.20	3.2	7.4	9.1	77	53	62	90	60	72	8.5	6.7	73	57	63	117	106	142	114	3	46	34	32	84	0
WILMINGTON	28	58.4	37.3	89.0	70.9	63.8	5	100	17	546	2347	7.68	2.85	51.29	15.51	0.17	8.24	0.3	1.6	5.3	79	54	70	83	64	76	9.8	8.7	88	58	64	118	114	133	116	1	44	22	41	46	0
WINSTON-SALEM 1964	963	49.8	31.5	88.2	67.8	59.1	10	100	1	753	3595	4.63	2.78	44.13	10.86	0.12	3.60	3.2	9.2	10.9	72	52	59	84	57	67	9.3	7.4	---	---	---	121	102	142	115	3	42	32	34	76	0

NORMALS, MEANS AND EXTREMES

State and Station	Elevation ground (feet)	Temperature (°F) Normal (1931-1960) January Daily maximum	January Daily minimum	July Daily maximum	July Daily minimum	Annual	Extremes Length, yrs	Record highest	Record lowest	Normal degree days (1931-1960) January	Seasonal	Precipitation (inches) Normal (1931-1960) Wettest month	Driest month	Annual	Extremes Wettest month	Driest month	Maximum in 24 hours
NORTH DAKOTA							77	121	-60							0.00	7.70
BISMARCK	1647	19.6	0.1	85.7	57.7	42.2	9	108	-43	1708	8851	3.40	0.36	15.15	8.29	T	3.25
DEVILS LAKE U 1961	1471	14.2	- 4.7	81.7	56.9	38.7	58	112	-46	1866	9940	3.18	0.40	17.61	8.55	T	4.82
FARGO	896	17.3	- 2.8	83.8	59.0	41.1	9	100	-35	1789	9226	3.04	0.51	18.45	8.52	0.02	4.72
WILLISTON U 1961	1877	19.8	0.2	83.5	58.2	41.3	46	110	-50	1705	9068	3.59	0.46	14.66	7.88	T	3.06
WILLISTON	1899	19.4	- 2.9	85.9	56.7	40.9	7	107	-41	1758	9243	3.31	0.48	13.70	7.39	T	5.03
OHIO							95	113	-39							0.00	8.70
AKRON	1208	35.6	20.9	83.2	61.9	50.3	5	94	- 9	1138	6037	4.26	2.25	36.43	11.43	0.20	4.18
CINCINNATI 1961	869	39.7	23.8	85.9	64.3	53.6	17	---	----	1021	5195	4.04	2.17	39.16	-----	----	----
CINCINNATI ABBE OBS.	761	41.3	26.1	87.5	66.3	55.2	53	109	-17	970	4806	4.18	2.24	39.51	13.68	0.10	4.77
CLEVELAND	777	35.4	21.3	82.4	61.3	49.7	8	98	-19	1135	6196	3.52	2.33	35.35	9.50	0.36	3.73
COLUMBUS	812	37.8	22.0	86.6	62.9	52.0	9	98	-15	1088	5660	4.16	2.11	36.67	9.75	0.11	4.81
DAYTON	1002	36.9	22.2	85.3	65.1	52.3	5	100	-12	1097	5622	4.10	2.23	36.04	10.89	0.10	4.30
MANSFIELD	1295	34.8	19.8	82.6	60.8	49.1	3	96	-10	1169	6403	4.23	2.27	38.16	7.04	0.43	2.79
SANDUSKY U 1961	603	35.7	21.8	83.7	65.5	51.3	34	105	-12	1122	5859	3.73	1.92	33.16	12.51	0.19	5.95
TOLEDO	669	34.1	18.4	85.1	60.2	49.0	13	98	-17	1200	6494	3.79	1.88	30.50	8.47	0.27	3.53
YOUNGSTOWN	1178	34.4	20.2	81.7	59.3	48.8	25	100	-18	1169	6417	4.32	2.50	39.27	9.87	0.27	4.31
OKLAHOMA							77	120	-27							0.00	19.75
OKLAHOMA CITY	1285	45.9	28.1	92.8	72.2	60.3	3	108	1	868	3725	5.19	1.31	30.82	10.78	T	4.82
TULSA	650	45.9	26.5	92.9	71.4	59.7	9	110	- 3	893	3860	5.26	1.62	37.08	18.00	T	7.54
OREGON							79	119	-54							0.00	31.10
ASTORIA	8	46.5	34.8	68.6	52.5	50.8	15	100	14	753	5186	13.65	1.27	80.44	21.89	0.01	4.32
BURNS U	4151	35.2	14.3	86.8	52.1	46.7	18	103	-26	1246	6957	1.62	0.29	10.96	5.47	0.00	2.15
EUGENE	359	45.3	32.8	82.2	51.0	52.5	26	105	- 4	803	4726	6.61	0.27	39.56	20.99	0.00	4.82
MEACHAM	4050	32.7	19.3	77.6	49.2	43.5	24	105	-23	1209	7874	4.53	0.50	33.87	9.29	0.00	3.00
MEDFORD	1298	42.4	28.4	88.3	55.7	52.6	8	109	0	918	5008	3.38	0.18	19.78	12.72	0.00	3.75
PENDLETON	1482	39.3	25.1	89.3	57.8	52.8	33	113	-22	1017	5127	1.49	0.22	12.38	3.23	0.00	1.49
PORTLAND U 1964	30	44.9	35.5	79.2	57.9	54.6	62	107	3	769	4109	7.42	0.39	42.37	17.45	0.00	5.01
PORTLAND	21	43.7	33.0	78.6	55.7	52.9	28	107	- 3	825	4635	6.38	0.41	37.18	12.83	0.00	2.60
ROSEBURG 1964	505	47.2	33.4	84.0	51.8	53.4	11	106	- 1	766	4491	5.69	0.21	33.11	15.74	T	4.80
SALEM	196	45.5	31.5	81.7	50.4	52.4	7	104	8	822	4754	7.37	0.35	41.75	15.40	0.00	3.16
SEXTON SUMMIT R	3836	39.3	28.9	75.5	51.6	48.0	24	100	- 2	958	6254	5.59	0.25	33.12	20.03	0.00	5.20
PACIFIC AREA																	
CANTON ISLAND 1966	8	88.4	77.8	89.4	77.7	83.5	20	98	70	----	----	4.35	1.10	29.43	20.49	T	5.56
ENIWETOK 1966	13	84.6	77.8	86.5	79.1	82.3	13	94	70	----	----	9.09	1.02	51.46	24.54	0.12	4.62
JOHNSTON ISLAND	7	80.7	73.4	85.0	77.1	79.3	13	89	62	----	----	3.89	0.84	26.11	15.80	0.11	9.51
KOROR R	94	86.0	74.6	86.6	75.1	80.9	19	93	69	----	----	15.76	7.13	147.49	34.82	1.65	11.57
KWAJALEIN ISLAND	8	82.2	78.0	85.2	77.9	81.1	16	97	69	----	----	12.13	2.15	94.76	30.38	0.18	6.68
MAJURO ISLAND	10	84.1	76.3	84.6	75.7	80.4	13	91	69	----	----	15.92	6.98	143.63	25.08	0.96	10.01
MARCUS ISLAND 1968	20	76.0	68.2	87.2	78.0	78.2	4	93	55	----	----	7.19	1.61	42.57	13.51	0.10	5.66
PAGO PAGO AM SAMOA	12	----	----	----	----	----	9	92	62	----	----	----	----	----	32.66	1.36	9.01
PONAPE R	123	85.6	75.3	86.6	72.7	80.1	18	96	67	----	----	20.31	9.74	191.92	38.65	1.71	22.48
TAGUAC GUAM R	361	83.9	72.4	86.7	72.3	79.3	12	95	54	----	----	13.36	2.64	88.53	23.07	0.50	7.50
TRUK MOEN ISLAND	5	84.9	76.5	86.1	74.8	80.7	18	94	70	----	----	14.12	6.29	137.52	34.89	0.84	14.92
WAKE	11	81.5	73.3	86.6	77.4	80.0	21	92	64	----	----	7.08	1.14	36.86	17.66	0.06	ϕ15.00
YAP R	62	85.3	75.6	87.6	75.1	81.3	20	97	69	----	----	14.70	4.64	121.50	29.44	1.08	10.45
PENNSYLVANIA							81	111	-42							0.00	34.50
ALLENTOWN	387	36.7	21.3	85.2	63.0	51.1	3	105	- 7	1116	5810	4.82	2.64	44.12	12.10	0.09	4.79
AVOCA W-B SCRANTON	930	33.6	21.7	81.6	63.2	49.4	13	101	-11	1156	6254	4.79	1.99	38.48	7.78	0.03	3.18
ERIE	731	34.0	20.5	80.1	62.0	48.7	3	94	- 6	1169	6451	3.67	2.32	37.50	9.87	0.58	4.84
HARRISBURG	338	38.9	23.6	87.0	65.3	53.3	30	107	- 8	1045	5251	3.90	2.31	37.65	9.07	0.04	4.36
PHILADELPHIA	5	40.3	24.3	85.9	65.2	53.5	9	104	- 5	1014	5101	4.63	2.78	42.48	9.70	0.09	5.45
PITTSBURGH U	747	39.5	24.7	85.0	64.8	53.0	34	103	-13	1020	5291	[illegible]	2.31	36.87	8.84	0.16	3.57
PITTSBURGH GTR. AP	1137	36.5	21.2	83.3	60.9	50.3	9	98	- 8	1119	5987	[illegible]	2.19	36.14	8.20	0.16	3.56
[illegible] U	266	[illegible]	[illegible]	86.4	[illegible]	[illegible]	[illegible]	103	2	[illegible]	4945	4.26	2.64	41.43	14.85	0.17	6.08
[illegible]	[illegible]	[illegible]	[illegible]	85.3	61.8	50.7	24	102	-15	1122	5934	4.18	2.51	40.65	9.45	0.19	4.38
RHODE ISLAND							81	102	-23							0.00	12.13
BLOCK ISLAND	110	37.9	26.3	75.9	63.2	50.1	18	91	- 4	1020	5804	4.07	2.56	40.45	11.51	T	8.52
PROVIDENCE	51	37.3	21.0	81.4	62.7	50.1	5	97	- 5	1110	5954	4.14	2.76	42.13	11.89	0.39	6.63

State and Station	Snow, sleet Mean total January	Seasonal	Extreme Maximum in 24 hours	Relative humidity (percent) January 7:00 a m EST	1:00 p m EST	7:00 p m EST	July 7:00 a m EST	1:00 p m EST	7:00 p m EST	Wind Speed (m p h) Mean speed January	July	Fastest mile	Sunshine (percent of possible) January	July	Annual mean number of days Sunrise to sunset Clear	Partly cloudy	Cloudy	Precipitation .01 inch or more	Snow, sleet, hail 1.0 inch or more	Thunderstorms	Heavy fog	Temperature Max 90 and above	Min 32 and below	Zero and below
NORTH DAKOTA																								
BISMARCK	6.7	37.6	15.5	71	65	67	82	48	43	10.2	9.8	72	55	76	93	109	163	96	12	35	11	21	189	51
DEVILS LAKE U 1961	6.2	35.4	13.4	76	72	76	86	53	52	9.7	8.4	57	53	71	112	109	144	101	11	30	9	10	189	60
FARGO	5.9	32.4	11.2	71	68	70	85	54	53	13.3	10.9	88	51	70	89	110	166	102	11	34	13	15	182	55
WILLISTON U 1961	5.5	32.9	10.6	74	67	69	77	45	41	6.8	6.9	60	52	78	122	116	127	89	12	27	7	18	178	43
WILLISTON	7.2	34.3	5.7	75	69	70	83	46	39	9.9	9.0	70	51	75	90	113	162	89	11	20	9	20	190	55
OHIO																								
AKRON	10.1	47.7	10.9	79	70	72	82	51	59	11.8	7.6	51	---	---	72	106	187	149	15	40	27	12	129	5
CINCINNATI 1961	---	---	---	82	70	74	84	52	60	---	---	---	---	---	108	115	142	---	--	--	--	--	---	---
CINCINNATI ABBE OBS.	5.4	19.2	11.0	--	--	--	--	--	--	8.3	5.2	49	42	70	---	---	---	132	6	50	--	29	98	2
CLEVELAND	10.3	50.5	15.0	77	70	72	82	56	61	12.4	8.8	74	31	67	72	104	189	153	18	36	13	9	128	6
COLUMBUS	7.0	28.6	8.7	77	67	70	83	54	58	10.0	6.4	63	40	68	76	109	180	135	9	42	18	17	123	6
DAYTON	6.8	27.4	11.3	74	63	67	79	53	56	12.0	8.1	78	41	69	82	104	179	128	8	41	22	21	116	5
MANSFIELD	9.6	42.2	12.0	74	66	69	82	55	62	12.9	7.4	44	---	---	73	105	187	137	14	38	27	6	127	6
SANDUSKY U 1961	6.2	26.9	12.3	--	--	--	--	--	--	10.1	6.9	75	35	75	93	115	157	137	10	37	8	19	111	2
TOLEDO	8.3	36.1	9.8	80	69	74	86	54	60	10.8	7.5	72	46	70	76	110	179	131	11	40	19	15	145	8
YOUNGSTOWN	12.7	57.6	20.7	82	73	77	83	53	63	11.7	7.9	58	---	---	73	100	192	161	19	36	29	8	136	5
OKLAHOMA																								
OKLAHOMA CITY	3.2	9.3	8.4	82	64	64	82	52	50	14.0	11.6	87	59	75	142	95	128	82	3	51	18	62	82	0
TULSA	3.4	9.4	9.8	78	57	57	83	55	52	11.3	9.3	75	53	70	126	103	136	90	4	53	9	71	89	1
OREGON																								
ASTORIA	2.0	5.7	7.2	87	85	79	91	75	69	9.0	8.4	52	---	---	50	71	244	201	2	8	44	1	37	0
BURNS U	15.3	48.6	11.0	83	76	68	53	34	20	6.2	7.8	---	---	---	127	88	150	92	16	14	12	21	186	5
EUGENE	3.9	6.6	7.2	93	87	80	88	55	37	8.2	8.1	63	---	---	78	86	201	137	3	5	58	14	54	*
MEACHAM	32.5	148.2	22.9	--	80	78	--	39	24	---	---	39	---	---	92	68	205	152	45	16	31	4	169	4
MEDFORD	3.9	8.1	7.9	91	89	74	75	46	27	4.1	5.7	55	---	---	117	83	165	101	3	9	48	51	95	0
PENDLETON	7.7	16.9	13.3	81	77	76	54	34	23	8.3	9.7	77	---	---	105	91	169	100	6	11	29	33	83	3
PORTLAND U 1964	5.1	9.1	16.0	--	--	--	--	--	--	---	---	---	---	---	---	---	---	152	3	--	--	8	21	0
PORTLAND	4.6	8.0	10.6	86	82	77	84	62	46	10.0	7.5	88	24	68	66	70	229	153	2	7	33	9	44	*
ROSEBURG 1964	3.2	6.5	9.4	--	86	73	--	54	34	3.9	5.9	50	26	79	75	89	201	135	2	5	59	21	56	*
SALEM	3.6	6.6	10.8	88	85	78	89	59	41	8.8	6.7	68	---	---	75	86	204	151	2	6	40	16	63	0
SEXTON SUMMIT R	24.4	99.1	33.5	83	80	76	68	60	41	12.8	11.8	59	---	---	126	68	171	129	29	6	160	2	112	*
PACIFIC AREA																								
CANTON ISLAND 1966	0.0	0.0	0.0	80	79	65	80	80	65	15.1	13.1	---	---	---	75	146	144	103	0	4	0	155	0	0
ENIWETOK 1966	0.0	0.0	0.0	77	77	68	82	84	75	17.3	12.6	---	---	---	---	---	---	202	0	5	0	15	0	0
JOHNSTON ISLAND	0.0	0.0	0.0	75	76	67	78	77	68	13.5	15.1	49	69	74	68	181	116	166	0	5	0	0	0	0
KOROR R	0.0	0.0	0.0	88	91	81	90	92	82	8.4	6.3	73	53	54	*	42	323	270	0	38	0	46	0	0
KWAJALEIN ISLAND	0.0	0.0	0.0	76	80	80	81	85	86	18.3	10.3	44	---	---	21	84	260	242	0	10	0	22	0	0
MAJURO ISLAND	0.0	0.0	0.0	78	80	81	79	83	84	13.2	8.4	38	61	54	13	73	279	258	0	19	0	1	0	0
MARCUS ISLAND 1968	0.0	0.0	0.0	72	75	68	79	83	71	14.0	11.7	114	58	73	85	147	133	146	0	5	1	23	0	0
PAGO PAGO AM SAMOA	0.0	0.0	0.0	90	90	74	86	86	79	7.5	12.0	56	53	65	44	129	192	258	0	27	0	18	0	0
PONAPE R	0.0	0.0	0.0	84	85	76	94	96	80	8.4	4.4	36	47	49	2	61	302	299	0	31	0	35	0	0
TAGUAC GUAM R	0.0	0.0	0.0	86	--	78	93	--	81	8.1	4.9	80	54	46	8	147	210	265	0	28	0	4	0	0
TRUK MOEN ISLAND	0.0	0.0	0.0	81	82	77	89	91	80	10.0	6.8	45	61	54	1	58	306	270	0	22	0	5	0	0
WAKE	0.0	0.0	0.0	70	74	75	74	81	82	13.3	12.2	48	---	---	111	154	100	178	0	7	0	6	0	0
YAP R	0.0	0.0	0.0	86	87	79	90	92	81	10.5	5.5	72	53	48	4	49	312	262	0	15	0	44	0	0
PENNSYLVANIA																								
ALLENTOWN	8.2	33.8	17.5	69	59	63	79	46	56	11.1	7.3	81	---	---	94	116	155	123	9	33	29	22	132	5
AVOCA W-B SCRANTON	11.4	51.2	20.1	75	64	67	82	53	61	8.8	7.4	60	42	61	73	110	182	135	14	31	26	9	133	5
ERIE	18.8	81.1	23.0	72	70	72	78	62	63	13.1	9.0	55	---	---	69	100	196	156	26	39	16	1	122	4
HARRISBURG	9.8	35.9	21.0	71	58	64	78	51	60	8.4	6.3	68	48	69	86	107	172	123	9	33	21	26	107	1
PHILADELPHIA	5.7	21.7	14.6	73	59	66	79	53	62	10.3	8.1	73	50	63	92	113	160	116	6	26	28	18	108	*
PITTSBURGH U	7.8	30.9	20.1	--	--	--	--	--	--	---	---	---	25	54	---	---	---	145	9	--	--	18	96	1
PITTSBURGH GTR. AP	11.1	46.2	14.7	77	66	68	83	51	58	10.7	7.5	58	39	66	59	107	199	148	14	35	17	9	127	6
[illegible] U	8.4	30.6	18.7	71	--	--	75	--	--	11.4	8.5	80	46	63	98	110	157	122	8	32	8	24	92	*
[illegible]	9.9	42.9	23.1	76	62	69	86	52	63	9.0	6.8	78	---	---	68	118	179	142	12	34	38	16	131	4
RHODE ISLAND																								
BLOCK ISLAND	5.8	23.1	16.9	73	65	--	87	72	--	---	---	---	---	---	98	114	153	112	7	17	82	*	89	*
PROVIDENCE	10.8	40.5	18.3	68	56	63	77	56	67	11.8	9.8	90	56	60	108	102	155	124	11	22	27	7	124	3

NORMALS, MEANS AND EXTREMES

State and Station	Elevation ground (feet)	Temp. (°F) Normal (1931-1960) January Daily maximum	January Daily minimum	July Daily maximum	July Daily minimum	Annual	Extremes Length, yrs	Record highest	Record lowest	Normal degree days (1931-1960) January	Seasonal	Precipitation (inches) Normal (1931-1960) Wettest month	Driest month	Annual	Extremes Wettest month	Driest month	Maximum in 24 hours	Snow, sleet Mean total January	Seasonal	Extreme Maximum in 24 hours
SOUTH CAROLINA							84	111	-13							0.00	13.25			
CHARLESTON	40	61.2	38.3	89.2	72.0	65.2	26	103	8	487	2033	7.71	2.09	49.16	18.46	0.08	8.84	0.1	0.3	2.1
CHARLESTON U 1961	9	61.4	39.2	89.4	70.8	65.2	18	103	14	472	1973	8.04	1.92	46.11	17.31	0.08	8.84	T	0.1	2.1
COLUMBIA	213	58.2	35.6	92.5	70.7	64.0	2	106	9	570	2484	6.09	2.36	46.82	16.72	T	7.66	0.3	1.2	8.8
FLORENCE 1964	146	58.3	36.7	90.9	70.4	64.0	17	108	8	552	2387	6.24	2.18	42.69	13.68	0.00	6.36	0.1	1.0	4.8
GREENVILLE 1961	1018	51.6	35.0	87.9	68.8	61.0	2	98	8	673	3060	4.81	3.00	47.65	10.10	0.52	5.79	0.5	4.1	6.4
SPARTANBURG 1961	801	52.1	34.7	88.7	69.1	61.2	18	104	3	670	3044	4.70	2.97	46.66	10.33	0.13	6.85	0.8	3.6	7.1
GRNVLE SPARTANBURG	957	52.4	35.0	87.0	71.0	61.2	6	99	-6	665	3044	4.75	2.84	46.42	11.30	0.24	4.49	3.1	5.9	5.7
SOUTH DAKOTA							79	120	-58							0.00	13.52			
ABERDEEN	1296	21.5	0.0	87.6	59.4	43.7	9	112	-39	1680	8473	3.76	0.61	19.14	8.88	0.00	4.02	6.9	34.6	14.3
HURON	1282	23.1	1.9	90.3	59.6	44.7	9	112	-39	1628	8223	3.14	0.48	17.33	8.30	T	5.48	6.0	37.4	17.5
RAPID CITY	3162	34.1	9.8	87.7	59.9	46.8	19	109	-26	1333	7345	3.08	0.30	14.71	7.05	T	4.01	5.3	36.6	14.7
SIOUX FALLS	1418	25.1	5.2	86.0	62.5	45.7	5	106	-30	1544	7839	4.35	0.62	25.16	7.94	T	4.32	5.7	40.2	26.0
TENNESSEE							86	113	-32							0.00	11.00			
BRISTOL	1507	46.8	29.7	86.4	65.4	56.8	7	95	-15	828	4143	5.55	2.15	41.06	9.73	0.07	3.65	4.9	15.5	16.2
CHATTANOOGA	665	49.9	33.4	90.0	71.4	61.2	29	106	-10	722	3254	5.64	3.02	51.96	13.68	0.20	5.40	1.6	4.1	8.9
KNOXVILLE	980	50.1	32.6	88.5	68.2	59.6	8	99	-9	732	3494	4.88	2.54	45.85	11.74	T	5.08	3.9	12.3	18.2
MEMPHIS	258	50.6	32.4	91.1	71.5	61.5	27	106	-13	729	3232	6.07	2.72	49.73	12.29	T	4.94	2.4	6.6	16.1
NASHVILLE	590	48.8	30.9	90.7	69.6	60.0	3	103	-6	778	3578	5.49	2.32	45.14	13.92	T	5.34	3.8	11.3	10.2
OAK RIDGE R	905	49.2	30.6	87.7	66.7	58.2	21	105	-9	778	3817	5.95	2.67	54.71	19.27	T	7.48	2.9	9.5	12.0
OAK RIDGE AREA 1964	886	48.9	31.2	88.0	66.7	58.5	20	103	-8	772	3742	5.44	2.82	51.52	12.84	0.00	7.75	---	---	---
TEXAS							88	120	-24							0.00	38.20			
ABILENE	1762	56.4	32.8	94.3	72.1	64.3	5	107	7	642	2624	4.33	0.88	23.32	13.19	0.00	6.70	1.5	4.2	5.7
AMARILLO	3604	49.8	23.5	94.2	67.0	58.7	8	104	-9	877	3985	3.37	0.62	19.67	10.73	0.00	6.75	3.7	13.3	12.2
AUSTIN	597	60.3	40.5	95.1	73.9	68.3	8	105	12	468	1711	3.71	1.94	32.58	12.31	0.00	7.22	0.5	1.1	7.0
BROWNSVILLE	19	70.5	52.2	92.5	75.5	73.7	2	99	32	205	600	4.99	1.04	26.75	19.26	T	12.19	T	T	T
CORPUS CHRISTI	41	67.4	47.4	93.5	74.6	71.8	4	101	25	291	914	4.40	1.44	28.34	20.33	0.00	8.76	0.1	0.1	1.1
DALLAS	481	55.8	36.0	94.5	75.3	65.8	10	107	8	601	2363	4.83	1.93	34.55	15.40	T	9.18	1.4	2.3	7.4
DEL RIO •	1026	63.7	38.8	98.5	73.8	70.0	6	107	19	438	1504	2.73	0.62	17.83	15.79	T	4.50	T	1.2	3.0
EL PASO	3918	56.3	29.5	94.9	68.9	63.3	9	106	-8	685	2700	1.29	0.29	7.89	6.29	0.00	2.89	1.3	4.3	7.8
FT. WORTH GTR. INTL	537	56.0	34.9	95.9	74.9	65.8	5	108	4	614	2405	4.59	1.68	31.33	12.64	0.02	5.91	1.9	3.3	12.1
GALVESTON 1961	7	60.4	48.2	88.7	77.9	70.1	11	97	18	362	1233	5.82	3.14	47.98	25.06	T	11.34	T	0.2	2.0
GALVESTON U	7	60.5	49.3	87.3	78.9	69.9	98	101	8	350	1235	5.09	2.59	41.81	26.01	0.00	14.35	T	0.2	15.4
HOUSTON U 1966	41	62.6	46.6	92.0	75.8	70.0	29	106	10	363	1278	5.15	2.40	45.26	17.64	0.01	10.83	0.2	0.3	3.0
HOUSTON	50	63.6	43.6	92.1	73.8	69.2	9	106	17	384	1396	4.36	2.67	45.95	22.31	T	15.65	0.2	0.4	4.4
LAREDO 1964	496	68.4	47.0	99.0	76.0	73.9	20	110	18	267	797	2.86	0.62	18.63	8.62	0.00	5.55	0.1	0.1	2.0
LUBBOCK	3254	53.0	25.4	92.4	66.5	59.7	22	107	-16	800	3578	3.18	0.54	18.08	8.85	0.00	5.70	1.8	8.5	12.1
MIDLAND	2851	57.1	30.9	94.5	71.2	64.3	5	107	2	651	2591	2.08	0.36	14.24	6.73	0.00	5.99	1.3	3.2	5.9
PORT ARTHUR	16	63.5	43.7	91.0	72.7	68.5	8	107	14	384	1447	6.00	2.88	53.09	18.71	0.00	13.17	T	0.6	4.4
SAN ANGELO	1903	59.4	34.3	96.9	72.7	66.4	9	111	6	567	2255	3.20	0.78	18.63	9.20	0.00	6.03	0.8	2.8	5.8
SAN ANTONIO INTL AP	788	62.3	41.6	94.0	73.9	68.7	27	106	0	428	1546	3.49	1.37	27.84	15.78	0.00	6.97	0.3	0.6	4.7
VICTORIA	104	64.8	46.0	91.7	74.6	70.2	8	107	16	344	1173	4.23	2.32	36.20	14.52	T	8.51	T	T	T
WACO	501	58.2	37.8	96.0	74.6	67.2	5	106	7	536	2030	4.57	1.68	32.08	15.00	0.00	7.18	1.0	1.7	7.0
WICHITA FALLS	994	53.9	31.6	97.9	73.3	64.5	9	113	-5	698	2832	4.60	1.12	26.20	12.03	0.00	5.61	2.0	5.6	5.9
UTAH							78	116	-50							0.00	5.08			
MILFORD	5028	37.1	12.1	92.1	55.5	48.9	20	104	-28	1252	6497	1.03	0.43	8.00	2.60	0.00	1.24	9.4	41.4	16.3
SALT LAKE CITY	4220	36.8	17.5	94.1	59.6	50.9	9	107	-18	1172	6052	1.76	0.53	13.90	4.90	0.00	2.41	13.4	54.7	15.4
WENDOVER	4237	35.9	18.0	92.0	66.8	52.3	31	112	-19	1178	5778	0.66	0.29	4.67	3.01	0.00	1.33	2.3	7.3	8.5
VERMONT							81	105	-50							0.00	8.77			
BURLINGTON	332	25.4	6.9	81.9	56.0	43.2	4	98	-27	1513	8269	3.85	1.79	33.21	11.54	0.38	3.59	18.0	72.3	16.5
VIRGINIA							78	110	-29							0.00	12.50			
LYNCHBURG	916	46.2	29.0	86.6	65.9	56.7	5	99	0	849	4166	4.41	2.58	40.30	11.36	0.33	4.98	6.0	18.7	12.8
NORFOLK	22	50.2	32.2	87.9	69.6	59.7	20	103	8	738	3421	5.97	2.74	44.94	12.83	0.36	11.40	3.6	7.7	11.4
RICHMOND	164	48.3	29.0	89.4	66.7	58.1	39	104	-12	815	3865	5.61	2.90	44.21	18.87	0.30	8.79	5.8	15.0	21.6
ROANOKE	1149	47.0	29.1	88.0	65.2	56.9	4	100	3	834	4150	4.63	2.70	41.23	9.12	0.18	6.41	8.2	25.6	17.4
WASHINGTON							102	118	-48							0.00	32.27			
OLYMPIA	195	45.1	31.1	79.7	48.0	50.8	9	100	3	834	5236	9.05	0.76	52.37	19.84	0.00	4.93	7.6	17.3	13.7
QUILLAYUTE	179	44.1	33.0	70.3	49.0	49.2	2	91	12	828	5745	16.81	2.08	103.55	24.86	0.40	8.32	3.4	7.1	4.0
SEATTLE-TACOMA	400	43.6	33.0	75.6	54.1	51.1	9	99	6	828	5145	6.29	0.81	38.94	12.92	T	3.41	6.1	14.7	21.4
SEATTLE U 1964	14	45.6	36.8	75.1	56.1	53.2	31	100	11	738	4424	5.42	0.63	34.10	10.93	T	3.31	4.3	8.1	11.5
SPOKANE	2356	31.4	19.2	85.6	55.4	47.8	9	108	-25	1231	6655	2.44	0.38	17.19	5.71	T	2.07	18.2	54.0	13.0
STAMPEDE PASS R	3958	27.5	19.5	65.4	47.0	39.5	25	90	-21	1287	9283	16.19	1.46	92.19	29.06	0.19	7.94	77.1	432.0	36.2
TATOOSH ISLAND 1966	101	45.2	38.8	59.5	51.5	49.3	63	88	14	713	5719	12.16	1.98	77.69	22.57	0.02	5.91	3.5	7.7	12.0
WALLA WALLA U	949	39.0	27.4	89.2	62.7	54.2	54	113	-16	986	4805	1.89	0.21	15.50	4.52	0.00	2.02	7.6	19.7	14.0
YAKIMA	1052	36.5	18.5	88.9	53.1	49.8	22	108	-25	1163	5941	1.19	0.13	7.86	4.19	0.00	1.40	9.6	23.8	14.0

State and Station	Relative humidity (percent) January 7:00 am EST	January 1:00 pm EST	January 7:00 pm EST	July 7:00 am EST	July 1:00 pm EST	July 7:00 pm EST	Wind Speed (mph) Mean speed January	Mean speed July	Fastest mile	Sunshine (percent of possible) January	July	Annual mean number of days, Sunrise to sunset: Clear	Partly cloudy	Cloudy	Precipitation .01 inch or more	Snow, sleet, hail 1.0 inch or more	Thunderstorms	Heavy fog	Temperature Max 90 and above	Min 32 and below	Min Zero and below
SOUTH CAROLINA																					
CHARLESTON	85	55	73	89	64	80	9.3	8.1	69	57	62	102	112	151	115	*	57	29	48	36	0
CHARLESTON U 1961	87	56	75	90	65	82	9.9	8.3	---	65	80	96	116	153	121	*	60	31	48	31	0
COLUMBIA	85	57	70	94	59	73	7.1	6.8	60	60	64	125	103	137	110	*	53	25	49	76	0
FLORENCE 1964	82	52	66	88	57	73	8.2	7.2	---	---	---	121	107	137	111	*	53	29	71	46	0
GREENVILLE 1961	70	41	50	85	56	70	9.4	7.7	70	58	63	117	114	154	116	1	50	23	48	54	0
SPARTANBURG 1961	73	44	51	89	56	70	8.6	6.8	---	- -	---	127	87	151	114	1	47	23	48	52	0
GRNVLE SPARTANBURG	75	53	62	87	60	70	7.6	6.3	52	55	58	122	96	147	112	3	43	33	29	68	*
SOUTH DAKOTA																					
ABERDEEN	72	68	71	81	51	48	11.6	9.4	58	---	---	97	100	168	85	12	35	14	22	196	47
HURON	75	68	71	88	53	49	11.8	10.9	77	55	77	103	109	153	93	12	42	15	29	177	41
RAPID CITY	69	60	65	72	45	41	10.4	9.9	66	55	71	111	111	143	95	12	45	15	32	167	20
SIOUX FALLS	77	65	71	85	53	50	10.8	9.6	70	---	---	105	106	154	92	11	44	20	25	174	24
TENNESSEE																					
BRISTOL	80	61	65	91	61	67	6.5	4.1	50	---	---	90	112	163	132	5	46	42	15	101	2
CHATTANOOGA	83	62	68	88	57	64	7.2	5.1	82	42	62	107	109	149	122	2	56	35	54	74	*
KNOXVILLE	80	64	65	91	62	66	8.3	6.4	73	38	58	98	110	157	126	3	48	30	22	77	1
MEMPHIS	80	64	70	85	57	59	10.7	7.7	56	48	73	116	102	147	103	2	51	11	66	60	*
NASHVILLE	81	64	65	90	60	64	9.0	6.2	73	41	64	104	108	153	117	4	56	16	35	86	1
OAK RIDGE R	--	--	--	--	--	--	4.8	3.9	59	---	---	113	90	162	126	3	53	34	33	81	*
OAK RIDGE AREA 1964	--	--	--	--	--	--	5.7	3.8	---	---	--	---	---	---	119	--	--	--	35	79	*
TEXAS																					
ABILENE	69	53	47	67	44	36	12.2	10.8	73	62	78	150	95	120	65	2	41	6	96	55	0
AMARILLO	69	47	42	74	43	38	13.2	12.4	84	70	77	161	104	100	66	4	48	24	69	104	3
AUSTIN	77	58	56	87	47	42	9.9	8.7	57	48	78	117	118	130	81	*	40	23	107	25	0
BROWNSVILLE	89	72	75	90	55	63	11.9	11.9	69	46	81	99	137	129	71	0	24	25	103	2	0
CORPUS CHRISTI	90	69	72	93	59	64	11.9	11.6	72	47	83	106	120	139	75	*	32	27	82	8	0
DALLAS	77	60	56	78	51	44	10.5	10.1	65	50	77	141	92	132	80	1	41	8	93	39	0
DEL RIO •	72	53	44	74	48	34	8.5	10.9	52	---	---	117	109	139	55	*	35	14	125	21	0
EL PASO	60	43	33	58	41	30	9.5	9.2	70	77	79	196	95	74	44	1	36	2	101	64	*
FT. WORTH GTR. INTL	80	61	59	78	49	44	12.0	10.3	73	---	---	144	94	127	79	1	45	11	85	47	0
GALVESTON 1961	84	73	78	82	69	71	13.0	11.3	---	---	---	111	118	136	90	*	52	32	32	2	0
GALVESTON U	85	77	80	81	70	73	11.6	9.8	100	49	72	---	---	---	96	*	--	--	11	4	0
HOUSTON U 1966	--	--	--	--	--	--	---	---	---	---	---	---	---	---	104	*	--	--	91	7	0
HOUSTON	84	64	67	91	59	64	11.9	8.8	54	47	74	87	126	152	103	0	59	42	95	13	0
LAREDO 1964	81	58	53	83	44	39	9.6	14.8	---	---	---	130	116	119	58	*	31	14	174	6	0
LUBBOCK	73	50	48	77	47	40	13.1	12.1	70	---	---	165	106	94	60	3	44	15	83	101	1
MIDLAND	72	47	40	68	39	30	9.5	10.0	67	---	---	166	96	103	50	2	35	15	99	72	0
PORT ARTHUR	89	69	78	92	62	69	11.6	8.0	73	43	66	90	127	148	103	0	63	41	87	19	0
SAN ANGELO	73	50	45	73	41	35	10.3	9.6	69	---	---	160	98	107	55	1	36	7	123	56	0
SAN ANTONIO INTL AP	81	60	58	88	49	43	9.1	9.1	74	49	77	113	116	136	79	*	35	23	117	21	*
VICTORIA	85	63	66	92	56	59	10.8	9.1	99	---	---	82	125	158	82	0	43	36	104	13	0
WACO	82	63	61	72	44	39	12.6	11.4	69	---	---	135	98	132	76	1	45	13	101	35	0
WICHITA FALLS	79	55	53	76	43	39	11.1	10.7	60	---	---	155	95	115	69	2	49	12	106	68	*
UTAH																					
MILFORD	--	66	60	--	24	20	---	---	---	---	---	154	99	112	61	14	32	7	59	180	14
SALT LAKE CITY	78	70	68	50	25	18	7.4	9.3	71	48	83	132	104	129	87	17	35	10	60	141	3
WENDOVER	67	60	57	31	21	14	---	---	---	---	---	154	94	117	46	3	29	5	51	128	1
VERMONT																					
BURLINGTON	71	64	67	79	53	62	9.8	7.9	72	40	65	61	104	200	148	21	25	16	4	167	28
VIRGINIA																					
LYNCHBURG	70	51	59	85	56	68	8.8	6.8	56	51	62	112	106	147	119	6	41	40	21	97	*
NORFOLK	76	60	69	82	60	72	11.7	8.7	78	58	65	110	107	148	115	2	37	24	32	56	0
RICHMOND	81	57	70	85	56	72	8.1	6.9	68	52	67	103	107	155	113	4	37	29	43	85	1
ROANOKE	68	51	56	79	53	59	9.8	6.7	58	---	---	103	117	145	119	7	39	26	21	94	0
WASHINGTON																					
OLYMPIA	91	89	82	90	64	48	7.5	6.0	60	---	---	50	90	225	163	5	4	92	7	82	[illegible]
QUILLAYUTE	95	93	90	96	72	62	8.7	6.4	36	15	53	52	61	252	220	3	10	45	2	51	0
SEATTLE-TACOMA	82	81	76	85	67	49	10.4	8.7	55	14	68	54	80	231	162	5	8	52	3	33	0
SEATTLE U 1964	--	--	--	--	--	--	---	---	65	28	63	71	93	201	152	3	6	--	2	15	0
SPOKANE	84	81	76	60	38	24	8.3	7.9	56	26	82	88	89	188	115	18	11	47	21	138	4
STAMPEDE PASS R	94	92	92	87	67	59	---	---	---	---	---	66	57	242	206	86	7	252	*	188	3
TATOOSH ISLAND 1966	84	82	82	94	89	87	20.0	10.1	94	26	47	58	76	231	197	3	5	59	0	8	0
WALLA WALLA U	--	76	--	--	34	--	5.1	5.4	67	24	86	119	87	159	105	7	11	14	36	64	2
YAKIMA	84	77	71	69	35	25	5.6	7.6	48	---	---	111	89	165	68	8	8	19	33	149	4

NORMALS, MEANS AND EXTREMES

State and Station	Elevation ground (feet)	Temperature (°F) Normal (1931-1960) January Daily maximum	January Daily minimum	July Daily maximum	July Daily minimum	Annual	Extremes Length, yrs	Record highest	Record lowest	Normal degree days (1931-1960) January	Seasonal	Precipitation (inches) Normal (1931-1960) Wettest month	Driest month	Annual	Extremes Wettest month	Driest month	Maximum in 24 hours	Snow, sleet Mean total January	Seasonal	Extreme Maximum in 24 hours	Relative humidity (percent) January 7:00 a m EST	1 00 p m EST	7 00 p m EST	July 7 00 a m EST	1 00 p m EST	7 00 p m EST	Wind Speed (m p h) Mean speed January	July	Fastest mile	Sunshine (percent of possible) January	July	Annual mean number of days Sunrise to sunset Clear	Partly cloudy	Cloudy	Precipitation .01 inch or more	Snow, sleet, hail 1.0 inch or more	Thunderstorms	Heavy fog	Temperature Max 90 and above	Min 32 and below	Zero and below
WEST INDIES							68	103	40																																
SAN JUAN U 1964	47	79.9	70.3	84.2	76.0	78.3	66	96	62	----	----	7.16	2.07	60.36	16.88	0.05	10.55	0.0	0.0	0.0	--	--	--	--	--	--	---	---	---	---	---	---	---	---	208	0	49	0	10	0	0
SAN JUAN	13	81.3	67.4	87.1	73.7	78.0	14	94	60	----	----	7.13	2.20	64.21	14.99	0.50	5.08	0.0	0.0	0.0	85	65	77	82	68	80	9.7	9.7	80	66	64	54	209	102	207	0	38	0	31	0	0
SWAN ISLAND r	28	82.6	73.9	87.3	77.6	81.0	25	92	64	----	----	7.39	0.63	51.61	31.53	T	10.77	0.0	0.0	0.0	--	--	--	--	--	--	---	---	---	---	---	78	163	124	153	0	--	--	14	0	0
WEST VIRGINIA							78	112	-37							0.00	19.00																								
BECKLEY	2504	41.1	26.1	80.4	61.3	51.8	5	90	- 9	973	5390	5.05	2.71	46.79	8.27	0.14	5.34	17.6	61.1	13.8	79	63	69	89	59	71	10.9	6.9	53	---	---	76	88	201	153	18	45	36	1	118	3
CHARLESTON	939	45.2	27.9	85.6	64.2	55.6	21	102	-12	880	4476	5.67	2.58	44.43	13.54	0.09	5.60	8.5	28.7	15.1	77	62	66	89	61	66	7.7	5.2	55	---	---	60	118	187	147	9	42	109	23	100	1
ELKINS	1970	43.0	22.0	82.3	57.9	50.7	24	97	-21	1008	5675	5.49	2.75	45.92	9.30	0.31	2.94	14.9	68.0	17.8	82	63	72	97	58	71	7.3	4.3	55	---	---	54	108	203	164	22	44	81	2	142	6
HUNTINGTON	827	45.3	27.9	86.0	64.3	55.8	8	100	-15	880	4446	4.50	1.85	39.53	8.57	T	4.27	8.0	24.0	8.2	79	62	64	90	59	65	7.3	4.9	47	---	---	75	111	179	131	8	41	53	19	106	3
PARKERSBURG U	615	42.9	26.3	86.3	65.2	55.0	80	106	-27	942	4754	4.27	2.05	38.77	12.05	0.07	4.81	6.9	24.3	18.3	82	66	74	80	52	67	7.2	5.1	66	31	62	109	103	153	142	8	44	12	23	97	2
WISCONSIN							78	114	-54							0.00	11.72																								
GREEN BAY	682	25.1	8.5	82.0	59.0	44.3	8	97	-29	1494	8029	3.36	1.08	25.83	8.47	T	3.68	9.0	39.9	10.1	77	72	73	86	57	59	11.0	8.2	73	44	64	95	102	168	118	13	38	28	6	161	30
LA CROSSE	651	25.6	7.4	84.6	63.0	46.3	4	99	-31	1504	7589	4.20	1.05	31.16	10.52	0.02	3.94	8.2	41.2	15.7	76	65	71	88	55	55	9.2	7.9	63	---	---	95	97	173	107	11	42	23	17	153	29
MADISON	858	25.9	9.1	82.2	60.0	45.0	9	98	-30	1473	7863	3.95	1.13	30.16	10.93	0.06	5.25	8.8	37.4	10.8	77	67	72	89	57	59	10.5	8.2	77	49	71	94	100	171	115	12	41	23	10	167	26
MILWAUKEE	672	28.3	12.8	78.9	58.4	45.1	9	98	-24	1376	7635	3.64	1.40	29.51	9.87	0.15	5.28	13.0	43.8	16.7	76	69	72	83	60	63	12.9	9.5	73	44	71	96	103	166	120	13	37	27	9	147	17
WYOMING							109	114	-63							0.00	5.50																								
CASPER	5338	32.8	13.9	87.1	56.3	46.0	4	99	-31	1290	7410	2.03	0.48	11.80	3.93	T	2.49	9.0	68.2	14.6	63	55	57	68	32	27	17.0	10.1	81	---	---	115	107	143	92	22	36	9	21	189	20
CHEYENNE	6126	37.2	13.6	85.2	54.8	45.9	9	96	-27	1228	7278	2.52	0.45	15.06	5.35	T	2.68	6.0	51.8	16.5	54	44	49	70	34	38	14.7	10.0	69	62	68	106	130	129	100	17	52	24	12	171	11
LANDER	5563	30.8	7.7	85.8	55.4	44.4	22	101	-37	1417	7870	2.65	0.42	13.58	6.88	T	3.56	8.3	96.5	23.1	66	59	58	56	34	28	6.2	7.6	77	68	77	116	127	122	71	23	33	3	19	186	20
SHERIDAN	3964	34.0	8.6	87.1	55.5	45.2	4	103	-29	1355	7683	2.57	0.62	15.91	9.54	0.02	3.84	9.5	67.2	26.7	65	57	60	70	39	34	7.7	7.2	84	57	76	99	115	151	107	23	37	6	17	198	25

Data from airport or from airport and Urban site records combined.
U indicates Urban, R indicates Rural sites.
Data for this table are based on records through 1968 except as indicated in notes.
Date after station name indicates last year included in summarization of data.
Normal values are based on the period, 1931-1960, and are means adjusted to represent observations taken at the present standard location.
Degree days are based on a daily average of 65°F.
For detailed periods of record see ANNUAL LOCAL CLIMATOLOGICAL DATA, 1968.
Fastest mile is the speed of the wind recorded in the shortest time on an automatic recording wind instrument. Refer to the Annual Climatological Data Table for stations reporting the fastest one-minute wind speed instead of fastest mile.

Clear Day averages 0-3 tenths sky cover, Partly Cloudy 4-7 tenths and Cloudy 8-10 tenths.
Heavy Fog includes data formerly referred to as "Dense" or "Thick". The upper visibility limit for heavy fog is 1/4 mile.
* Less than one-half.
\- No record.
\# Number of days Maximum 70° or above (Alaskan stations).
\+ Relative humidity means for period of record through 1960.
‡ Mt. Washington excluded.
ø Estimated amounts during typhoon.
1/ Means and extremes are from post office location through 1962.
2/ Based on records from Urban office through January 1943; airport through June 1964.

a Relative Humidity readings NOON Local Time.
c Relative Humidity readings 8:00 a.m. and NOON Local Time.
e Reopened 1963.
T Trace, an amount too small to measure.
x Sun below horizon continuously Nov. 19 - Jan. 23.
v Sun below horizon continuously Nov. 24 - Jan. 17.
(x and v)-Yearly totals for period sun above horizon.
m Record for 1949-1951, 1958-1962.
r Resumed 1965.

ELEVATIONS OF STATION PRESSURES

State and station	Ft	Mtrs
ALABAMA		
Birmingham	630	192
Huntsville	644	196
Mobile	221	67
Montgomery	202	62
ALASKA		
Anchorage	132	40
Annette	110	34
Barrow	13	4
Barter Island	50	15
Bethel	150	46
Cold Bay	103	31
Fairbanks	454	138
Juneau	24	7
King Salmon	49	15
Kotzebue	16	5
McGrath	338	103
Nome	22	7
St. Paul Island	28	9
Shemya	102	31
Yakutat	31	9
ARIZONA		
Flagstaff	7018	2139
Phoenix	1107	337
Tucson	2555	779
Winslow	4883	1488
Yuma	206	63
ARKANSAS		
Fort Smith	463	141
Little Rock	265	81
Texarkana	368	112
CALIFORNIA		
Bakersfield	492	150
Bishop	4145	1263
Blue Canyon	5283	1610
Eureka (U)	60	18
Fresno	327	100
Long Beach	40	12
Los Angeles (U)	512	156
Los Angeles	104	32
Mt Shasta (R)	3587	1093
Oakland	7	2
Red Bluff	353	108
Sacramento	25	8
Sandberg (R)	4523	1379
San Diego	28	9
San Francisco (U)	155	47
San Francisco	18	5
Santa Catalina	1580	482
Santa Maria	238	73
Stockton	27	8
COLORADO		
Alamosa	7541	2298
Colorado Springs	6170	1881
Denver	5332	1625
Grand Junction	4839	1475
Pueblo	4720	1439
CONNECTICUT		
Bridgeport	17	5
Hartford	179	55
New Haven	13	4
DELAWARE		
Wilmington	80	24
DISTRICT OF COLUMBIA		
Wash. Nat'l AP	65	20
FLORIDA		
Apalachicola (U)	35	11
Daytona Beach	41	12
Fort Myers	12	4
Jacksonville	31	9
Key West	21	6
Lakeland (U)	236	72
Miami	12	4
Orlando	119	36
Pensacola	118	36
Tallahassee	68	21
Tampa	11	3
West Palm Beach	21	6
GEORGIA		
Athens	811	247
Atlanta	1034	315
Augusta	148	45
Columbus	394	120
Macon	362	110
Rome	643	196
Savannah	51	16
HAWAII		
Hilo	36	11
Honolulu	15	5
Kahului	67	20
Lihue	148	45
IDAHO		
Boise	2858	871
Idaho Falls 46W (R)	4938	1505
IDAHO (Cont'd)		
Lewiston	1436	438
Pocatello	4478	1365
ILLINOIS		
Cairo (U)	357	109
Chicago (O'Hare)	674	205
Chicago (Midway)	623	190
Moline	594	181
Peoria	662	202
Rockford	743	226
Springfield	613	187
INDIANA		
Evansville	388	118
Fort Wayne	828	252
Indianapolis	808	246
South Bend	773	236
IOWA		
Burlington	702	214
Des Moines	963	294
Dubuque	1080	329
Sioux City	1103	336
Waterloo	878	268
KANSAS		
Concordia	1484	452
Dodge City	2592	790
Goodland	3688	1124
Topeka	885	270
Wichita	1340	408
KENTUCKY		
Covington	877	267
Lexington	989	301
Louisville	488	149
LOUISIANA		
Alexandria	118	36
Baton Rouge	76	23
Lake Charles	32	10
New Orleans	30	9
Shreveport	259	79
MAINE		
Caribou	628	191
Portland	63	19
MARYLAND		
Baltimore	155	47
MASSACHUSETTS		
Boston	29	9
Nantucket	12	4
Pittsfield	1169	356
Worcester	1017	310
MICHIGAN		
Alpena	693	211
Detroit (City AP)	626	191
Detroit (M. Wayne Co.)	664	202
Detroit (Willow Run)	777	237
Flint	766	233
Grand Rapids	803	245
Houghton Lake	1160	354
Lansing	874	266
Marquette (U)	734	224
Muskegon	633	193
Sault Ste. Marie	724	221
MINNESOTA		
Duluth	1417	432
International Falls	1183	361
Minneapolis	838	255
Rochester	1320	402
St. Cloud	1043	318
MISSISSIPPI		
Jackson	331	101
Meridian	310	94
MISSOURI		
Columbia	785	239
Kansas City	750	229
St. Joseph	817	249
St. Louis (Lambert)	564	172
Springfield	1270	387
MONTANA		
Billings	3570	1088
Glasgow	2298	700
Great Falls	3657	1115
Havre	2599	792
Helena	3898	1188
Kalispell	2973	906
Miles City	2634	803
Missoula	3189	972
NEBRASKA		
Grand Island	1856	566
Lincoln (U)	1189	362
Norfolk	1551	473
North Platte	2787	849
Omaha (Eppley AP)	982	299
Scottsbluff	3958	1206
Valentine	2598	792
NEVADA		
Elko	5077	1547
Ely	6262	1909
Las Vegas	2180	664
Reno	4400	1341
Winnemucca	4339	1323
NEW HAMPSHIRE		
Concord	346	105
NEW JERSEY		
Atlantic City (Exp. Cntr.)	67	20
Newark	30	9
Trenton (U)	190	58
NEW MEXICO		
Albuquerque	5314	1620
Clayton	4972	1515
Raton	6376	1943
Roswell	3619	1103
Silver City	5376	1639
NEW YORK		
Albany	292	89
Binghamton	1638	499
Buffalo	706	215
New York Central Park	87	27
New York (Kennedy AP)	22	7
New York (LaGuardia)	52	16
Rochester	555	169
Syracuse	408	124
NORTH CAROLINA		
Asheville	2170	661
Cape Hatteras (R)	11	3
Charlotte	769	234
Greensboro	886	270
Raleigh	441	134
Wilmington	38	12
NORTH DAKOTA		
Bismarck	1660	506
Fargo	899	274
Williston	1905	581
OHIO		
Akron	1236	377
Cleveland	805	245
Columbus	833	254
Dayton	1003	306
Mansfield	1312	400
Toledo	692	211
Youngstown	1186	361
OKLAHOMA		
Oklahoma City	1304	397
Tulsa	676	206
OREGON		
Astoria	22	7
Burns (U)	4170	1271
Eugene	373	114
Meacham	4056	1236
Medford	1329	405
Pendleton	1495	456
Portland	39	12
Salem	201	61
Sexton Summit (R)	3841	1171
PACIFIC AREA		
Canton Island	11	3
Eniwetok	21	6
Johnston Island	17	5
Koror (R)	109	33
Kwajalein	26	8
Majuro, Marshall Islands	10	3
Marcus Island	55	17
Ponape (R)	151	46
Taguac, Guam (R)	365	111
Truk (Moen Island)	8	2
Wake Island	12	4
Yap (R)	56	17
Pago Pago	10	3
PENNSYLVANIA		
Allentown	385	117
Erie	737	225
Harrisburg	351	107
Philadelphia	28	9
Pittsburgh	1225	373
Reading (U)	323	98
Scranton	948	289
Williamsport	525	160
RHODE ISLAND		
Block Island	118	36
Providence	62	19
SOUTH CAROLINA		
Charleston (U)	48	15
Charleston	48	15
Columbia	225	69
Grnvl-Spartanburg	971	296
SOUTH DAKOTA		
Aberdeen	1300	396
Huron	1289	393
Rapid City	3168	966
SOUTH DAKOTA (Cont'd)		
Sioux Falls	1427	435
TENNESSEE		
Bristol	1525	465
Chattanooga	688	210
Knoxville	980	299
Memphis	284	87
Nashville	605	184
Oak Ridge (R)	914	279
TEXAS		
Abilene	1753	534
Amarillo	3604	1099
Austin	621	189
Brownsville	20	6
Corpus Christi	44	13
Dallas	488	149
Del Rio	1027	313
El Paso	3916	1194
Fort Worth	576	176
Galveston (U)	54	16
Houston	62	19
Lubbock	3241	988
Midland	2862	872
Port Arthur	22	7
San Angelo	1908	582
San Antonio	794	242
Victoria	117	36
Waco	508	155
Wichita Falls	1030	314
UTAH		
Milford	5033	1534
Salt Lake City	4227	1288
Wendover	4239	1292
VERMONT		
Burlington	340	104
VIRGINIA		
Lynchburg	937	286
Norfolk	30	9
Richmond	164	50
Roanoke	1176	358
Wallops Island	13	4
WASHINGTON		
Olympia	200	61
Seattle-Tacoma	450	137
Spokane	2365	721
Stampede Pass (R)	3967	1209
Walla Walla (U)	991	302
Yakima	1066	325
Quillayute	205	62
WEST INDIES		
San Juan, P. R.	62	19
Swan Island	35	11
WEST VIRGINIA		
Beckley	2514	766
Charleston	951	290
Elkins	2006	611
Huntington	838	255
Parkersburg (U)	637	194
WISCONSIN		
Green Bay	702	214
La Crosse	672	205
Madison	866	264
Milwaukee	693	211
WYOMING		
Casper	5290	1612
Cheyenne	6141	1872
Lander	5558	1694
Sheridan	3968	1209

Data from airport unless otherwise specified. U indicates Urban, R indicates Rural, sites.
These are the elevations of the barometer (in feet and meters above mean sea level) to which station pressure values pertain in the "Climatological Data" table in the monthly publication CLIMATOLOGICAL DATA NATIONAL SUMMARY.

GENERAL SUMMARY OF TORNADOES, 1968

Esther K. Grabill
Evironmental Data Service, ESSA
Washington, D. C.

A total of 660 tornadoes was reported in the United States in 1968, occurring on 170 days, causing 131 deaths, and millions of dollars property damage. The 16-year averages, 1953-1968, are 644 tornadoes on 159 days and 122 deaths. Only 10 of the 50 States did not have any tornadoes in 1968. These are Alaska, California, Delaware, Hawaii, Maryland, Nevada, New Jersey, Rhode Island, Vermont, and Washington. More than half of the 1968 tornadoes, 387, occurred in the 3-month period April through June and over three-fourths, 510, in the 5-month period April through August. Tornadoes were reported in every month of the year, reaching a peak of 146 in May. More than half of the year's total deaths, 72, also occurred in May. A total of 2,543 persons were injured, 83% in the 2 months of April and May. Some of the more damaging tornadoes are described briefly in the following paragraphs.

FEBRUARY.--A tornado struck the heavily populated area of North Miami Beach, Fla., on the 19th, causing \$2 million damage, not including shrubbery losses and damage to utilities. Two homes were destroyed, 12 suffered major damage and 86 minor damage; 4 business firms were destroyed and 40 partially destroyed; 20 automobiles were destroyed and 80 others damaged.

APRIL.--The most destructive Arkansas tornado since March 1952 passed almost directly through the center of Greenwood on the 19th, killing 14 persons and injuring 270. Over 400 homes and 69 business units were destroyed or damaged.

In Kentucky on the 23d, 40% of the Falmouth area was affected; 180 homes were destroyed, 100 suffered heavy damage, and 100 minor damage; 4 persons were killed and 350 injured. In Dover, 115 of the community's 127 houses were damaged extensively, 3 churches and 3 trailers were destroyed, and 3 business buildings were damaged. Although only one home in Dover was not damaged, there were no deaths and only a few dozen injuries. Bracken County reported 1 person killed, at least 8 injured, 20 houses demolished, 50 damaged, and 175 barns lost. On the 23d in Scioto County, Ohio, there was an estimated \$2 million damage, most of which was in the Wheelersburg area where 7 persons were killed, 75 injured, and 550 homes destroyed or damaged. An estimated \$230,000 damage was reported at the Gallipolis State Institute where 15 buildings sustained moderate to heavy damage.

At Millington, Tenn., on the 3d, 100 house trailers received moderate damage to total destruction. In the Covington-Gift area many rural and urban homes were destroyed or heavily damaged. There were 4 deaths and 32 injuries along the storm area. Damages were estimated at between \$1 to \$2 million.

MAY.--A tornado on the 15th destroyed about two-thirds of the town of Oil Trough, Ark., causing \$750,000 damage, 7 deaths, and 24 injuries. On the same day another tornado in Jonesboro, Ark., killed 34 persons, injured 350, and destroyed 164 homes. Crops (mostly cotton) were damaged by the heavy rain that accompanied the tornado.

Major tornado damage occurred at Freeburg, Ill., on the 15th. The 4 dead and most of the 60 injured were from the completely destroyed trailer court. Homes and other buildings were badly damaged.

A tornado struck 3 miles northeast of Hansell, Iowa, on the 15th, passed through Charles City, continued northeast to Elma, then north for 14 miles. Greatest losses were in Charles City where 13 persons were killed, 450 injured, and 337 homes completely destroyed; 1,565 families were affected by the tornado. Losses were estimated up to \$30 million. In Elma 12 persons were injured, and property damage reached \$1.5 million. Many farmsteads and rural homes were damaged. Another tornado moved through downtown Oelwein and north-northeastward to Maynard on the same day. There were 5 deaths and 156 injuries, with 965 families affected by the tornado. Loss estimates range up to \$21 million, mostly in Oelwein.

A tornado at Miami, Tex., on the 6th destroyed or damaged 44 homes and businesses, destroyed a high school, injured 6 persons, and damaged about 20 cars, at an estimated \$1 million damage. On the 31st, one of the largest tornadoes ever to occur in the South Plains wiped out several farms northwest of Edmonson before striking the small Hale County community. Property and crop damage were estimated at \$1 million.

JUNE.--An estimated \$2 million damage was caused by a tornado on the 13th at Arnolds Park in Dickinson County, Iowa. Farm losses in the County amounted to about \$3/4 million. There were 17 injuries, but no deaths.

A severe tornado at Tracy, Minn., on the 13th killed 9 persons, injured 125, destroyed 111 homes, caused major damage to 81, and minor damage to 117. It also destroyed or damaged 13 farmsteads and 10 businesses. This tornado was seen by observers for more than 20 miles in all directions.

Approximately 1,800 acres of prime timber were destroyed, an additional 1,200 acres were badly damaged, and 40 million board feet of lumber were blown down 30 miles north of Enterprise, Ore., by a tornado on the 11th.

The 9 or more tornadoes, sighted in 6 counties in South Dakota on the 20th-21st, probably caused the most extensive damage, \$10 to \$15 million, that has ever occurred in this State.

JULY.--In the Salisbury Beach, Mass., area on the 1st, 100 persons were injured and 60 trailers or other campers were demolished or damaged.

AUGUST.--Utah's most damaging tornado touched down in a wheatfield and moved in an erratic southwest to northeast direction in West Weber, on the 14th. Damages were estimated at \$50,000.

A tornado in west-central Marathon County, Wis., on the 19th flattened 25 barns, causing damages that exceeded \$1 million.

SEPTEMBER.--In Orange City, Iowa, on the 22d, tornado losses totaled over \$1 million, with 50 homes destroyed or damaged.

NOVEMBER.--A twister struck the Eight Mile area, 8 miles northwest of downtown Mobile, Ala., on the 3d. It moved northeast into Saraland, touched down 10 miles east near Bay Minette AP, dipped down at Canoe and also at Shady Grove community. Most extensive damage was at Eight Mile and Saraland areas with 15 homes demolished, 60 severely damaged, 170 had minor damage, 5 trailer homes were destroyed, and 10 others damaged. Most of the 18 persons injured occurred in Saraland. In Bay Minette 3 houses were demolished, 5 severely damaged, and 24 had minor damage.

A tornado on the 17th moved from Clanton east-northeast to 3 miles north of Rockford. Severe damage was done to all structures and trees in its path, including extensive damage to a motel, 15 homes were destroyed and 25 damaged, 3 trailers and 10 barns

were destroyed, 30 trucks and automobiles were damaged, about 2,500 acres of timber were destroyed, 1 person was killed and 9 injured.

DECEMBER.--At Tyler AP, Texas, on the 27th, 15 airplanes were damaged, 10 of which were a total loss, 1 hangar was destroyed and others had minor damage. Total damage was estimated at $500,000.

Although the 1968 Texas total of 140 tornadoes was the highest for any state, no tornado deaths were reported.

The tables, figure, and tornado tracks on the following pages include additional information to supplement the above summary.

TABLE 1. TORNADO SUMMARY 1968

State	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Year
ALA.													
Number	1			2	3						3	1	10
Days	1			1	3						2	1	8
Deaths	0			0	0						1	0	1
Injuries	0			0	0						29	2	31
ALASKA (None)													
ARIZ.													
Number							3			1	1		5
Days							2			1	1		4
Deaths							0			0	0		0
Injuries							2			3	0		5
ARK.													
Number		1		10	6	2							19
Days		1		3	3	2							[illegible]
Deaths		0		20	45	0							65
Injuries		0		310	413	2							725
CALIF. (None)													
COLO.													
Number					1	2	2						5
Days					1	1	2						4
Deaths					0	0	0						0
Injuries					1	0	0						1
CONN.													
Number								3					3
Days								3					3
Deaths								0					0
Injuries								0					0
DEL. (None)													
D. C. (None)													
FLA.													
Number	2	3	4		5	7	6	5	5	3	10	2	52
Days	2	2	2		4	6	6	4	4	2	2	2	36
Deaths	0	0	0		0	0	2	0	0	0	2	0	4
Injuries	0	21	0		0	1	1	0	1	0	27	0	51
GA.													
Number			6	1	3	3	2	2			5	1	23
Days			3	1	2	3	2	2			3	1	17
Deaths			0	0	0	0	0	0			0	0	0
Injuries			0	0	0	0	0	7			0	0	7
HAWAII (None)													
IDAHO													
Number									1				1
Days									1				1
Deaths									0				0
Injuries									0				0
ILL.													
Number				3	4		1						8
Days				1	1		1						3
Deaths				0	[illegible]		0						8
Injuries				0	135		0						135
IND.													
Number				6	4	4		1					15
Days				2	2	2		1					7
Deaths				0	1	0		0					1
Injuries				0	20	5		0					25
IOWA													
Number			2	7	5	8			3				25
Days			[illegible]	3	1	4			1				10
Deaths			0	0	18	0			0				18
Injuries			0	0	606	17			0				623
KANS.													
Number				4	5	7	4			1			21
Days				3	4	6	3			1			17
Deaths				0	0	0	0			0			0
Injuries				0	4	10	0			0			14
KY.													
Number				5	1								6
Days				2	1								3
Deaths				7	0								7
Injuries				408	0								408
LA.													
Number		2	4	1		3			2		4	1	17
Days		1	1	1		3			2		3	1	12
Deaths		0	0	0		0			0		0	0	0
Injuries		0	0	0		0			0		1	0	1
MAINE													
Number							2						2
Days							1						1
Deaths							0						0
Injuries							0						0
MD. (None)													
MASS.													
Number							3	3					6
Days							3	1					4
Deaths							0	0					0
Injuries							100	4					104
MICH.													
Number			1	3		4	1	9	3				21
Days			1	1		2	1	6	2				13
Deaths			0	0		1	0	0	0				1
Injuries			0	13		0	0	0	1				14
MINN.													
Number			1	4	6	13	6	4					34
Days			1	1	2	7	5	3					19
Deaths			0	0	0	10	0	0					10
Injuries			0	[illegible]	1	127	0	1					129
MISS.													
Number			1	2	3	2			1		6	6	21
Days			1	2	1	2			1		3	1	11
Deaths			0	0	0	0			0		0	1	1
Injuries			0	3	7	0			0		14	10	34
MO.													
Number				9	10	7	2	1	1				30
Days				4	2	2	2	1	1				12
Deaths				0	0	0	0	0	0				0
Injuries				0	6	0	0	1	1				8
MONT.													
Number						1							1
Days						1							1
Deaths						0							0
Injuries						0							0
NEBR.													
Number				2	[illegible]	9	7	1					21
Days				1	2	7	4	1					15
Deaths				0	0	0	0	0					0
Injuries				0	0	1	[illegible]	0					3
NEV. (None)													
N. H.													
Number							2	2					4
Days							2	1					3
Deaths							0	0					0
Injuries							0	1					1
N. J. (None)													
N. MEX.													
Number					1	1							2
Days					1	1							2
Deaths					0	0							0
Injuries					0	3							3
N. Y.													
Number								2					2
Days								2					2
Deaths								0					0
Injuries								4					4
N. C.													
Number			2	1		1	2						6
Days			1	1		1	2						5
Deaths			0	0		0	0						0
Injuries			0	0		0	0						0
N. DAK.													
Number						2	2	6					10
Days						2	2	3					7
Deaths						0	0	0					0
Injuries						0	0	3					3
OHIO													
Number				6	3	4		1					14
Days				1	2	2		1					6
Deaths				9	0	0		0					9
Injuries				126	0	6		0					132
OKLA.													
Number				16	26	9		1				3	55
Days				6	11	6		1				1	25
Deaths				0	0	0		0				0	0
Injuries				12	1	2		0				0	15
OREG.													
Number						1				1			2
Days						1				1			2
Deaths						0				0			0
Injuries						0				0			0
PA.													
Number						2	1	2	1				6
Days						1	1	2	1				5
Deaths						0	0	0	0				0
Injuries						1	0	0	0				1
R. I. (None)													
S. C.													
Number			3		1			1			1	1	7
Days			2		1			1			1	1	6
Deaths			0		0			0			0	0	0
Injuries			0		1			0			0	0	1
S. DAK.													
Number				1		13	2	4	1				21
Days				1		3	2	3	1				10
Deaths				0		0	0	0	0				0
Injuries				0		1	0	0	0				1

TABLE 1. TORNADO SUMMARY 1968 CONTINUED

State	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Year
TENN.													
Number				5	7				1				13
Days				3	5				1				9
Deaths				4	0				0				4
Injuries				33	0				0				33
TEX.													
Number	2	1	3	13	48	21	4	8	5	8	11	16	140
Days	1	1	2	7	15	13	1	5	5	5	4	4	63
Deaths	0	0	0	0	0	0	0	0	0	0	0	0	0
Injuries	0	0	0	0	9	0	0	0	0	0	8	0	17
UTAH													
Number					1			3					4
Days					1			1					2
Deaths					0			0					0
Injuries					0			1					1
VT.													
(None)													
VA.													
Number				1				1					2
Days				1				1					2
Deaths				0				0					0
Injuries				0				0					0
WASH.													
(None)													

State	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Year
W. VA.													
Number						1							1
Days						1							1
Deaths						0							0
Injuries						0							0
WIS.													
Number			1	2	2	3	2	10					20
Days			1	1	2	1	2	4					11
Deaths			0	0	0	0	0	2					2
Injuries			1	0	0	2	0	10					13
WYO.													
Number						8			1				9
Days						6			1				7
Deaths						0			0				0
Injuries						0			0				0
TOTALS													
Number	5	7	28	104	147	138	54	70	25	14	41	31	664
					*146	*137		*69	*24				*660
Days†	3	3	8	15	26	27	22	23	14	9	12	8	170
Deaths	0	0	0	40	72	11	2	2	0	0	3	1	131
Injuries	0	21	1	905	1204	178	105	32	3	3	79	12	2543

* Corrected for boundary-crossing tornadoes.
† Tornado Days for Country as a whole.

TABLE 2 -- NUMBER OF TORNADOES, TORNADO DAYS, AND DEATHS BY MONTHS, 1953-68

	January			February			March			April			May			June			July		
Year	Number	Days	Deaths	Number	Days	Deaths	Number	Days	Deaths	Number	Days	Deaths	Number	Days	Deaths	Number	Days	Deaths	Number	Days	Deaths
1953	14	6	0	17	3	3	40	10	24	45	16	34	99	21	162	114	24	244	40	19	0
1954	2	1	0	19	9	2	69	13	10	117	22	3	97	22	8	101	26	5	46	23	0
1955	2	2	0	4	3	0	41	15	4	101	18	7	150	26	103	148	28	2	50	21	5
1956	2	2	0	47	12	8	31	7	1	87	15	67	88	24	4	66	21	0	101	26	1
1957	17	3	13	5	3	0	39	7	1	216	21	29	226	26	87	148	25	14	54	19	0
1958	12	7	[illegible]	20	5	13	15	10	0	78	19	4	69	21	0	128	27	42	119	30	1
1959	15	2	3	19	5	21	42	11	9	30	12	1	225	28	8	73	25	2	62	24	0
1960	9	4	0	28	10	0	27	10	0	70	20	7	200	26	34	123	27	3	48	22	1
1961	1	1	0	31	8	0	121	17	7	73	19	3	135	25	23	101	23	2	77	27	0
1962	11	3	1	25	7	0	37	9	17	41	8	1	201	22	3	173	29	0	75	26	0
1963	14	5	1	6	3	0	49	12	8	82	14	16	69	21	1	93	23	0	62	26	0
1964	14	3	10	2	2	0	36	11	6	161	23	15	135	20	16	144	24	0	61	23	0
1965	21	11	0	29	4	0	33	9	2	130	20	264	271	25	19	149	28	6	86	26	0
1966	1	1	0	23	5	0	10	6	58	81	20	12	98	17	0	124	28	21	92	27	8
1967	40	4	7	8	5	0	40	14	3	146	18	73	112	25	3	205	28	8	88	25	1
1968	5	3	0	7	3	0	28	8	0	104	15	40	146	26	72	137	27	11	54	22	2
Total	180	58	35	290	87	47	658	169	160	1562	280	576	2321	375	543	2027	413	360	1115	386	19
Mean	11	4	2	18	5	3	41	11	9	98	18	36	145	23	34	127	26	23	70	24	1

TABLE 2 -- NUMBER OF TORNADOES, TORNADO DAYS, AND DEATHS BY MONTHS, 1953-68–Continued

	August			September			October			November			December			Annual		
Year	Number	Days	Deaths	Number	Days	Deaths	Number	Days	Deaths	Number	Days	Deaths	Number	Days	Deaths	Number	Days	Deaths
1953	26	15	0	5	4	0	6	4	0	11	6	0	20	8	49	437	136	516
1954	46	21	1	20	10	3	15	8	2	2	2	0	16	3	1	549	159	35
1955	34	18	0	16	8	2	23	7	1	20	4	1	3	2	0	593	153	125
1956	43	20	2	19	10	0	30	8	0	8	6	0	10	4	0	532	155	83
1957	26	14	0	17	10	2	17	11	2	61	11	25	38	4	18	864	154	191
1958	45	20	1	24	14	1	9	6	4	45	6	0	1	1	0	565	166	66
1959	37	18	0	54	15	14	19	10	0	11	4	0	2	2	0	589	156	58
1960	48	23	1	21	13	0	18	10	1	25	6	0	1	1	0	618	172	47
1961	25	16	0	53	16	15	13	5	0	36	7	1	16	5	0	682	169	51
1962	49	21	6	27	11	0	12	10	0	5	4	0	2	2	0	658	152	28
1963	27	13	2	33	13	3	14	5	0	12	6	0	0	0	0	461	141	31
1964	79	23	2	24	10	0	24	4	22	15	8	0	18	5	2	713	156	73
1965	60	23	2	63	21	0	15	4	0	35	6	5	7	4	0	899	181	298
1966	58	21	[illegible]	23	13	0	29	[illegible]	6	20	3	0	11	3	0	570	150	103
1967	29	16	2	139	16	5	34	7	4	[illegible]	5	0	63	10	10	912	173	116
1968	69	23	2	24	14	0	14	9	0	41	12	3	31	8	1	660	170	131
Total	701	305	21	562	198	45	292	114	42	355	96	35	239	62	81	10302	2543	1952
Mean	44	19	1	35	12	3	18	7	3	22	6	2	15	4	5	644	159	122

AVERAGE NUMBER OF TORNADOES AND TORNADO DAYS
EACH MONTH IN THE UNITED STATES
(Based on 10,302 Tornadoes That Occurred from 1953 to 1968)

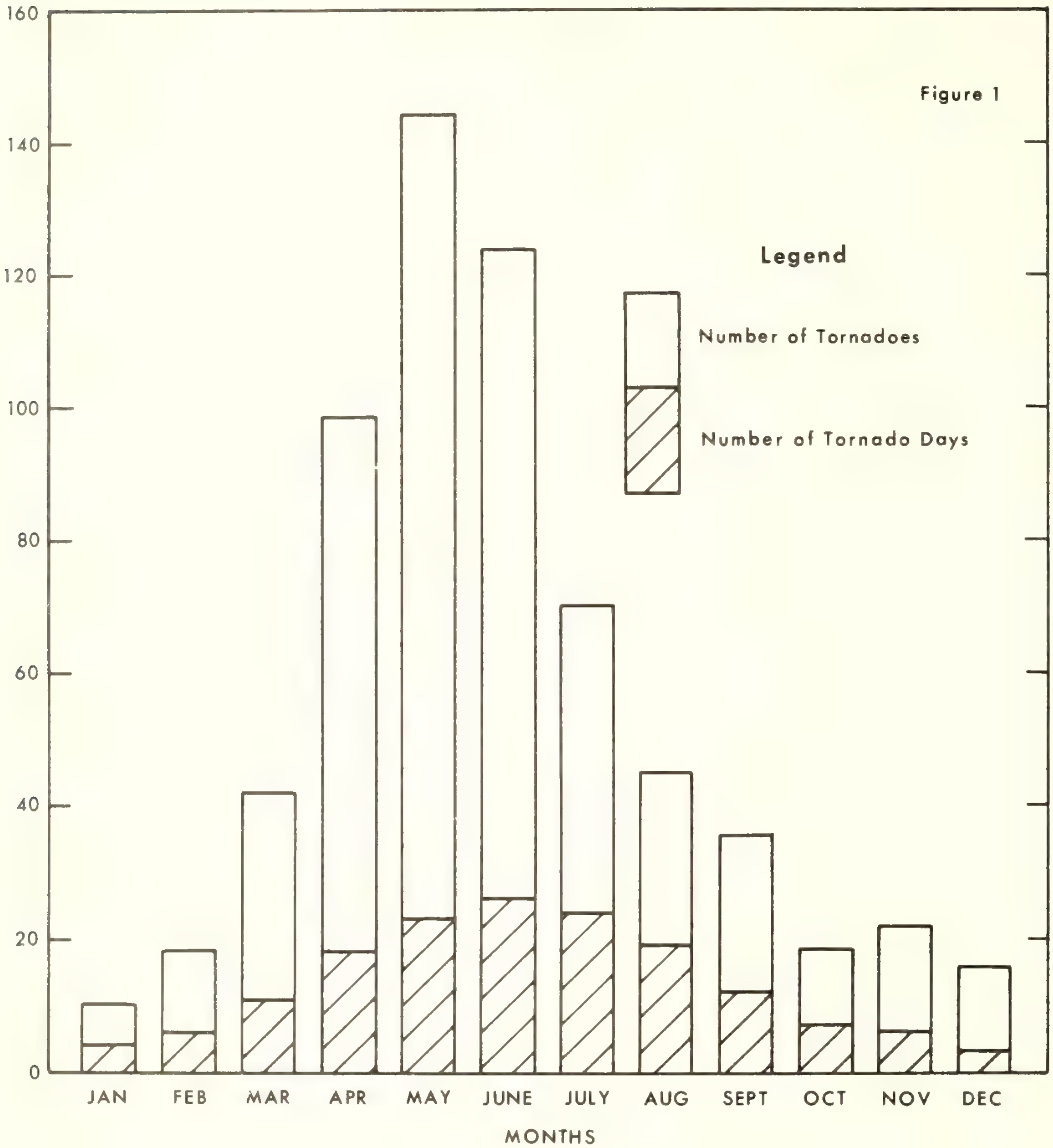


TABLE 3. NUMBER OF TORNADOES, TORNADO DAYS, AND RESULTING LOSSES BY YEARS, 1916-68

YEAR	Number torna-does	Number tornado days	Total Deaths	Most deaths in a single tornado	Total property losses †	Number of tornadoes causing losses † in category 5	category 6	category 7 & over
1916	90	36	150	30	6	7	1	0
1917	121	38	509	101	7	21	9	0
1918	81	45	135	36	7	20	5	0
1919	64	35	206	59	7	10	2	0
1920	87	50	498	87	7	14	10	0
1921	105	55	202	61	7	22	3	0
1922	108	64	135	16	7	27	5	0
1923	102	59	109	23	6	21	1	0
1924	130	57	376	85	7	26	11	1
1925	119	65	794	689	7	34	2	1
1926	111	57	144	23	6	28	0	0
1927	163	62	540	92	7	42	9	1
1928	203	79	92	14	7	40	7	0
1929	197	74	274	40	7	48	4	0
1930	192	72	179	41	7	38	6	0
1931	94	57	36	6	6	14	1	0
1932	151	67	394	37	7	23	1	1
1933	258	96	362	34	7	46	9	0
1934	147	77	47	6	6	10	3	0
1935	180	77	70	11	6	29	0	0
1936	151	71	552	216	7	17	5	1
1937	147	75	29	5	6	24	0	0
1938	213	76	183	32	7	29	6	0
1939	152	75	87	27	7	21	3	0
1940	124	62	65	18	7	13	2	0
1941	118	57	53	25	6	24	1	0
1942	167	66	384	65	7	42	10	0
1943	152	61	58	5	7	28	8	0
1944	169	68	275	100	7	50	9	0
1945	121	66	210	69	7	21	10	1
1946	106	65	78	15	7	29	7	0
1947	165	78	313	169	7	46	7	1
1948	183	68	140	33	7	62	11	2
1949	249	80	212	58	7	54	13	0
1950	199	88	70	18	7	47	9	0
1951	272	113	34	6	7	35	11	2
1952	236	98	230	57	7	53	19	0
1953	437	136	516	116	8	63	18	7
1954	549	159	35	6	7	63	8	1
1955	593	153	125	80	7	74	13	1
1956	532	155	83	25	7	83	24	1
1957	864	154	191	44	8	129	26	3
1958	565	166	66	19	7	70	8	1
1959	589	156	58	21	7	70	4	1
1960	618	172	47	16	7	65	11	1
1961	682	169	51	16	7	103	21	1
1962	658	152	28	17	7	51	10	0
1963	461	141	31	5	7	77	15	1
1964	713	156	73	22	7	113	17	5
1965	899	181	298	44	8	126	30	11
1966	570	150	103	58	8	79	13	4
1967	912	173	116	33	8	125	33	8
1968	660	170	131	34	8	82	26	6
Means: 1953-68	644	159	122	--	-	86	17	3

NOTE:--The above estimated losses are based on values at time of occurrence.

† Storm damages in categories:
5 \$50,000 to \$500,000
6 \$500,000 to \$5,000,000
7 \$5,000,000 to \$50,000,000
8 \$50,000,000 and over.

TABLE 4 -- NUMBER OF FUNNEL CLOUDS IN 1968

State	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept	Oct.	Nov.	Dec.	Total
Ala.						1	2		1		1		1
Alaska													
Ariz.		1											1
Ark.					2	1			1				4
Calif.			3	2							2		7
Colo.							6	2					8
Conn.													
Del.						1							1
D.C.													
Fla.		6	2	2	12	44	34	55	26	18	8	2	209
Ga.			2		1				1	1			5
Hawaii	3	3		5						5			16
Idaho						4		5					9
Ill.					6	22	5						33
Ind.					13	9	13	3					38
Iowa			3	10	9	60	11	18	7				118
Kans.			3	8	9	16	2	1	1				40
Ky.				3	1	5	9	2		1			21
La.					17	11	10	10	3			2	53
Maine													
Md.						1							1
Mass.													
Mich.					1	1				1			3
Minn.				8	3	34							45
Miss.			1	1	9	4	1	5	2		1		24
Mo.				5	10		10	5	2				32
Mont.						3							3
Nebr.				12	5	12	4	11					44
Nev.													
N. H.													
N. J.													
N.Mex.		1			5			4			1		11
N. Y.									1				1
N. C.						1							1
N. Dak.							5	2	2				9
Ohio			1	6	7	7	5	1					27
Okla.		1		18	38	10							67
Oreg.					1	1							2
Pa.													
R. I.													
S. C.						2	1	1					4
S.Dak.						18	7	4	3				32
Tenn.				3	2		2						7
Tex.			1	15	61	81	29	20	9	5	5		226
Utah					4	1		7					12
Vt.													
Va.				1		2							3
Wash.													
W.Va.													
Wis.			2	5	4	8		2					21
Wyo.						4							4
TOTAL	3	12	18	104	220	364	156	158	59	31	18	4	1147

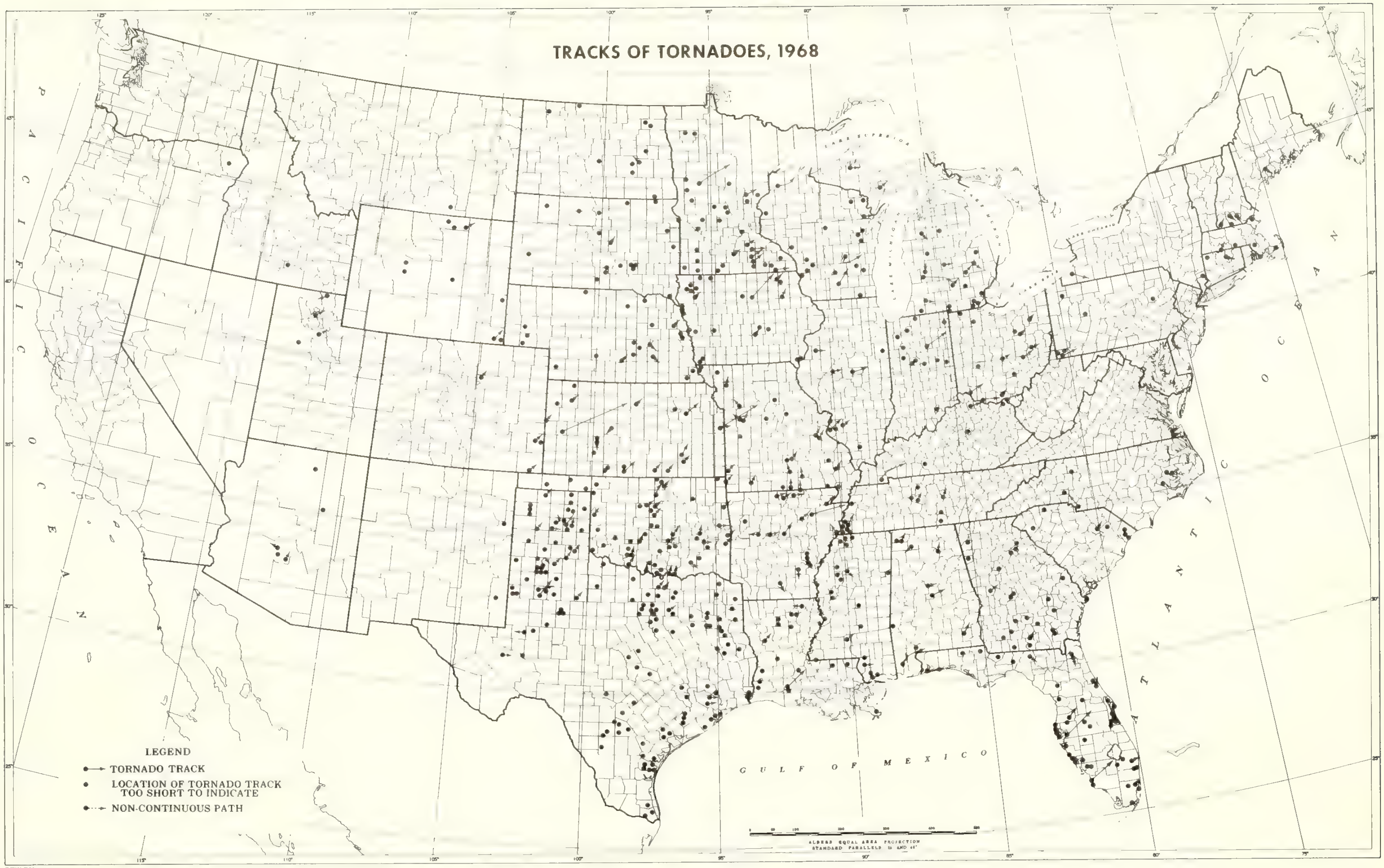
TABLE 5--NUMBER OF TORNADOES, TORNADO DAYS, AND DEATHS, 1953-1968

	Tornadoes		Tornado Days		Deaths	
State	Total	Average	Total	Average	Total	Average
Ala.	266	17	145	9	88	6
Alaska	1	0	1	0	0	0
Ariz.	43	13	38	2	7	0
Ark.	274	18	151	9	44	3
Calif.	41	3	32	2	0	0
Colo.	232	15	164	10	8	1
Conn.	21	1	19	1	4	0
Del.	13	1	12	1	0	0
D.C.	0	0	0	0	0	0
Fla.	377	24	275	17	88	6
Ga.	287	18	182	11	62	4
Hawaii	4	0	4	0	0	0
Idaho	21	1	20	1	2	0
Ill.	361	23	179	11	109	7
Ind.	358	22	173	11	160	10
Iowa	400	25	185	12	40	3
Kans.	859	54	377	24	152	10
Ky.	88	6	62	4	15	1
La.	251	16	159	10	76	5
Maine	47	3	42	3	3	0
Md.	31	2	27	2	1	0
Mass.	72	5	51	3	98	6
Mich.	190	12	109	7	238	15
Minn.	259	16	158	10	76	5
Miss.	259	16	154	10	157	10
Mo.	474	30	223	14	122	8
Mont.	55	3	48	3	1	0
Nebr.	551	34	273	16	60	4

	Tornadoes		Tornado Days		Deaths	
State	Total	Average	Total	Average	Total	Average
Nev.	7	0	6	0	0	0
N.H.	39	2	33	2	4	0
N.J.	20	1	18	1	0	0
N.Mex.	139	9	101	6	4	0
N.Y.	33	2	33	2	2	0
N.C.	120	8	93	6	13	1
N.Dak.	217	14	133	8	29	2
Ohio	163	10	99	6	100	6
Okla.	1011	63	403	25	176	11
Oreg.	12	1	11	1	2	0
Pa.	88	6	72	5	9	1
R.I.	0	0	0	0	0	0
S.C.	159	10	109	7	15	1
S.Dak.	323	20	174	11	27	2
Tenn.	126	8	78	5	28	2
Tex.	1631	102	707	44	371	23
Utah	21	1	18	1	4	0
Vt.	19	1	15	1	0	0
Va.	66	4	52	3	14	1
Wash.	12	1	11	1	0	0
W.Va.	21	1	19	1	1	0
Wis.	249	16	146	9	66	4
Wyo.	100	6	84	5	10	1
U.S	*10302	644	†2543	159	1952	122

*Corrected for boundary-crossing tornadoes.
†Tornado Days for Country as a whole.

TRACKS OF TORNADOES, 1968



HAILSTORM LOSSES FOR PAST YEARS

Year	Property (exclusive of crops) †	Crops †	Total †	Year	Property (exclusive of crops) †	Crops †	Total †
1933	-	-	7	1951	7	7	8
1934	-	-	7	1952	7	7	7
1935	-	-	7	1953	7	7	7
1936	6	7	7	1954	7	8	8
1937	[illegible]	7	7	1955	7	7	8
1938	6	7	7	1956	7	8	8
1939	5	6	6	1957	7	8	8
1940	6	7	7	1958	7	8	8
1941	6	7	7	1959	6	7	7
1942	6	7	7	1960	7	8	8
1943	6	7	7	1961	8	8	8
1944	7	7	[illegible]	1962	9	8	9
1945	6	7	7	1963	8	8	8
1946	7	7	7	1964	8	8	8
1947	6	8	8	1965	8	8	8
1948	7	8	8	1966	8	8	8
1949	7	7	7	1967	8	8	8
1950	7	7	7	1968	8	8	8

† Storm damages are placed in categories varying from 1 to 9 as follows:

1 Less than $50	4 $5,000 to $50,000	7 $5,000,000 to $50,000,000
2 $50 to $500	5 $50,000 to $500,000	8 $50,000,000 to $500,000,000
3 $500 to $5,000	6 $500,000 to $5,000,000	9 $500,000,000 to $5,000,000,000.

NOTE.--The above estimated losses are based on values at time of occurrence.

WINDSTORM LOSSES FOR PAST YEARS

(Windstorms other than tornadoes)

Year	Total loss of life	Total property loss †	Year	Total loss of life	Total property loss †
1916	65	7	1944	448	8
1917	25	6	1945	85	7
1918	79	7	1946	70	7
1919	344	7	1947	117	8
1920	42	6	1948	52	8
1921	65	7	1949	102	8
1922	133	7	1950	210	8
1923	68	7	1951	289	8
1924	78	7	1952	137	8
1925	88	7	1953	118	8
1926	357	8	1954	292	9
1927	64	7	1955	301	8
1928	1,947	8	1956	196	8
1929	46	7	1957	553	8
1930	49	7	1958	129	8
1931	17	7	1959	145	7
1932	306	7	1960	85	8
1933	156	8	1961	64	8
1934	109	7	1962	134	9
1935	461	7	1963	54	9
1936	121	7	1964	64	9
1937	43	7	1965	107	9
1938	630	8	1966	74	8
1939	60	6	1967	48	8
1940	251	7	1968	49	8
1941	43	7		Total 9,699	
1942	68	7			
1943	61	7			

† Storm damages are placed in categories varying from 1 to 9 as follows:

1 Less than $50	4 $5,000 to $50,000	7 $5,000,000 to $50,000,000
2 $50 to $500	5 $50,000 to $500,000	8 $50,000,000 to $500,000,000
3 $500 to $5,000	6 $500,000 to $5,000,000	9 $500,000,000 to $5,000,000,000.

NOTE.--The above estimated losses are based on values at time of occurrence.

NORTH ATLANTIC TROPICAL CYCLONES, 1968

Richard M. DeAngelis
Environmental Data Service
Environmental Science Services Administration
Washington, D. C.

From Abby to Gladys the 1968 season was unusual. A rush of June storms was followed by a lull in July and below normal activity in August and September. Although only seven tropical cyclones reached tropical storm strength or greater, more than 100 potential storms(tropical disturbances) rolled across the Atlantic this season. None of the four storms that crossed the Florida Peninsula caused recorded, sustained hurricane winds in the State. Gladys was the most destructive storm this season, but the $9.88 million estimated damage was spread between Abby, Candy, and Gladys, and the 11 deaths were caused by Abby and Gladys. The total of seven tropical cyclones, four of which reached hurricane strength, was below the latest 30-yr average of nine tropical cyclones of which almost six reached hurricane strength. The tracks of 1968 tropical cyclones are shown in the accompanying chart.

HURRICANE ABBY, JUNE 1-13

Hurricane Abby opened the 1968 hurricane season on the 1st of June--the date generally considered to open the hurricane season. She was a rare tropical bird--a nonviolent, beneficial hurricane. The $450,000 damage she caused was more than offset by her drought-relieving rains. Of course nothing can offset the six deaths indirectly caused by the storm; particularly the little boy who, left unwatched, drowned in a puddle caused by the storm's rains.

Abby got her start in a cloud mass off the northern coast of Honduras as the month of May closed. This stagnant, but persistent, cloud mass was triggered into action by a frontal system from the north, and on the 1st Abby was born. The first leg of Abby's journey looks like a replay of Alma's track back in June 1966. Abby moved northward at 9 kt., and she became a tropical storm on the 2d shortly before crossing the western tip of Cuba. She became a hurricane for a day on the 3d, and peaked in the afternoon just northwest of Dry Tortugas. Her pressure was measured at 992 mb. and winds reached minimal hurricane force near her center. After stalling for awhile, Abby finally made up her mind and headed northeastward toward the Florida mainland.

Tropical storm Abby crossed the Florida coast near Punta Gorda on the morning of the 4th. Winds in the area were only 35 kt.; however, the more exposed Florida Keys were whipped by 40- to 45-kt. winds for almost 24 hr. The weak storm moved east-northeastward across central Florida on the 4th and 5th. Abby's slow movement and heavy rains combined to bring relief from a spring-long drought. Rainfall was heaviest in the Titusville-Orlando area where 10 in. and more were recorded. Rainfall amounts of 4 in. and more covered most of the peninsula. Most of the damage cost was due to clean up work. Two tornadoes occurred in Florida on the 4th; on touched down near Pineda Bar in Brevard County and the other at Haines City in Polk County. The six-death total included three drownings, two electrocutions, and one traffic fatality.

Late on the 5th, Abby stalled off Cape Kennedy, reintensified slightly, then moved northward along the Jacksonville beaches. It was on the 6th that Jacksonville recorded 45-kt. winds with 57-kt. gusts--the highest figures from any land station (reconnaissance aircraft recorded 67-kt. winds). Most of northern Florida and southern Georgia felt the brunt of Abby's gale force winds as she moved across northeastern Florida and into southern Georgia late on the 6th. Once over Georgia, she weakened to a depression.

As Abby moved through Georgia and the Carolinas her torrential rains caused local flooding and minor damage. She spawned a tornado near Charlotte, N. C., on the 7th; it touched down once near Monroe and again on the outskirts of Charlotte causing an estimated $30,000 in damage. Abby's rains, like in Florida, were beneficial to Georgia and South Carolina, and damage in these States was minor. By the time she reached North Carolina she was weak and heavy rain occurred in local thundershowers. On the 11th and 12th the weak depression moved along the North Carolina shoreline and out into the Atlantic. Abby finally dissipated on the 13th some 120 mi. off the New Jersey coast.

HURRICANE BRENDA, JUNE 17-26

Brenda blossomed into the second hurricane of the season on the 23d, far off the U. S. coast. Her winds reached 70 kt. and her pressure dropped to 990 mb, but no damage or casualties were reported.

The initial depression, which formed in the Florida Straits on the 17th, drifted up the Florida peninsula for 2 days before turning to sea. The real weather, wind squalls and heavy rain, remained well east of the center. Moving eastward into the Atlantic, the depression began to grow; she reached tropical storm intensity on the 21st and hurricane force by the 23d. The ESSO WASHINGTON, sailing 150 mi. to the west of Brenda's center on the 21st, ran into 36-kt. winds, and 6 hr. later the LT. J. E. ROBINSON reported 40-kt. winds 100 mi. south of the storm's eye. Brenda reached peak intensity early on the 24th; however, late in the day she began to weaken. On the 26th she was devoured by a strong extratropical system near 38°N., 42°W.

TROPICAL STORM CANDY, JUNE 22-26

Tropical storm Candy, although lacking the room to reach hurricane strength, still managed to spread destruction from Texas to Illinois. The total estimated damage figure is near $2.8 million. Fortunately no deaths were associated with the storm, although she spawned 19 tornadoes over four States on the 23d and 24th.

Candy followed an early season pattern when she formed in the Bay of Campeche on the 22d. She peaked just 1 day later when central pressure dropped to 999 mb., winds gusted to 62 kt. at Hoppers Landing, and tides ran 3-4 ft. above normal in Corpus Christi and San Antonio Bays. Hoopers Landing, on San Antonio Bay, also reported a rainfall maximum of 12.00 in. Candy's brief sea life covered less than 500 mi. before she made it to the Texas coast near Port Aransas during the afternoon of the 23d. Nearing Ft. Worth on the 24th, the storm was spreading rains over an already rain-drenched area. The depression stage of Candy moved through Arkansas, Missouri, Illinois, and Indiana on the 24th, and into northern Ohio the following day. On the 26th Candy became extratropical as she crossed Lake Erie and moved eastward along

the New York-Pennsylvania border.

Texas suffered the bulk of the damage with crop and property losses estimated at $2.73 million. Gale force winds lashed the Texas coast from Corpus Christi to Galveston, while high tides and high waves temporarily marooned tourists on Padre Island. Strong winds and high tides beached eight barges and sunk a drilling rig in San Antonio Bay and the 740-ft. fishing pier at Port O'Connor suffered extensive damage. The Aransas Wildlife Refuge near Austwell was dealt a severe blow by 52-kt. winds and 10-in. rains. The refuge had never completely recovered from hurricane Beulah (1967). In addition to numerous cuts across the refuge's shell road, many of the young wildlife drowned when they couldn't make it to high ground.

Coastal areas in the storm's path received around 10 in. of rain while inland areas of Texas recorded from 3-8 in. over a 24- to 48-hr. period. Flooding occurred on most middle and upper coastal rivers after 8-10 days of rain, which culminated in Candy's torrential downpours. Flood damage was relatively minor except along the west and east forks of the San Jacinto River in Harris and Montgomery Counties.

While 10 tornadoes were spawned in Texas, nine others were reported over a three-State area on the 23d and 24th. Five tornadoes occurred in Arkansas, three in Louisiana, and one in Missouri. The most serious tornado demolished a school in Morning Star, Ark., and damage was estimated at $100,000. The northern States in Candy's path received 3-6 in. of rain over a 2-day period, while a HIGH in Canada resulted in a tight gradient that caused gale force winds as far north as Green Bay, Wis.

HURRICANE DOLLY, AUGUST 9-16

The tropical wave that was to spawn hurricane Dolly emerged from the African Continent at the end of July. Closely watched, the wave slowly made its way across the Atlantic and thru the Bahamas to the Florida coast. On the 9th it spawned a small tropical depression in the Florida Straits. The tropical depression moved inland just north of Miami on the 10th, and moved offshore just north of Titusville later in the day. She dumped 2-4 in. of rain along the coast where winds reached 20-25 kt.

It wasn't until the 12th that Dolly reached tropical storm strength and by this time she was well out into the Atlantic--some 200 mi. east of Cape Hatteras. The following day Dolly reached hurricane strength when winds rose to 64 kt. and pressure fell to 994 mb. The LUTJENBURG, 120 mi. southeast of Dolly's center, encountered 40-kt. winds. The storm lost her hurricane strength late on the 13th, but regained it again the next day. Winds reached 70 kt. and pressure fell to a low of 992 mb. On the 16th, as Dolly moved north of the Azores, she weakened to a depression.

TROPICAL STORM EDNA, SEPTEMBER 10-19

Tropical storm Edna lived and died at sea without ever making landfall. Edna was born off the African coast on the 10th. As a depression, she passed 60 mi. south of the Cape Verde Islands on the 12th; this was the closest she ever came to land. Satellites tracked the storm westward. The SAL MELA was battered by 60 kt. gusts on the 15th, confirming the existence of an organized tropical storm. The MORMACELM reported 40- to 45-kt. winds later in the day. Air Force and Navy Reconnaissance flights, along with satellite pictures, indicated a gradual decrease in intensity during the next few days. Edna finally dissipated on the 19th about 300 mi. before reaching the Leeward Islands.

TROPICAL STORM FRANCES, SEPTEMBER 23-30

Satellite pictures caught the initial stages of tropical storm Frances on the 23d, 150 mi. east of Great Abaco Island in the Bahamas. On the 26th a Navy reconnaissance team found a 1003-mb. pressure and 45 kt. winds near the center of the storm, which had moved northeastward. Upper air conditions prevented Frances from reaching hurricane strength. The most intense conditions were recorded by an Air Force Reconnaissance flight that encountered 50-kt. winds and a 1001-mb. pressure on the 28th. The storm, moving east-northeastward, gradually lost its tropical characteristics. On the 29th, near 35°N., 50°W., Frances was deemed extratropical. She weakened as she approached the Azores on the 30th.

HURRICANE GLADYS, OCTOBER 13-21

Gladys was spawned from a late season depression in the western Caribbean Sea. This depression was the third disturbance in several days in the area. On the 14th she was centered 100 mi. southeast of Swan Island and her rain shield extended over Jamaica and western Cuba. On the 15th the depression reached tropical storm strength and moved northward toward western Cuba.

Already soaked by 2 days of rain, Cuba felt the brunt of the storm on the 16th when Gladys became a hurricane shortly before moving ashore, south of Pinar Del Rio. The western part of the island was lashed by 70-kt. winds, storm tides, and flash floods, forcing thousands of persons to flee low-lying areas.

Gladys left Cuba and headed for Florida. Early on the 17th the storm located 180 mi. south-southwest of Tampa, was generating 75-kt. winds around a 986-mb. center. The Florida Keys and the lower west coast of Florida were already being whipped by gales and soaked by torrential rains. The Tampa radar indicated Gladys was a well-developed storm. The hurricane stalled for several hours before resuming her slow northward journey. It was then apparent that Gladys would turn northeastward and move inland north of Cedar Key late on the 18th.

Hurricane Gladys, her 65-kt. winds battering Florida's west coast and leaving 3- to 7-ft. tides in her wake, moved ashore between Bayport and Crystal River shortly after midnight, on the 19th. She moved northeastward across the peninsula and pushed offshore south of St. Augustine later that morning. After losing some of her punch over land, Gladys began to reintensify as she paralleled the southeastern U. S. coastline. By late on the 19th the violent storm was generating 85-kt. winds around a 965 mb. center (extremes for the storm). The hurricane brushed North Carolina's Outer Banks early on the 20th, then continued northeastward out to sea. When Gladys crossed the major shipping lanes on the 21st, she was still generating 75-kt. winds near her center. Later in the day she completed her extratropical transformation and moved across Cape Breton Island. She was still a potent storm with winds up to 65 kt.

Gladys caused more than $7 million in damage during her journey; most of her wrath was spent in Cuba and Florida. Total death figures for the storm stand

TROPICAL CYCLONE DATA
HURRICANE GLADYS
OCTOBER 13 - 21, 1968

Station	Date Oct.	Pressure (inches) Low	Time+	Wind (miles per hour) Fastest Mile	Time+	Gusts	Time+	Highest Tide (feet) #	Time+	Storm Rainfall (inches)	Remarks
FLORIDA											
Key West	16	29.62	17/0230	SE 49	2112	55	2114	0.6	1920	2.95	
Fort Meyers	16	29.68	17/1400, 1600, 1700	SE 30	1430	SE 37		2.5		6.09	
Tampa	18	29.53	1955	S 37	1855, 2055	55	1958, 2007, 2112	5.0	2330	3.12	
Venice	18	29.52	17/2130			WSW 39	1600				
Egmont Key	18	29.54	1720			ESE 60	1715				
Cedar Key	18	29.45	19/0130			NE 48	2250			1.10	
Plantation Key	17	29.71	1300			ESE 88	16/2030			4.14	
Tavernier	17	29.80	0600			SE 58	16/2330	.5		2.31	
North Key Largo	17	29.74	0400			ESE 47	16/1920				
Flamingo	17	29.77	0850			SSW 59	0238	1.0		2.56	
Royal Palm	17	29.80	0700			SE 33				5.47	
40 Mile Bend	17	29.88	0700			SE 44	2015			3.19	
Miami (WBAS)	17	29.74	1453			SE 53	0136			3.79	
Miami (NHC)	16	29.74	2340			58	2342			4.32	
Miami Beach	17					SE 63	0120	2.7*		2.39	
Port Everglades	17	29.80	1500			ESE 63	0300			2.15	
Everglades City	17	29.71	0400			SE 36	1305	3.6*		3.15	
S. Melbourne Beach	17	29.77	1330			SE 47				5.05	
West Palm Beach	17	29.73	1558	ESE 35		ESE 45				3.73	Tornado at Boca Raton 17/1200
Orlando	19	29.66	0256	S 38		S 40				4.30	
Daytona Beach	19	29.56	0615	SSW 35		SSW 63				6.57	
Jacksonville	19	29.56	0637	SE 39	0305			1.3	0645	.71	
SOUTH CAROLINA											
Charleston	19	29.62	1541	NNW 23	1806	N 32	1834	1.6	17/0800-1000	6.41	
Edisto Beach	19	29.64	1630	NNW 21	1550						
Sullivans Is.	19	29.58	1600	NNW 23	2200						
NORTH CAROLINA											
Wilmington	19	29.58	20/0137	N 35	2327	N 39	2255			2.52	
Atlantic Beach	19	29.32		69							
Cape Lookout	19			90						6.65	
Cape Hatteras	20	29.17	0450	NNW 60	0535	N 79	0535			3.03	Coast Guard stations at Ocracoke and Cape Hatteras reported gusts N 98.
VIRGINIA											
Norfolk	20	29.71	0445			N 46	0535			2.91	

* Tides above mean low water
\# Tide above normal
\+ Times are Eastern Standard

at five. Several areas actually benefited from the storm's rainfall.

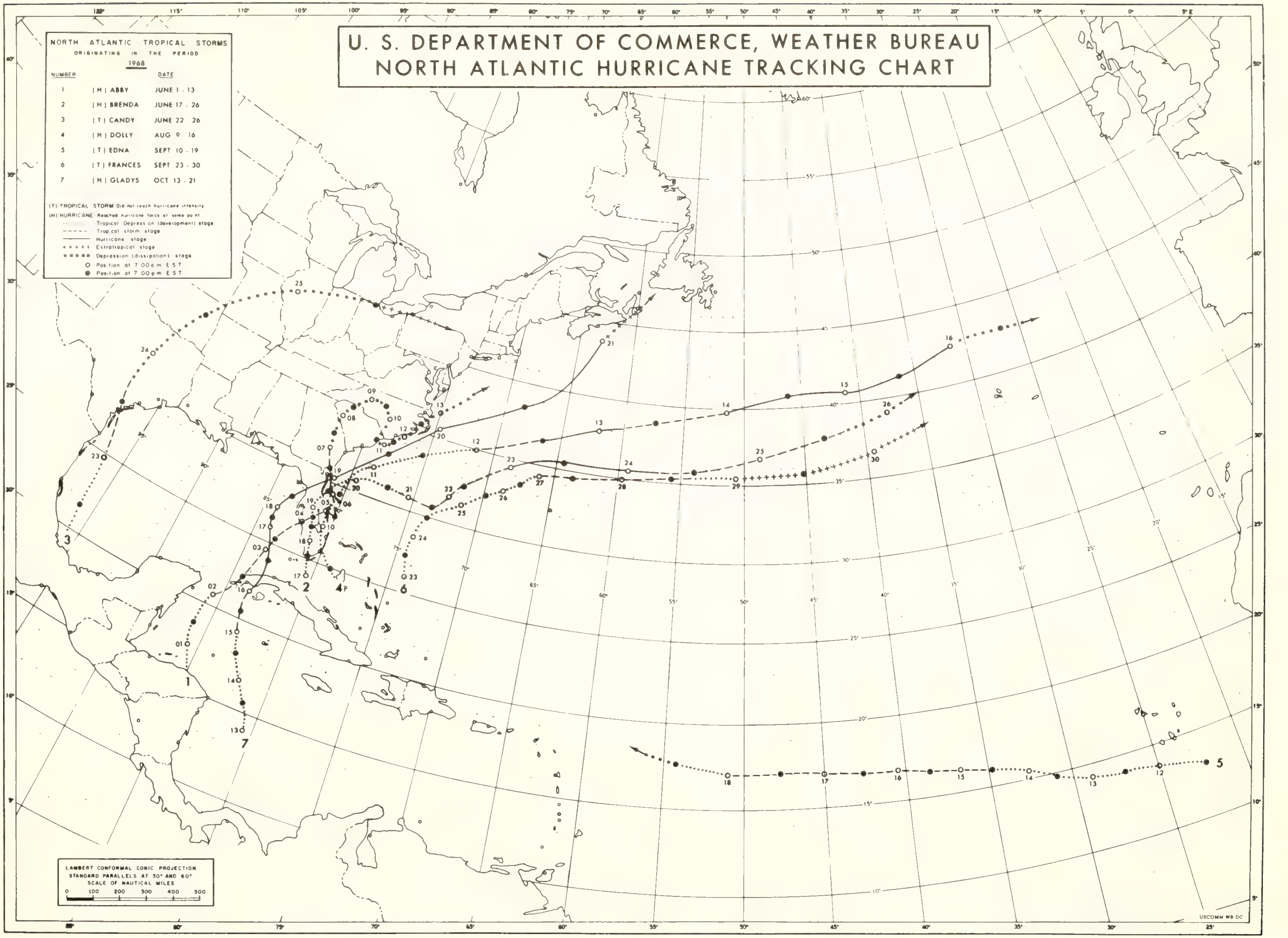
Western Cuba suffered when the rains from Gladys caused serious flashflooding. The heaviest damage was incurred by industrial installations and crops. The rich tobacco crop was virtually wiped out. One death was reported in Cuba.

Damage in Florida, which is estimated at $6.7 million, was concentrated primarily in Pinellas, Pasco, Hernando, Citrus, Marion, and Hillsborough Counties. In her path Gladys left a trail of uprooted trees, fallen power lines, and unroofed houses. There were three deaths indirectly related to the storm, and she was responsible for two confirmed tornadoes (Whitfield Estates and Boca Raton).

Pinellas County, owing to its population density, suffered the most (damage has been estimated as high as $2.5 million). Along the county beaches there was flooding damage in several areas. The MIC(Meteorologist in Charge of Weather Bureau Office) Tampa, after a tour of the area, reported that although many trailers were rolled over, boathouses were demolished, and billboards were torn apart, no buildings of substantial construction were visibly damaged. The CHURN (Cooperative Hurricane Reporting Network) observer at Bayport reported that the wind reached 73 kt. from the southeast when the anemometer, together with the roof of his house, blew away. In the Ocala area a great number of trees were uprooted, blocking roads and damaging power and telephone lines. Wind damage along the east coast was minor, even though Jacksonville Beach recorded a gust of 64 kt. Since Gladys rode an outgoing tide off the east coast, there was no flooding damage. Rainfall from the storm averaged 2-4 in. in most areas with a few localities recording 6 in., and this caused negligible flooding damage. The major portion of the State's citrus-producing area was unharmed by Gladys. In Pinellas and West Pasco Counties some individuals suffered a 75 percent loss of grapefruit crop, but the overall orange loss in the area was less than 10 percent..

North Carolina benefited the most from hurricane Gladys. The MIC's at Wilmington and Cape Hatteras describe damage as light, and there were no deaths or injuries reported in the State. Rainfall was beneficial throughout the State. For most of the 2-day period moderate rain soaked into previously dry soil. Total amounts over the eastern portion of the State ranged from 2-5 in. with a few reports close to 8 in. Winds were highest along the exposed Outer Banks; they reached a peak at Cape Hatteras and Ocracoke Coast Guard stations where 85-kt. gusts were reported. Despite the high winds along the coast, tides ran only 2-3 ft. above normal, causing minor beach erosion.

Despite one storm-associated death in Nova Scotia, this area benefitted from the 2-4 in. of rain produced by the extratropical stage of Gladys.


U. S. DEPARTMENT OF COMMERCE, WEATHER BUREAU
NORTH ATLANTIC HURRICANE TRACKING CHART
NORTH ATLANTIC TROPICAL STORMS
ORIGINATING IN THE PERIOD
1968
NUMBER
DATE
1 (H) ABBY JUNE 1 - 13
2 (H) BRENDA JUNE 17 - 26
3 (T) CANDY JUNE 22 26
4 (H) DOLLY AUG 9 16
5 (T) EDNA SEPT 10 - 19
6 (T) FRANCES SEPT 23 - 30
7 (H) GLADYS OCT 13 - 21
(T) TROPICAL STORM Did not reach hurricane intensity
(H) HURRICANE Reached hurricane force at some point
Tropical Depression (development) stage
Tropical storm stage
Hurricane stage
Extratropical stage
Depression (dissipation) stage
Position at 7:00 a.m. E S T
Position at 7:00 p.m. E S T
LAMBERT CONFORMAL CONIC PROJECTION
STANDARD PARALLELS AT 30° AND 60°
SCALE OF NAUTICAL MILES
0 100 200 300 400 500
USCOMM WB DC

NORTH ATLANTIC TROPICAL CYCLONES, 1968

STORM NAME	DATE	ORIGIN	COAST LINES CROSSED	HIGHEST REPORTED WIND SPEED	LOWEST PRESSURE REPORTED	AREA OF DISSIPATION	INTENSITY	REMARKS
1. ABBY	June 1-13	Nrn. coast of Honduras	Cuba, Fla., Ga., S.C., N.C.	52 m.p.h. at Jax on the 6th	992 mb on the 4th	Off the New Jersey coast	Hurricane	Six deaths--damage, $450,000
2. BRENDA	June 17-26	Fla. Straits	Florida	80 m.p.h., Recon. 23d	990 mb Recon. 23d.	West of Azores	Hurricane	
3. CANDY	June 22-26	Wrn Gulf of Campeche	Tex., Okla., Mo., Ill., Ind., Ohio, N.Y.	60 m.p.h. Austwell /23d	999 mb Austwell 23d.	N.Y., - Pa., border	Tropical Storm	$1 million damage and 19 tornadoes
4. DOLLY	Aug. 9-16	Fla. Straits	Florida	75 m.p.h. Recon. 13th, 14th	992 mb Recon. 14th	North of Azores	Hurricane	
5. EDNA	Sept. 10-19	Southeast of Cape Verde Islands	None	69 m.p.h. from SAL MELA on 15th	1005 mb Recon. 15th	East of Leeward Islands	Tropical Storm	
6. FRANCES	Sept. 23-30	East of the Bahamas	None	58 m.p.h. Recon. on 28th	1001 mb Recon. on 28th	West of Azores	Tropical Storm	
7. GLADYS	Oct. 13-21	Wrn. Caribbean Sea	Cuba, Fla., Cape Breton Is.	90 m.p.h. Recon. 19th	965 mb. Recon. on the 19th	Cabot Strait	Hurricane	Five deaths--$6.7 million damage and four tornadoes

NORTH ATLANTIC TROPICAL CYCLONES FOR PAST YEARS

TOTAL NUMBER OF TROPICAL CYCLONES, LOSS OF LIFE AND DAMAGE								
	Total Number Tropical Cyclones*		Total Number Hurricanes		Loss of Life		Damage by Categories**	
Year	All Areas	Reaching U.S. Coast	All Areas	Reaching U.S. Coast	Total All Areas	United States	Total All Areas	United States
1886	10	7	8	6				
1887	17	4	10	3				
1888	10	6	5	3				
1889	9	4	5	2				
1890	1	0	1	0				
	47	21	29	14				
1891	11	4	8	2				
1892	9	3	4	0				
1893	12	7	10	6				
1894	6	3	5	2				
1895	6	4	2	1				
	44	21	29	11				
1896	6	4	6	4				
1897	5	4	2	1				
1898	9	6	4	3				
1899	6	4	5	3				
1900	7	3	3	1		6,000		7
	33	21	20	12				
1901	10	[illegible]	3	2		10		6
1902	5	3	3	1		#		#
1903	9	2	8	2		9		6
1904	5	3	2	[illegible]		#		6
1905	5	2	1	0		#		#
	34	16	17	7				
1906	11	6	6	4		285		7
1907	4	3	0	0		#		[illegible]
1908	8	2	5	1		[illegible]		#
1909	10	7	4	3		404		7
1910	4	2	3	2		13		6
	37	20	18	10				
1911	4	2	3	2		17		6
1912	6	4	4	[illegible]		12		6
1913	4	3	3	2		#		#
1914	1	1	0	0		#		#
1915	5	4	4	3		600		8
	20	14	14	9				
1916	14	8	11	6		107		7
1917	3	1	2	1		5		5
1918	5	2	3	1		34		6
1919	3	2	1	1		287		7
1920	4	3	4	2		2		6
	29	16	21	11				
1921	6	2	4	2		5		6
1922	4	1	2	0		0		#
1923	7	4	3	2		0		4
1924	8	3	5	2		2		3
1925	2	2	1	1		6		3
	27	12	15	7				
1926	11	4	[illegible]	4		269		[illegible]
1927	7	1	4	0		0		#
1928	6	3	4	2		1,836		7
1929	3	2	3	2		3		6
1930	2	1	2	0		0		2
	29	11	21	8				
1931	9	2	2	0		0		#
1932	11	5	6	2		0		#
1933	21	7	9	5		63		7
1934	11	5	6	3		17		6
1935	6	2	5	2		414		7
	58	21	28	12				
1936	16	7	7	3		9		6
1937	9	4	3	0		0		[illegible]
1938	8	4	3	2		600		8
1939	5	3	3	1		3		3
1940	8	3	4	2		51		6
	46	21	20	8				
1941	6	4	4	2		10		7
1942	10	3	4	2	17	8	7	7
1943	10	4	5	1	19	16	7	7
1944	11	4	7	3	1,076	64	8	8
1945	11	5	5	3	29	7	8	[illegible]
	48	20	25	11				
1946	6	4	3	1	5	0	7	7
1947	9	7	5	3	72	53	8	8
1948	9	4	6	3	24	3	7	7
1949	13	3	7	2	4	4	8	8
1950	13	4	11	3	27	19	7	7
	50	22	32	12				
1951	10	1	[illegible]	0	244	0	7	6
1952	7	2	6	1	16	3	6	[illegible]
1953	14	6	6	2	3	2	7	7
1954	11	4	8	3	720+	193	9	[illegible]
1955	12	5	9	3	1,518+	218	9	9
	54	18	37	9				
1956	8	2	4	1	76	21	8	7
1957	8	5	3	1	475	395	[illegible]	8
1958	10	1	7	0	49	[illegible]	7	7
1959	11	7	7	3	57	24	7	7
1960	7	5	[illegible]	2	185	65	8	8
	44	20	25	7				
1961	11	3	8	2	345	46	8	8
1962	5	1	3	0	4	4	6	[illegible]
1963	[illegible]	1	7	1	7,218+	11	9	7
1964	12	6	6	[illegible]	266	49	[illegible]	9
1965	6	2	4	1	76	75	9	9
	43	13	28	8				
1966	11	2	7	2	1,040	54	8	7
1967	8	2	6	2	68	18	8	8
1968	7	3	4	2	11	9	7	7
Total	669	294	396	162				
Median	8	4	4	[illegible]				

** ESSA (Environmental Science Services Administration has for some time recognized that, without detailed expert appraisal of damage, all figures published are merely approximations to fact. Since errors in dollar estimates vary in proportion to the total damage, storms are placed in categories varying from 1 to 9 as follows:

1 Less than $50	4 $5,000 to $50,000	7 $5,000,000 to $50,000,000
2 $50 to $500	5 $50,000 to $500,000	8 $50,000,000 to $500,000,000
3 $500 to $5,000	6 $500,000 to $5,000,000	9 $500,000,000 to $5,000,000,000

Blank spaces indicate no figures available.

* Including hurricanes.

Not reported in literature, believed minor.

+ Additional deaths for which figures are not available.

NORTH ATLANTIC TROPICAL CYCLONES FOR PAST YEARS—CONT'D

Frequency of Tropical Cyclones (Including Hurricanes) by Months and Years

	Mar.	Feb.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1886				3	1	2	2	2			10
1887			1		2	2	3	6	1	2	17
1888				1	1	2	2	1	3		10
1889			1	1		1	5	1			9
1890						1					1
1891					1	2	3	4	1		11
1892				1		1	4	3			9
1893				1	1	5	3	1	1		12
1894						2	1	3			6
1895						2	1	3			6
1896					1	1	2	2			6
1897						1	2	2			5
1898						2	5	2			9
1899					1	2	1	2			6
1900						1	3	3			7
1901				1	2	2	3	2			10
1902				2			1	1	1		5
1903					1	1	4	2	1		9
1904				1			1	3			5
1905							3	2			5
1906				2		1	3	4	1		11
1907				1			2	1			4
1908	(Mar.) 1				1	1	3	2			8
1909				2	2	2	2	1	1		10
1910						1	2	1			4
1911						2	1	1			4
1912				1	1		1	2	1		6
1913				1		1	1	1			4
1914							1				1
1915					1	2	2				5
1916				1	2	3	4	3	1		14
1917						2	1				3
1918						3	2				5
1919					1		1		1		3
1920							4				4
1921				1			3	2			6
1922				1			1	2			4
1923						1	1	5			7
1924				1		2	2	2	1		8
1925							1		1		2
1926					1	2	5	2	1		11
1927						1	3	3			7
1928						2	3	1			6
1929				1			1	1			3
1930						2					2
1931				1	1	2	3	1	1		9
1932			1			3	3	3	1		11
1933			1	1	3	7	5	3	1		21
1934			1	1	1	2	2	3	1		11
1935						3	1	2			6
1936				3	2	6	4	1			16
1937					1	2	6				9
1938						3	1	3	1		8
1939				1		1	1	2			5
1940			1			3	2	2			8
1941							4	2			6
1942						3	3	3	1		10
1943					1	2	4	3			10
1944					3	2	4	2			11
1945				1	1	4	3	2			11
1946				1	1	1	1	2			6
1947					1	2	3	3			9
1948			1		1	2	3	1	1		9
1949						3	7	2	1		13
1950						4	3	6			13
1951			1			3	4	2			10
1952		(Feb.) 1				2	2	2			7
1953			1			3	4	4	1	1	14
1954				1	1	2	4	1	1	1	11
1955					1	4	5	2			12
1956				1	1	1	4	1			8
1957				2		1	4	1			8
1958				1		4	4	1			10
1959			1	2	2	1	3	2			11
1960				1	2	1	3				7
1961					1		6	2	2		11
1962						2	2	1			5
1963					1	1	5	2			9
1964				1	1	4	4	1	1		12
1965				1		2	2	1			6
1966				1	4	1	4		1		11
1967						1	4	3			8
1968				3		1	2	1			7
Totals	1	1	10	46	50	147	228	152	30	4	669

Frequency of Tropical Cyclones Reaching Hurricane Intensity by Months and Years

	Mar.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1886			2	1	2	2	1			8
1887				1	2	3	2	1	1	10
1888			1		2		1	1		5
1889		1			1	3				5
1890					1					1
1891				1	2	3	2			8
1892					1	2	1			4
1893			1	1	5	3				10
1894					1	1	3			5
1895					1		1			2
1896				1	1	2	2			6
1897					1	1				2
1898					2	2				4
1899				1	2	1	1			5
1900					1	2				3
1901				1	2					3
1902			1			1	1			3
1903				1	1	3	2	1		8
1904						1	1			2
1905							1			1
1906			1		1	2	2			6
1907										0
1908	(Mar.) 1			1		2	1			5
1909				1	1	1	1			4
1910						2	1			3
1911					2	1				3
1912						1	2	1		4
1913			1		1	1				3
1914										0
1915					2	2				4
1916			1	2	3	2	2	1		11
1917					1	1				2
1918					2	1				3
1919						1				1
1920						4				4
1921			1			2	1			4
1922						1	1			2
1923					1	1	1			3
1924					2	1	1	1		5
1925								1		1
1926				1	2	4	1			8
1927					1	3				4
1928					2	1	1			4
1929			1			1	1			3
1930					2					2
1931						2				2
1932					3	1	1	1		6
1933			1	1	3	3	1			9
1934			1	1	1	1	1	1		6
1935					2	1	2			5
1936			1	1	3	2				7
1937						3				3
1938					2	1				3
1939					1		2			3
1940					3	1				4
1941						3	1			4
1942					3			1		4
1943				1	1	2	1			5
1944				2	1	3	1			7
1945			1		1	1	2			5
1946				1		1	1			3
1947					2	1	2			5
1948					1	3	1	1		6
1949					2	4	1			7
1950					4	3	4			11
1951		1			2	3	2			8
1952					2	2	2			6
1953					2	3	1			6
1954			1		2	3	1		1	8
1955					3	5	1			9
1956				1	1	1	1			4
1957			1			2				3
1958					3	3	1			7
1959			1	2		3	1			7
1960				1	1	2				4
1961				1		5	1	1		8
1962					1	1	1			3
1963				1	1	4	1			7
1964					2	3	1			6
1965					2	1	1			4
1966			1	3	1	1		1		7
1967					1	3	2			6
1968			2		1		1			4
Totals	1	2	20	29	109	145	74	13	2	396

TROPICAL CYCLONES IN THE EASTERN NORTH PACIFIC, 1968

Arthur F. Gustafson
Weather Bureau
Environmental Science Services Administration
San Francisco, California

Six hurricanes and 13 tropical storms originated in the North Pacific east of 140°W during 1968. There were five tropical depressions in the same area which failed to reach storm intensity. The season opened June 20 with tropical storm Annette and closed October 28 with the dissipation of the residual depression from tropical storm Tara. The San Francisco Weather Bureau Forecast Office issued a total of 326 numbered advisories on hurricanes and tropical storms and an additional 164 bulletins on depressions.

Naomi and Pauline were destructive hurricanes to parts of Mexico. Tropical storms Hyacinth, Annette, and Simone may also have been damaging as they moved inland and dissipated. Hyacinth and Annette dissipated over Mexico and Simone dissolved mainly over Guatemala. No serious injuries or deaths were reported from Mexican land areas, but press accounts told of the evacuation of 20,000 residents of small towns in four Mexican States to escape wind-swept torrential rains and floods resulting from Naomi. Naomi went inland about 40 mi. northwest of Mazatlan producing winds estimated up to 80 kt. in the Mazatlan district and knocking out electricity and communications over a wide area. Pauline crossed the Baja California peninsula northwest of La Paz and southeast of Magdalena Bay. Winds up to 100 kt. at Magdalena Bay were reported later by the Mexican Navy. The intensity of Pauline was considerably reduced in crossing the peninsula, but she was still an active storm moving onto the mainland near Navojoa.

A 40-ft. sailboat, TIARE, carrying four or five persons from San Diego to Puerto Vallarta, Mexico, was lost in the vicinity of Magdalena Bay about the time hurricane Pauline hit there; it became the object of an extended search by the U. S. Coast Guard.

A list of storms and hurricanes dangerous to fishing and other marine activities, concentrated near the Mexican coast, should include the small intense hurricane Rebecca in addition to those that moved onto Mexico. Rebecca attained hurricane intensity when the center was less than 75 mi. from the coast between Acapulco and Manzanillo. Winds up to 90 kt. were reported by ships near the center of Rebecca when she was south of Manzanillo, yet the radius of 35-kt. winds was only about 40 mi., so that two ships were able to locate and track the hurricane eye on their navigation radar while avoiding the strong winds.

Weather satellite pictures were the number one tool for detection, tracking, and evaluation. Ship reports were very sparse, especially at 0600 and 1200 GMT when no reconnaissance or satellite information was available.

Aircraft reconnaissance was regularly accomplished by the U. S. Air Force at 30,000 ft. on storms over international waters within 1,200 mi. range of Sacramento, Calif.

The total of 19 storms and hurricanes was a new record. However, the record has little meaning since many storms undoubtedly were not detected prior to 1966 when full operational satellite coverage became available. A total of 13 storms and hurricanes were found in 1966, and there were 17 in 1967. A total of eight storms and hurricanes in August 1968 should put to rest the notion from past years that August can be expected to bring a lull in tropical storm activity.

Summaries of individual tropical cyclones follow. All time references are GMT. Tracks are shown in the accompanying charts and tropical cyclone highlights are summarized in the table.

TROPICAL STORM ANNETTE, JUNE 20-21

Tropical storm Annette developed on the night of the 19th, 150 mi. west of Acapulco. It was first detected by the KOLLFINN which sent a report on the morning of the 20th which read, "Tropical storm at 17.0°N., 101.0°W. Bad weather here." The JAMES LYKES had a 40-kt. wind, about the same time, at a point 85 mi. to the southwest. The storm moved northwestward, turned inland near Manzanillo, and dissipated, early on the 21st. Heavy rains resulted in nearby Mexican coastal areas.

TROPICAL STORM BONNY, JULY 4-9

The depression that became Bonny was first seen on weather charts about 350 mi. south of Manzanillo late on July 3. The depression attained tropical storm strength the next day. The storm moved northwestward at 8 to 10 kt. and made a brief turn toward the north, with intensification, during the night of July 5-6. Maximum winds were estimated at 60 kt. on the 6th. The storm then weakened due to the influence of relatively cold water to the west of Baja California. The SILVERCAPE passed through the center of the storm early on the night of July 7-8. It reported no more than 20 kt. of wind on the 6-hr. reports. The residual depression continued northwestward and then turned westward to subsequently disappear on the 10th.

TROPICAL STORM CELESTE, JULY 15-21

Celeste became an organized tropical storm on July 15, 200 mi. south of Manzanillo. She reached peak intensity for her 6-day life on the 16th when 60-kt. winds were estimated near the center. Celeste's intensity began to decrease about the 17th as she became affected by relatively cool water. She moved westward for the first 36 hr. and then west-northwestward. She weakened upon crossing the 20th parallel near 120°W., on the 19th and degenerated to depression intensity within the next 24 hr.

TROPICAL STORM DIANA, JULY 21-26

Diana formed about 300 mi. south of Manzanillo on July 21. She moved on a west-northwesterly course and never quite attained hurricane strength. She did generate 55-kt. winds around the center on the 22d and 23d and then weakened abruptly to a depression which could be tracked westward past 130°W., on the 26th.

TROPICAL STORM ESTELLE, JULY 23-31

The fourth tropical storm in July formed on the 24th. Tropical storm Estelle organized from a depression first detected about 420 mi. south of Acapulco on the 23d. Storm intensity was apparent on the 24th and 25th followed by a weakening to depression status. The depression followed a westerly track past 135°W., (near 15°N.) on the 30th.

YEAR 1968

HURRICANE FERNANDA, AUGUST 4-15

The first hurricane of the season, Fernanda, evolved from a tropical depression which organized about 400 mi. southwest of Acapulco on August 4. Tropical storm intensity was reached early on the 6th after about a 500-mi. movement toward the west. The new tropical storm moved west-northwestward at 11 kt. and intensified to a hurricane early on the 8th when near 15°N., 118°W. Hurricane Fernanda moved westward at 12 kt. and then weakened to a tropical storm late on the 9th. She then turned toward the northwest on the 11th with continued weakening as indicated by satellite pictures. The remains of the dissipating storm crossed 140°W., (near 21°N) on the morning of the 13th. No ships were caught in hurricane Fernanda's strong winds.

TROPICAL STORM GWEN, AUGUST 5-9

The depression that led to tropical storm Gwen was spawned in the intertropical convergence zone on August 5 near, 11°N., 96°W. The depression moved west-northwestward at 12 kt. for 2 days, accelerated to 18 kt., and intensified to a tropical storm briefly on the 8th. Tropical storm Gwen then dissipated less than 24 hr. after attaining storm intensity.

TROPICAL STORM HYACINTH, AUGUST 16-20

The beginnings of tropical storm Hyacinth, the second storm to reach the mainland during 1968, were detected on the 16th, 230 mi. southwest of Manzanillo. The following day, near the storm's center, the KAWACHI MARU encountered 42-kt. winds and a 994-mb. pressure. Hyacinth, moving northward, passed between the tip of Baja California and the Mexican mainland on the 18th. She made landfall near Los Mochis on the 19th and then dissipated into an area of showers which moved northward over Arizona.

TROPICAL STORM IVA, AUGUST 21-26

Tropical storm Iva began to develop in the intertropical convergence zone some 300 mi. southeast of Acapulco on August 21. She intensified and followed a track toward the west-northwest, with acceleration to 15 kt. by the 23d. Maximum winds were between 45 and 50 kt. for most of her life. The PIONEER MART encountered 45-kt. winds and 996-mb. pressure near the storm's center at 0000 GMT on the 25th, shortly before rapid dissipation began. The residual depression turned toward the west on the 25th.

HURRICANE JOANNE, AUGUST 21-28

The BIRGITTE CORD tangled with hurricane Joanne on August 23 as she developed abruptly from depression to hurricane. Winds up to 68 kt. and pressure as low as 986 mb. were encountered with gale winds, or stronger, lasting more than 12 hr. From the vicinity of Clipperton Island, the initial depression had been followed for about 2 days.

Joanne moved northwestward at 12 kt. during the hurricane stage, which lasted less than 2 days. Rapid weakening was evident on August 25 as cool, stable air entered from the northwest. She was only a dissipating depression after crossing the 20th parallel (near 122°W.) on the 26th.

TROPICAL STORM KATHLEEN, AUGUST 23-SEPTEMBER 3

While Joanne was weakening from hurricane to tropical storm intensity near 14°N., 110°W., Kathleen moved west-northwestward at 11 kt. for 2 days and then turned westward for another 2 days. On the 28th, the DENBY GRANGE recorded 40-kt. winds and a 1003-mb. pressure north of the storm center. Soon afterwards, she weakened to a minor depression and moved toward the west-northwest.

HURRICANE LIZA, AUGUST 27-SEPTEMBER 6

Liza was first detected some 300 mi. south-southwest of Acapulco on August 27. She reached hurricane strength 180 mi. north of Clipperton Island on the 29th. The TEVERYA encountered 50-kt. winds near the center of the developing storm late on the 28th. Liza moved west-northwestward attaining winds up to 100 kt. on the 30th, as indicated by satellite pictures, and then weakened steadily. Tropical storm intensity was indicated as she crossed the 20th parallel (near 122°W.) on the 2d. Only a depression was left on the 4th, when the track turned toward the west-southwest.

TROPICAL STORM MADELINE, AUGUST 28-30

Madeline was a tropical storm less than 24 hr. She was detected on August 28 as a disturbance near 8°N., 90°W., and was seen to increase briefly to a tropical storm the following day. Late on the 30th, she dissipated rapidly.

HURRICANE NAOMI, SEPTEMBER 8-13

Hurricane Naomi first appeared as a tropical depression 270 mi. south-southeast of Acapulco on September 8. The depression moved west-northwestward for 2 days, with little development, and then turned toward the north and intensified to a hurricane during a 24-hr. period, ending early on the 11th. Late on the 11th, hurricane Naomi moved northward at 8 kt. starting from a point about 130 mi. west of Manzanillo. She turned gradually toward the mainland during the 12th. The hurricane center passed within 40 mi. to the west of Mazatlan on the afternoon of the 12th and made landfall a few hours later, causing widespread heavy rains during her dissipation over Mexico.

TROPICAL STORM ORLA, SEPTEMBER 21-30

Orla became a tropical storm some 400 mi. west-southwest of Manzanillo on September 23. Winds near the center remained 45 to 60 kt. as she made her way westward during the next 4 days. On the 28th, she weakened to a depression while moving west-southwestward at 8 kt. near 16°N., 130°W. She dissipated completely during the following 2 days as her track turned back toward the west.

HURRICANE PAULINE, SEPTEMBER 26-OCTOBER 3

Hurricane Pauline became the second storm of the month to strike the mainland when she ripped across the southern Baja California peninsula and into northwestern Mexico. Pauline formed from a disturbance first detected 250 mi. south of Acapulco on September 26. She reached tropical storm strength about 300 mi.

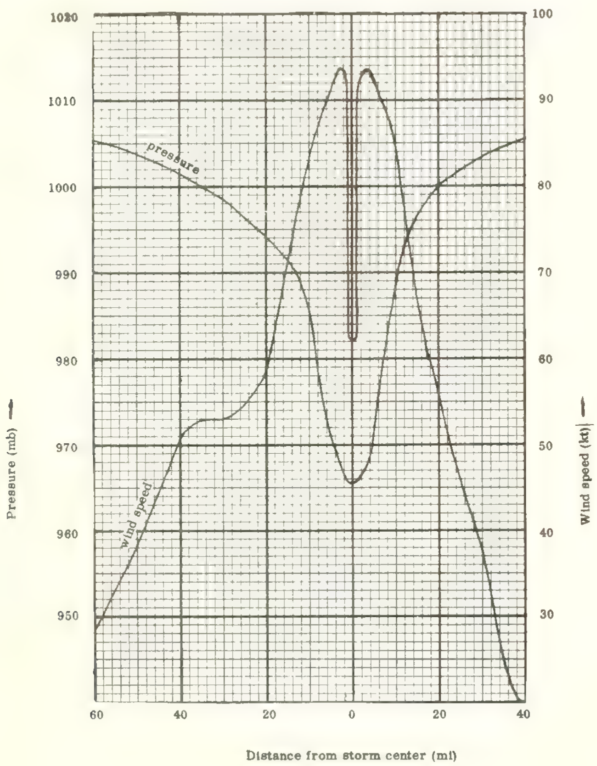
south-southeast of Manzanillo on the 29th, and hurricane strength on the 30th about 200 mi. west-southwest of Manzanillo. Pauline, with winds up to 100 kt., tore across southern Baja California on October 2. She weakened to a tropical storm in crossing the rugged terrain and then continued northward across the Gulf of California onto the Mexican mainland near Navojoa where she dissipated rapidly.

HURRICANE REBECCA, OCTOBER 5-11

Rebecca reached tropical storm stage on the morning of October 6 about 175 mi. south of Acapulco. When 100 mi. south of Manzanillo on the 8th, she became an excellent example of the very small type of violent hurricane which can occur off the Mexican west coast. Danger from such a compact storm is increased by the difficulty in following it, even with a reasonably close spacing of ship reports.

The first indication of hurricane intensity came from the MISSISSIPPI MARU which measured 80-kt. winds. The PACIFIC STRONGHOLD sent a series of five reports that told of winds up to 90 kt. and barometer down to 965 mb.; those reports indicated a radius of 35-kt. winds of only 40 mi.

Radar fixes on the eye of the hurricane were reported by the ARIZONA MARU and the STEENWIJK as they avoided the strong winds during the following few hours. The STEENWIJK was able to determine that the hurricane center had turned toward the west. The hurricane turned back toward the west-northwest early on the 9th and began to weaken. Dissipation then became rapid, and strong winds had abated by the time the center was 150 mi. southwest of Cape San Lucas on the 10th.



Pressure and wind profile of the PACIFIC STRONGHOLD's encounter with hurricane Rebbeca.

TROPICAL STORM SIMONE, OCTOBER 18-19

Simone was a short-lived minor storm that formed about 60 mi. off the Guatemalan coast on October 18. The VILLANGER passed through the storm center getting 40- to 50-kt. winds and a low pressure of 1005 mb. The storm moved northward onto land and dissipated. Simone's total lifetime was about 24 hr.

TROPICAL STORM TARA, OCTOBER 20-28

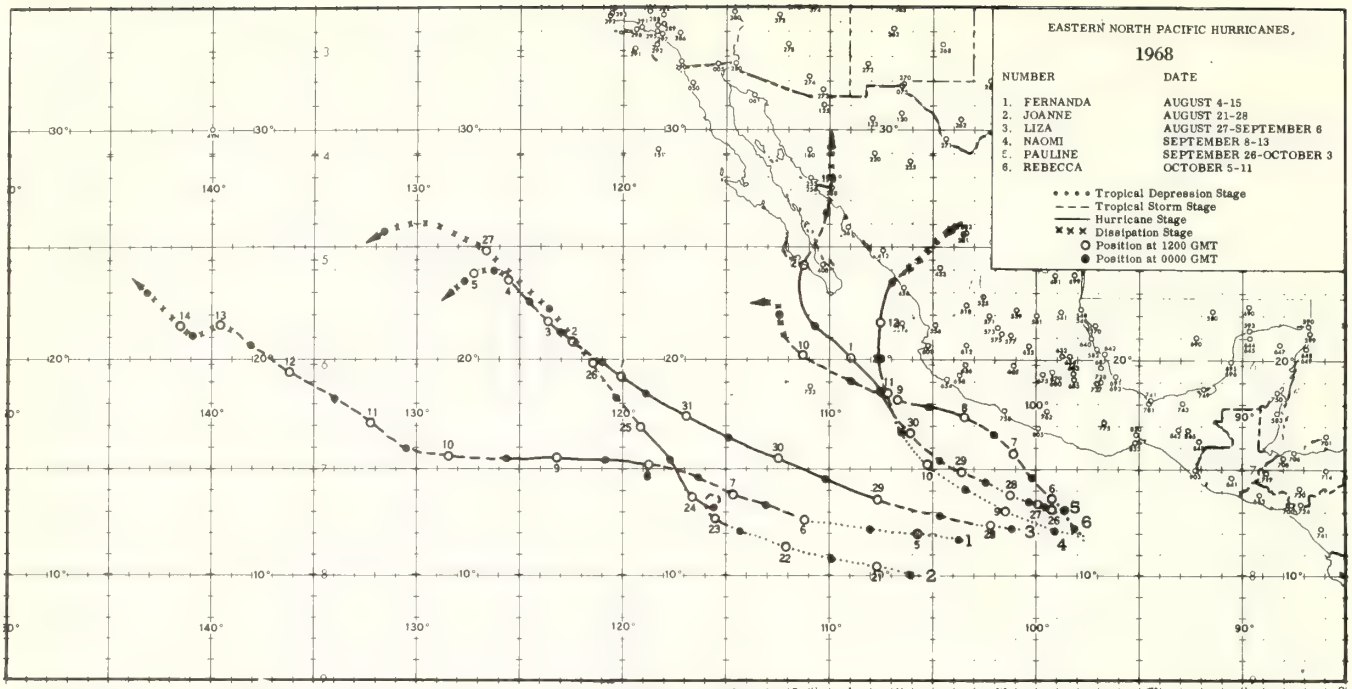
By means of a satellite picture, tropical storm Tara was first detected on October 20 about 300 mi. southwest of Acapulco. Initial movement was toward the west at 10-12 kt. for about 3 days, and then a turn toward the west-northwest occurred. Maximum winds were about 50 kt. when the storm was discovered, and these winds increased to about 60 kt. before the change in direction of movement on the 23d. Strongest winds were 45 kt. or less during the west-northwestward movement. Dissipation to a minor depression was evident as the remains of the storm crossed the 20th parallel (near 133°W.) on the 27th.

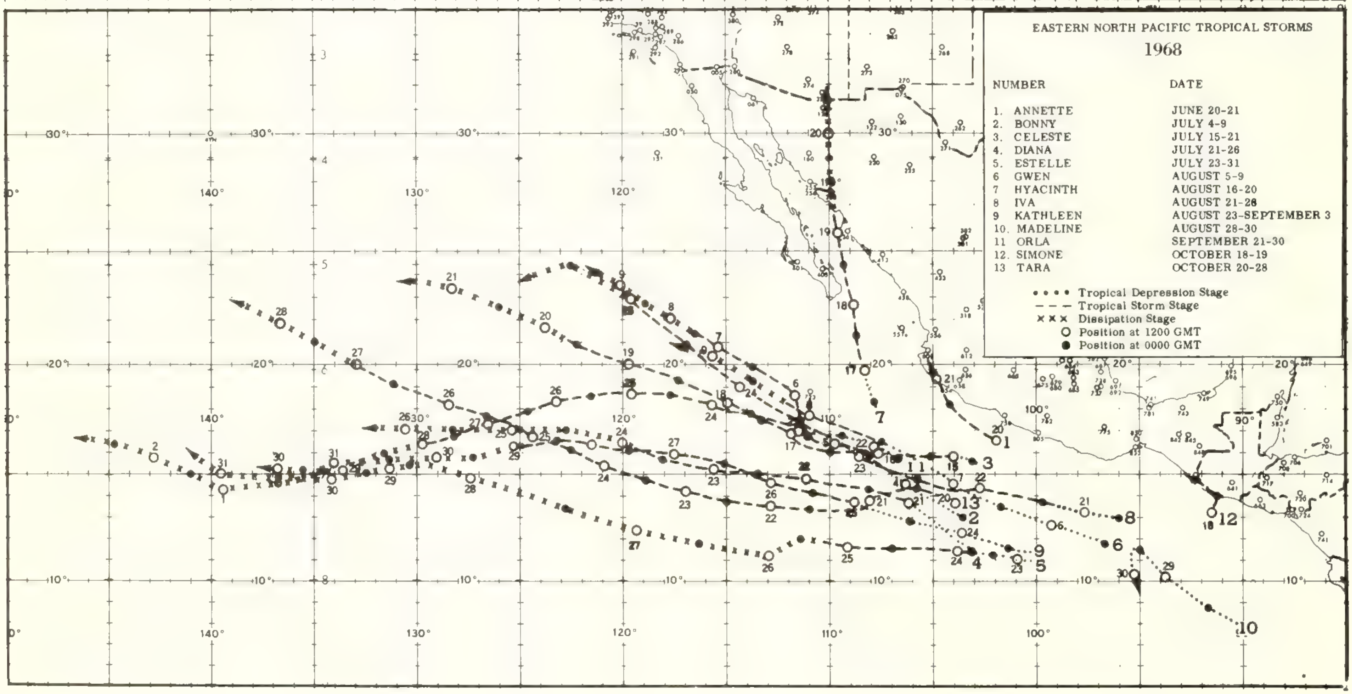
	June	July	August	Sept.	Oct.	Total
Hurricanes*	0	0	3	2	1	6
Tropical Storms*	1	4	5	1	2	13
TOTAL	1	4	8	3	3	19

* Storms and hurricanes counted for the month in which they formed.

STORM NAME	INTENSITY	DATE	ORIGIN (°N, °W)	COAST LINES CROSSED	*HIGHEST REPORTED WIND SPEED (kt)	*LOWEST REPORTED PRESSURE (mb)	AREA OF DISSIPATION (°N, °W)	REMARKS
ANNETTE	Tropical storm	June 20-21	17, 101	Mexico, near Manzanillo	40, ORSOVA and JAMES LYKES	1003.3 ORSOVA	On land near Manzanillo	
BONNY	Tropical storm	July 4-9	13, 104	None	50, EXPORT BUYER	1001.3 EXPORT BUYER	24, 120	
CELESTE	Tropical storm	July 15-21	16, 103	None	25, FUJISAN MARU	1003.0 FUJISAN MARU	23, 130	
DIANA	Tropical storm	July 21-26	11, 103	None	40, ANCO SWAN	1000.0 ANCO SWAN	17, 132	
ESTELLE	Tropical storm	July 23-31	11, 100	None	20, KELLETIA	1008.0 KELLETIA	16, 141	
FERNANDA	Hurricane	Aug. 4-15	11, 102	None	30, KELLETIA	1000.0 KELLETIA	22, 142	
GWEN	Tropical storm	Aug. 5-9	11, 96	None	30, (Radio call PGQY)	1010.0 (Radio call PGQY)	21, 117	
HYACINTH	Tropical storm	Aug. 16-20	17, 108	Mexico, near Los Mochis	42, KAWACHI MARU	994.0 KAWACHI MARU	On land east of Tucson, Arizona	
IVA	Tropical storm	Aug. 21-26	13, 96	None	45, PIONEER MART	996.0 PIONEER MART	24, 124	
JOANNE	Hurricane	Aug. 21-28	10, 106	None	68, BIRGITTE CORD	986.0 BIRGITTE CORD	26, 132	
KATHLEEN	Tropical storm	Aug. 23-Sept. 3	11, 100	None	40, DENBY GRANGE	1003.0 DENBY GRANGE	17, 146	
LIZA	Hurricane	Aug. 27-Sept. 6	12, 100	None	75, U.S. Navy(Anonymous)	998.0 TEVERYA	19, 128	
MADELINE	Tropical storm	Aug. 28-30	8, 90	None	45, (Radio Call ELMO)	1009.0 (Radio Call ELMO)	10, 95	
NAOMI	Hurricane	Sept. 8-13	12, 98	Mexico, 40 mi northwest of Mazatlan	81, near Mazatlan, Mexico	979.0 PHILLIPINE PRESIDENT GARCIA	On land about 200 mi north-east of Mazatlin	20,000 people were evacuated from homes in small towns of four Mexican States due to floods produced by NAOMI.
ORLA	Tropical storm	Sept. 21-30	15, 106	None	35, SHOBU MARU	1006.5 FURYU MARU	15, 137	
PAULINE	Hurricane	Sept. 26-Oct. 3	13, 99	Tip of Baja California and mainland Mexico near Navajo	100, Magdalena Bay, Mexico	1002.0 OVERSEAS JOYCE	100 mi north-east of Guaymas, Mexico	40-ft sailboat, TIARE, carrying four or five persons, disappeared near Magdalena Bay about the time PAULINE was there.
REBECCA	Hurricane	Oct. 5-11	11, 97	None	90, PACIFIC STRONG-HOLD	965.0 PACIFIC STRONGHOLD	22, 112	A very small but intense hurricane, followed on radar by STEENWIJK and ARIZONA MARU.
SIMONE	Tropical storm	Oct. 18-19	13, 92	Guatemala (60 mi southeast of Tapachula, Mexico)	45, VILLANGER	1005.4 Tapachula, Mexico	30 mi southeast of Tapachula, Mexico	
TARA	Tropical storm	Oct. 20-28	13, 103	None	30, WAROONGA	1005.5 WAROONGA	22, 137	

*In only a few cases were the highest winds reported representative of the highest winds that occurred. Likewise, lowest reported pressure was not generally near the lowest pressure that occurred.


EASTERN NORTH PACIFIC HURRICANES,
1968
NUMBER
DATE
1. FERNANDA
AUGUST 4-15
2. JOANNE
AUGUST 21-28
3. LIZA
AUGUST 27-SEPTEMBER 6
4. NAOMI
SEPTEMBER 8-13
5. PAULINE
SEPTEMBER 26-OCTOBER 3
6. REBECCA
OCTOBER 5-11
Tropical Depression Stage
Tropical Storm Stage
Hurricane Stage
Dissipation Stage
Position at 1200 GMT
Position at 0000 GMT
140°
130°
120°
110°
100°
90°
30°
20°
10°


EASTERN NORTH PACIFIC TROPICAL STORMS
1968
NUMBER
DATE
1. ANNETTE
JUNE 20-21
2. BONNY
JULY 4-9
3. CELESTE
JULY 15-21
4. DIANA
JULY 21-26
5. ESTELLE
JULY 23-31
6 GWEN
AUGUST 5-9
7 HYACINTH
AUGUST 16-20
8 IVA
AUGUST 21-28
9 KATHLEEN
AUGUST 23-SEPTEMBER 3
10. MADELINE
AUGUST 28-30
11 ORLA
SEPTEMBER 21-30
12. SIMONE
OCTOBER 18-19
13 TARA
OCTOBER 20-28
Tropical Depression Stage
Tropical Storm Stage
Dissipation Stage
Position at 1200 GMT
Position at 0000 GMT
140°
130°
120°
110°
100°
90°
30°
20°
10°

TYPHOONS OF THE WESTERN NORTH PACIFIC, 1968

Richard M. DeAngelis*
Environmental Data Service
Environmental Science Services Administration
Washington, D. C.

A slow start, a September lull, and a strong finish were the highlights of the 1968 typhoon season. At the end of July the normally productive waters of the western North Pacific had spawned just four typhoons--three below average. The pace picked up in August, but for the first 2 weeks in September, the tropical ocean was quiet. Then things began to happen! Three typhoons popped up over the last two weeks in September; five more developed in October, and the season was topped off by four November typhoons. Not since 1952 had there been such a late-season flurry of activity in the western North Pacific.

The late season rush brought the number of typhoons this season to a near-average 20. Seven of these storms came within 100 mi. of Saipan; Jean passed directly over the little Island. Five typhoons hit the Philippines, three reached Japanese shores, and two made it to the China mainland. There were five "super typhoons" (maximum sustained surface winds of 130 kt. or greater) this year compared to four in 1967 and three in 1966.

In the following narrative typhoon summary and in the accompanying charts, intensities are classified by wind speeds as follows:

typhoon	64 kt or more
tropical storm	34-63 kt.
tropical depression	less than 34 kt.

Dates for individual tropical cyclones indicate the periods during which warnings were issued. Storm tracks and maximum winds are based on post storm analysis.

JEAN, APRIL 6-15

More than two decades have passed, but for a short while last April, the northern Marianas were battlefields again. Saipan, Tinian, Rota, and Guam, names that bring back World War II memories were battered, but this time the enemy was weather--typhoon Jean.

Jean spawned among the Caroline Islands, grew stronger every day on her trek to the Marianas. Truk Island recorded 35-kt. winds and a 4.74-in. rainfall on the 8th as the storm passed 135 mi. to the east-northeast; by the 10th 110-kt. winds roared around her 932-mb. center. As Jean moved by Guam at a distance of 90 mi., Anderson Air Force Base recorded 65-kt. gusts and the Island's north shore was pounded by a 22-ft. surf. Rota and Tinian were also battered and suffered heavy damage, but most of Jean's fury was spent on Saipan.

Jean approached Saipan on the 11th. That evening she passed directly over the 48-sq. mi. island demolishing 90 percent of the houses and rendering another 8 percent unlivable. Only the concrete government buildings, a church, and a hotel escaped heavy damage. The Coast Guard LORAN station measured gusts to 100 kt. before the wind instruments failed; the winds then toppled a LORAN tower built to withstand 200-m.p.h. winds. The almost total destruction of crops, warehouses, and waterworks necessitated the airlifting of food and water from Japan, Korea, and Hawaii. Damage was estimated at $16.5 million and President Johnson declared the Islands a "major disaster area". Fortunately no lives were lost. Shorelines and dock areas were particularly hard hit.

In Saipan's Tanapag Harbor, the FOUR WINDS and the SAN JOSE were sunk in about 30 ft. of water, while the PACIFIC ISLANDER parted her mooring and grounded on a reef at Flores Point; while aground she reported a 933-mb. pressure. The Navy sent the salvage tug USS GRASP from Guam to help refloat the PACIFIC ISLANDER.

Conditions weren't much better on the high seas; the tug HENRY FOSS encountered gusts to more than 120 kt., east of Guam, and lost the 18,000-ton drydock it was towing (see Mariners Weather Log, November 1968 issue, article on HENRY FOSS and Typhoon Jean). The USNS FORMAN also encountered typhoon-force winds in the waters east of Guam.

After her 2-day adventure with Saipan, Jean on a northerly course, began to weaken; on the 15th winds dropped below gale force and the storm became extratropical.

KIM, MAY 30-JUNE 5

Kim's beginnings were detected southwest of Guam on the 29th. It was just a matter of time before this cloud mass would become a typhoon, as it moved northwestward through the favored breeding grounds. Kim matured in less than 2 days; late on the 31st, near 15°N., 135°E., she entered the typhoon stage. Kim's strong winds were confined close to her center; the PRESIDENT JOHNSON reported 50-kt. winds 60 mi. southeast of the storm's center on the 1st. Early on the 3d, while Kim was recurving, she reached peak intensity; 100 kt. winds howled around a 948-mb. pressure center. The storm moved northeastward and weakened. On the 5th, near the Volcano Islands, Kim became extratropical.

LUCY, JUNE 27-JULY 2

Although the orgin of Lucy can be traced back to near the equator on the 23d, it wasn't until late on the 27th, just west of Saipan, that the storm really began to develop. It then took just 2 days for Lucy to become a full-blown typhoon; she reached a peak, near 19°N., 131°E., on the 29th, when winds were measured at 110 kt. and central pressure dropped to 935 mb. Lucy was a well-developed typhoon in a favorite area for June typhoons. And at a latitude where recurvature is common in June, Lucy recurved. On the 30th, winds dropped to 80 kt., and by the 1st, they were down to 45 kt. as she brushed the Ryukyu Island chain. On the 2d, winds were 30 kt., forward speed was 25 kt., and the storm was extratropical.

MARY, JULY 20-30

Super typhoon Mary made the run from Saipan to Shikoku in 8 days. Along the way she developed 130-kt. winds, battered a few ships, and caused havoc when she crashed ashore on the 28th.

Mary attained super intensity for a brief time on the 23d when winds climbed to 130 kt. around a 924-mb. pressure center. It was the ANDREW JACKSON'S misfortune to run into Mary at this time. For 3 days the ship battled 50- to 70-kt. winds in seas that reached 50 ft. The MADAKET and OBERLIN VICTORY encountered 55- to 60-kt. winds during this period.

Mary left her winds at sea, but the torrential rains that she generated brought death and destruction to southern Japan. Although only a depression as she

moved across Shikoku, Honshu, and Kyushu, some stations reported 35 in. of rain in a 16-hr. period. Numerous landslides and floods claimed 22 lives before the storm petered out on the 30th.

SHIRLEY, AUGUST 16-21

A Hong Kong bound typhoon usually forms in the Philippine Sea and moves across Luzon; just such an incident occurred in mid-August. Typhoon Shirely developed near 16°N., 132°E., and crossed northern Luzon as a tropical storm, on the 18th. She gained typhoon strength in the South China Sea on the 20th, shortly before moving into Hong Kong. Shirely caused havoc in Hong Kong Harbor as ships broke their moorings and ran aground. Such a ship as the LA GRANDE ABETO which, after breaking loose, rammed the SAN EDUARDO several times before being driven aground.

WENDY, AUGUST 27 SEPTEMBER 9

Super typhoon Wendy came to life on the 27th under the watchfull eyes of weather satellites and the careful scrutiny of passing ships. The BOISE VICTORY told of 50- to 55-kt. winds during the first 2 days of the young storm's life. She was christened a typhoon late on the 28th, about 60 mi. northeast of Saipan. Nursed by warm waters and fed by a protective atmosphere, Wendy grew to gigantic proportions in a few days. By late on the 30th, her winds had climbed to 140 kt. around a 917-mb. pressure center. She became a spoiled, raging monster turned loose on the high seas, and had a twin that was becoming just as bad--Agnes was born just one day later.

The Joint Typhoon Warning Center at Guam, kept close watch on Wendy; ships warned of her violent nature, steered clear and reconnaissance aircraft flew into the storm every 6 hr. around the clock. By the 31st, it looked like Wendy had reached a turning point. Reconnaissance aircraft indicated a slight weakening as the typhoon turned toward the west. However, it was not until the 2d that Wendy's will was broken and her winds fell below 100 kt. On the 3d the ANTHOLL McBEAN encountered 80-kt. winds 150 mi. northeast of the storm's center, while the following day the HOPE VICTORY, 60 mi. southwest of the center, ran into 26-ft. seas whipped by 75-kt. winds. Wendy battered the southern Taiwan coast with 80-kt. winds on the 5th, and moved across the Luichow Peninsula as a tropical storm on the 8th. The COURT HARWELL went aground in Haiphong Harbor as Wendy moved inland and dissipated. The ship was refloated after unloading 2,056 tons of cargo.

AGNES, AUGUST 28-SEPTEMBER 9

Typhoon Agnes was the most potent storm of the season; none topped her combination of 150-kt. winds and 904 mb. pressure. Her 13-day journey covered more than 3,000 mi.

Agnes began inconspicuously on the 28th near 14°N., 171°E. It wasn't until 5 days later that her winds reached 100 kt.; this occurred about 200 mi. northwest of Saipan. Agnes reached her prime on the 3d when 150-kt. winds roared around the 904-mb. center. On the 6th the HEERING SUSAN and the ERICSON encountered 50-kt. winds in 24-ft. seas on the outskirts of the storm. That same day the PRESIDENT HARDING, close to the ERICSON, was battered by 80-kt. winds. All three ships encountered storm winds and 20-ft. seas into the following day. Agnes recurved after a long westward journey, and by the 7th she headed northward becoming extratropical.

BESS, AUGUST 31-SEPTEMBER 6

The South China Sea spawned its first and only typhoon of the season on the last day of August. Bess came to life as a tropical depression some 250 mi. southeast of Hong Kong. She moved westward and intensified gradually. However, it wasn't until she was off the southeastern Hainan coast on the 4th, that Bess attained minimal typhoon intensity. Her typhoon tenure was brief, for the following day Bess moved ashore near DaNang, South Vietnam.

CARMEN, SEPTEMBER 16-23

The discovery of Carmen on the 16th, about 300 mi. northeast of Saipan, broke an abnormal September lull in typhoon activity; she became the first tropical storm to form since the 31st of August.

Carmen reached typhoon strength by the 17th and by the 19th was full-blown; a 935-mb. pressure accounted for 110-kt. winds. The typhoon rode a north-northwesterly course at about 10 kt. On the 20th she brushed the Bonin and Volcano Islands and turned north-northeastward. Winds dropped to 45 kt. by the 23d and Carmen was deemed extratropical.

DELLA, SEPTEMBER 16-25

Della became Japan's most devastating storm when she rode the Ryukyu chain up into Kyushu and southern Honshu. While her 120-kt. winds lashed the southern chain, she still had enough punch to batter the southern Kyushu coast with 80-kt. winds. Torrential rains added to the disaster.

Della formed on the 16th near 20°N., 135°E. She swung southwestward, then headed northwestward for the Ryukyus. It was on the 20th that Della reached her peak; 120 kt. winds enclosed a 930-mb. pressure center. On the 22d she reached the southern Ryukyus and crossed into the East China Sea. She moved parallel to the Islands, pounding them with winds up to 120 kt. Della banged ashore at Kyushu on the 23d and weakened considerably. By the time she reached the north shore of Kyushu, she was extratropical and winds were below gale force.

ELAINE, SEPTEMBER 24-OCTOBER 1

Super typhoon Elaine, boasting measurements of 150 kt. and 908 mb., qualified as the second biggest storm of the season. Most of her might was aimed at northern Luzon--the most typhoon-ridden area in the world.

Elaine formed about 300 mi. west of Yap Island on the 24th. Moving northwestward, she intensified quickly, and was at full typhoon strength by late on the 25th. She reached peak intensity on the 27th, just 150 mi. off the Luzon coast. Elaine, sporting 130-kt. winds, slammed into rugged, northern Luzon early on the 28th. She was so intense that even the mountainous terrain could not drop Elaine below typhoon intensity; she moved into the South China Sea as a minimal typhoon. The GARDEN STATE, 180 mi. northwest of the center on the 28th, reported 50-kt. winds. Elaine reached mainland China by the 1st of October. During Elaine's final stages, the BANGKOK TRADER was disabled in the southern entrance to the Taiwan Strait--

the NAGAN CHAU rescued 31 of her crewmen, but six were reported missing. Later U. S. Navy tugs towed the 4,744-ton Panamanian steamer to Kaohsuing.

In another incident the NAN SING grounded on the west coast of Taiwan during Elaine. The ship was abandoned by passengers and crew when the bow cracked and the 1 and 2 holds flooded.

FAYE, OCTOBER 3-9

Faye popped up on the 3d in the waters north of the Carolines. From near 15°N., 158°E., she moved northeastward to within 120 mi. of Wake Island, then she turned abruptly northward. During this stretch, which covered some 2 days, Faye had grown from a tropical storm to a raging typhoon with winds up to 145 kt. Weakening slightly, she slowed to make a northward turn; however, winds were still 105 kt. on the 7th. The next 2 days saw Faye accelerate northward, weaken, and become extratropical.

GLORIA, OCTOBER 14-24

Gloria traced an irregular, northerly path through the Philippine Sea for 11 days in October; she began near 11°N., 135°E., and ended near 28°N., 135°E. On the 19th the PVT FRANCIS X McGRAW encountered 48-kt. winds in 23-ft. seas some 300 mi. west of the storm's center, which was located at 22°N., 132°E. Gloria was generating 80-kt. winds close to her center at the time. She had reached a peak of 90 kt. with a 942-mb. pressure the day before. The LOS ANGELES encountered Gloria on the 19th and 20th and battled winds up to 55 kt. Gloria remained at typhoon strength until late on the 20th. On the 23d she became extratropical.

IRMA, OCTOBER 20-25

Irma was a fast-moving typhoon that covered almost 1,800 mi. in 5 days; most of this track was below 30°N. She formed some 300 mi. north of Truk Island. Moving westward, Irma passed close to Guam as a tropical storm, and then made a quick turn northward. After passing Saipan on the 22d, Irma became a typhoon. The PACIFIC BEAR encountered 62-kt. winds 100 mi. southeast of the storm's center on the 22d. Irma attained maximum intensity briefly on the 23d when winds reached 80 kt. around a 946-mb. center. Late the following day she turned extratropical.

JUDY, OCTOBER 24-NOVEMBER 2

Judy formed 300 mi. northwest of Eniwetok Atoll, became a typhoon 200 mi. northeast of Truk, and turned extratropical 200 mi. southwest of Iwo Jima.

Detected near the outer limits of the typhoon area for this time of year, Judy moved on an unusual west-southwesterly course for 2 days. As she neared 10°N., 150°E., her direction changed to the west-northwest. Between the 25th and 28th, Judy intensified from 55 kt. to 120 kt.; she was generating 110-kt. winds south of Guam on the 26th. Judy reached her peak late on the 28th, but then began to recurve and weaken. She fell to tropical storm strength by the 30th, and after stalling for several days became extratropical on the 2d.

*Based on information furnished by the Joint Typhoon Warning Center, Fleet Weather Central, Guam, Mariana, Islands.

KIT, OCTOBER 26-NOVEMBER 4

Kit blossomed briefly on the 26th, only to dissipate later in the day. On the 30th she was picked up again just west of Truk Island. Moving northward she passed to the east of Guam on the 1st and very close to Saipan on the 2d. Late on the 2d, she reached typhoon strength and early the following day Kit reached her peak; 70 kt. winds wound around a 959-mb. pressure center. Kit became extratropical on the 4th as she crossed the 30th parallel near 153°E.

LOLA, NOVEMBER 7-12

Lola peaked on the 9th, about 200 mi. northeast of Saipan, when winds climbed to 105 kt. and central pressure dropped to 938 mb. She maintained 90-kt. winds for a little more than 30 hr. and typhoon force for 4 days. Lola followed a typical November path and her forward speeds were close to average.

MAMIE, NOVEMBER 9-24

After 9 days of developing, while meandering through the Philippine Sea, Mamie sporting 60-kt. winds, moved through the Mindanao and Sulu Seas on the 18th and 19th. In Cebu Harbor the IRUNA was rammed and sunk by the British freighter EASTERN MOON and about 90 persons drowned. It wasn't until the 19th in the middle of the Sulu Sea that Mamie reached minimal typhoon strength; winds rose to 65 kt. and pressure dipped to 972 mb. However, she crossed Palawan as a tropical storm and never regained her strength. Mamie crossed the South China Sea and moved ashore just north of Nha Trang, South Vietnam.

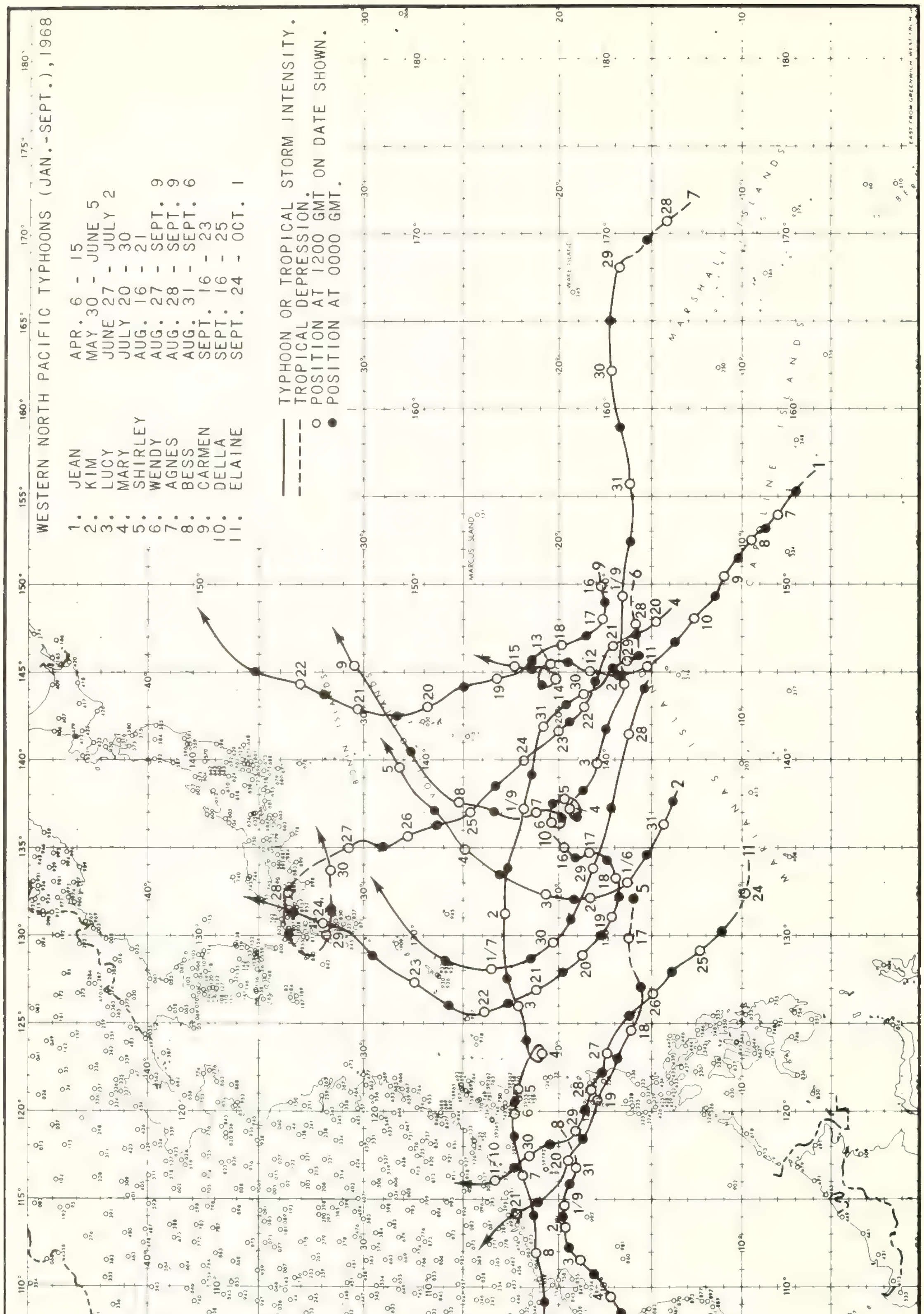
NINA, NOVEMBER 18-28

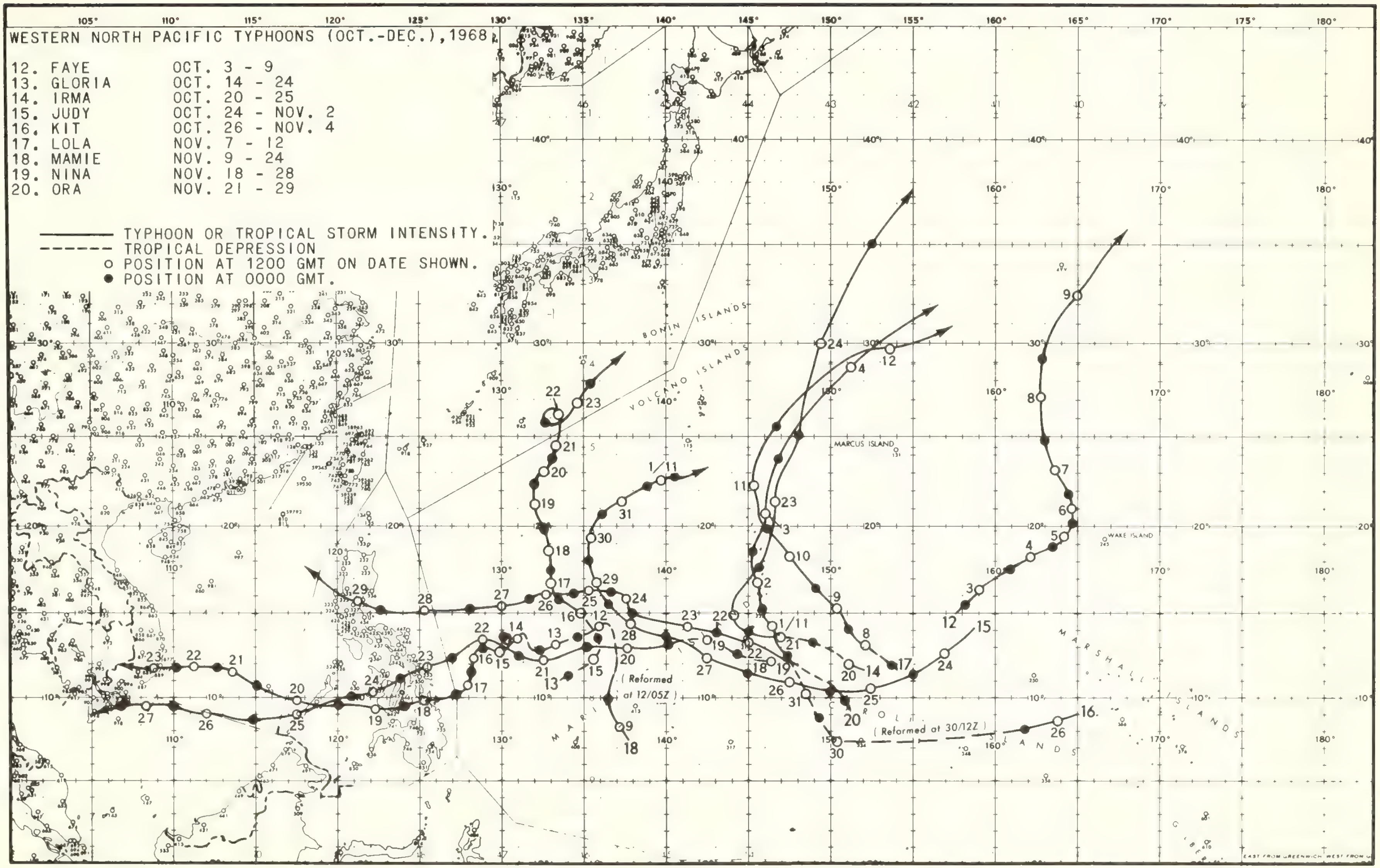
Nina became a killer storm on the 24th while moving through the central Philippines. Strong winds and rough seas sank a small fishing fleet and only eight of 71 crewmen survived in the shark-infested waters. Nina did not reach typhoon strength until the 25th in the South China Sea. For a short time winds reached 70 kt. around a 959-mb. pressure center, causing the LAXMI JAYANTI, in the storm's northwest quadrant, to send out a distress call. On the 28th Nina became an unorganized cloud mass off the coast of South Vietnam.

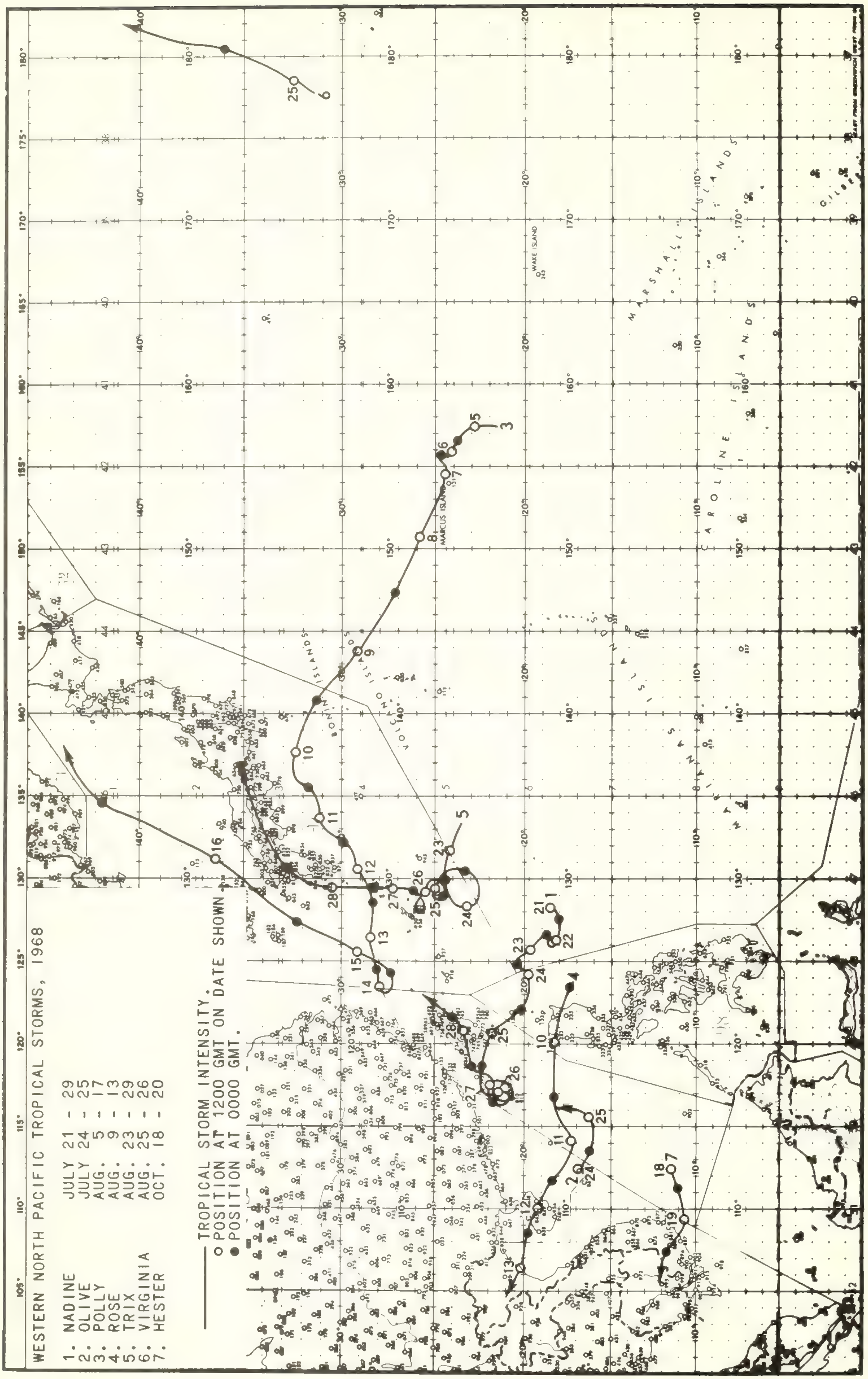
ORA, NOVEMBER 21-29

On the 29th Ora became the third typhoon in November to batter the Philippines when she stormed ashore over northern Luzon. Her 65-kt. winds lasted but a short while in the rugged terrain, and before the day was through she was dissipating in the northern mountains.

Ora formed near 10°N., 150°E°, on the 21st. She moved west-northwestward passing just north of Guam on the 22d. She reached typhoon strength on the 23d and peaked on the 24th, when winds climbed to 120 kt. and pressure dropped to 931 mb. However, as Ora approached the Philippines her strength began to ebb.


WESTERN NORTH PACIFIC TYPHOONS (JAN.-SEPT.), 1968
1. JEAN APR. 6 - 15
2. KIM MAY 30 - JUNE 5
3. LUCY JUNE 27 - JULY 2
4. MARY JULY 20 - 30
5. SHIRLEY AUG. 16 - 21
6. WENDY AUG. 27 - SEPT. 9
7. AGNES AUG. 28 - SEPT. 9
8. BESS AUG. 31 - SEPT. 6
9. CARMEN SEPT. 16 - 23
10. DELLA SEPT. 16 - 25
11. ELAINE SEPT. 24 - OCT. 1
TYPHOON OR TROPICAL STORM INTENSITY.
TROPICAL DEPRESSION.
POSITION AT 1200 GMT ON DATE SHOWN.
POSITION AT 0000 GMT.
MARCUS ISLAND


WESTERN NORTH PACIFIC TYPHOONS (OCT.-DEC.),1968
12. FAYE OCT. 3 - 9
13. GLORIA OCT. 14 - 24
14. IRMA OCT. 20 - 25
15. JUDY OCT. 24 - NOV. 2
16. KIT OCT. 26 - NOV. 4
17. LOLA NOV. 7 - 12
18. MAMIE NOV. 9 - 24
19. NINA NOV. 18 - 28
20. ORA NOV. 21 - 29
TYPHOON OR TROPICAL STORM INTENSITY.
TROPICAL DEPRESSION
POSITION AT 1200 GMT ON DATE SHOWN.
POSITION AT 0000 GMT.
BONIN ISLANDS
VOLCANO ISLANDS
MARCUS ISLAND
WAKE ISLAND
MARSHALL ISLANDS
(Reformed at 12/05Z)
(Reformed at 30/12Z)


WESTERN NORTH PACIFIC TROPICAL STORMS, 1968
1. NADINE JULY 21 - 29
2. OLIVE JULY 24 - 25
3. POLLY AUG. 5 - 17
4. ROSE AUG. 9 - 13
5. TRIX AUG. 23 - 29
6. VIRGINIA AUG. 25 - 26
7. HESTER OCT. 18 - 20
TROPICAL STORM INTENSITY.
○ POSITION AT 1200 GMT ON DATE SHOWN
● POSITION AT 0000 GMT.
BONIN ISLANDS
VOLCANO ISLANDS
MARCUS ISLAND
WAKE ISLAND
MARSHALL ISLANDS
CAROLINE ISLANDS
MARIANA ISLANDS

GENERAL SUMMARY OF FLOOD LOSSES

YEAR 1967

Elmer R. Nelson and Raymond J. Haley
Office of Hydrology, Weather Bureau

Monetary losses from floods in the United States during 1967, estimated at over $375 million, were more than 3 times that of 1966 when the flood damages totalled $117 million. Flood losses during 1967 were less than one-half of the total damages in 1965 when it totalled $785 million and 94% of the 15-year (1951 to 1965) national average of $400 million (adjusted to the 1965 price index). Destructive overflows have caused property damage in some years estimated at more than $1 billion.

The total loss of life in 1967 from floods was 34 compared to 31 in 1966 and 119 in 1965. This is the second lowest loss of life since 1962 when 19 lives were lost.

The most significant floods during 1967 were the disastrous floods on the Tanana and Chena Rivers in Alaska during August and the Hurricane "Beulah" floods in Texas during September.

Flood damage in the Alaska floods was estimated at $98.6 million. At least 6 deaths were reported from drowning. Fairbanks, much of which lies in the flood plain between the Chena and the Tanana Rivers, was almost completely inundated. Virtually every home and business suffered major damage. The Alaska railroad and all roads leading from Fairbanks were impassable. Nearly the entire town of Nenana was evacuated. Only 6 residents out of 300 remained in town. Red Cross officials estimated that they provided food and housing for 10 to 11 thousand persons. Shuttle flights carried many refugees to Anchorage, Alaska, and to Seattle, Wash.

Disastrous floods occurred in extreme southern Texas during September due to the heavy rains accompanying Hurricane Beulah. Heavy flooding occurred on all streams from the Guadalupe River westward to the Rio Grande with many streams reaching record high levels. The San Antonio River at Goliad, Tex., crested at a record stage of 53.7 feet, 19.7 feet above flood stage or 8.8 feet above the previous highest stage of 44.9 feet recorded in July 1942. Major damage occurred in the Goliad and Karnes County area, where the river exceeded a width of 3 miles. The area of major damage in the Guadalupe Basin occurred below the Nixon-Luling-Wallder, Texas, line. The Mission River at Refugio, Tex., and the Nueces River from near Tilden, Tex., to the mouth reached record heights. The inflow into the Rio Grande just above Rio Grande City, Tex., was so rapid (the river rose 32 feet in 48 hours) and prolonged (9 days) that water flowed into the American Floodway System and filled it to more than capacity. The flooding overflowed and flooded the McAllen Airport and a large portion of south McAllen with several feet of water. This was the most severe flood on record in the Arroyo Colorado. Some 1,800 residences in Harlingen, Tex., were damaged by the flood. About 8,000 people, or 20% of the population of Harlingen, had to be evacuated. It was estimated that over one million persons were immobilized due to the Hurricane Beulah floods. Estimates of flood damage were placed at $98.2 million.

The savings resulting from the ESSA, Weather Bureau River Forecasting Service in 1967 were estimated at $40 million. The average annual savings, based on fragmentary information, during the 15-year period 1951 to 1965 is approximately $50 million.

ANNUAL FLOOD LOSSES FOR UNITED STATES

Annual Flood Losses and Savings for years 1933 to 1947, inclusive, have been published in the Monthly Weather Review as follows:

Year	Issue	Pages
1933	Vol. 62, No. 1, Jan. 1934	25-27
1934	Vol. 62, No. 12, Dec. 1934	465-467
1935	Vol. 63, No. 12, Dec. 1935	362-365
1936	Vol. 65, No. 1, Jan. 1937	28-31
1937	Vol. 66, No. 12, Dec. 1938	426-430
1938	Vol. 68, No. 9, Sept. 1940	262-263
1939	Vol. 68, No. 11, Nov. 1940	329-330
1940	Vol. 69, No. 7, July 1941	217-218
1941	Vol. 71, No. 11, Nov. 1943	185-186
1942 & 1943	Vol. 73, No. 8, Aug. 1945	137-139
1944 & 1945	Vol. 76, No. 6, June 1948	113-116
1946	Vol. 76, No. 9, Sept. 1948	208-210
1947	Vol. 77, No. 9, Sept. 1949	262-265

Beginning with flood losses for the year 1948, annual flood loss data are published in Climatological Data National Summary as follows:

Year	Issue	Year	Issue
1948	August 1950	1958	Annual 1959
1949	Annual 1950	1959	Annual 1960
1950-1951	Annual 1951	1960	Annual 1961
1952	Annual 1952	1961	Annual 1962
1953	Annual 1953	1962	Annual 1963
1954	Annual 1955	1963	Annual 1964
1955	Annual 1956	1964	Annual 1965
1956	Annual 1957	1965	Annual 1966
1957	Annual 1958	1966	Annual 1967

Prior to 1933 Flood Losses and Savings were published monthly, as a rule, in the Monthly Weather Review.

ESTIMATED FLOOD LOSSES FOR 1967

In Thousands of Dollars

River and drainage	Urban Property: Residential Fixed	Urban Property: Residential Movable	Urban Property: Commercial Fixed	Urban Property: Commercial Movable	Urban Property: Public	Rural Property: Crops Growing	Rural Property: Crops Stored	Rural Property: Livestock	Rural Property: Other Fixed	Rural Property: Other Movable	Other Property: RR's, bridges, Highways, etc.	Other Property: Public Utilities	Miscellaneous *	Unclassified	Total Loss	Lives Lost
ST. LAWRENCE DRAINAGE																
Lakes Erie and Ontario																
Maumee River and tributaries...........	40.0	10.0	0.5	....	20.0	....	....	....	....	....	22.0	8.0	18.0	....	118.5	...
Flash flood, Cazenovia Creek near Colden, N. Y.........................	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1
Van Camper Creek, vicinity of Friendhsip, N. Y.....................	....	....	....	....	....	....	....	....	....	....	180.0	....	....	100.0	280.0	...
Total	40.0	10.0	0.5	....	20.0	....	....	....	....	....	202.0	8.0	18.0	100.0	398.5	1
ATLANTIC SLOPE DRAINAGE																
Woonasquatucket River (R. I.)..........	....	0.6	280.0	195.0	....	....	....	....	....	....	....	....	112.0	....	587.6	...
Flash flooding in New Jersey...........	A 900.0	....	....	....	....	....	....	....	....	....	40.0	....	....	....	940.0	...
Assunpink Creek (N. J.)................	A 498.0	....	....	....	....	....	....	....	....	....	....	....	....	....	B 498.0	...
Flash flooding in North Philadephia, Pa	A 400.0	....	....	....	....	....	....	....	....	....	....	....	....	....	400.0	...
Flash flooding, Susquehanna River drainage of eastern Pa...............	....	....	....	....	....	....	....	....	....	....	....	....	....	500.0	500.0	...
Potomac River and tributaries..........	A 550.0	....	....	....	....	....	....	....	....	....	250.0	....	....	....	800.0	...
James River and tributaries (Va.)......	2.4	....	2.0	12.0	13.5	0.6	....	....	....	....	0.5	....	....	....	31.0	...
Pee Dee River (S. C.)..................	....	....	....	....	....	....	....	....	....	....	....	....	3.0	....	3.0	...
Wateree River (S. C.)..................	508.1	1.3	10.0	19.0	....	16.6	2.5	0.3	....	0.1	0.2	....	10.0	....	568.1	...
Broad and Congaree Rivers (S. C.)......	....	....	....	....	....	1.0	....	....	....	1.5	5.0	....	....	....	7.5	...
Total	2,858.5	1.9	292.0	226.0	13.5	18.2	2.5	0.3	....	1.6	295.7	....	125.0	500.0	4,335.2	...
EAST GULF OF MEXICO DRAINAGE																
Flint River (Ga.)......................	5.4	....	....	....	....	17.0	....	....	....	....	0.4	....	....	....	22.8	...
Apalachicola River (Fla.)..............	53.4	....	....	....	....	23.2	....	....	....	....	18.1	....	....	....	94.7	...
Black Warrior River (Ala.).............	....	....	....	....	....	24.4	....	....	....	....	0.3	....	....	....	24.7	...
Tombigbee River (Ala.).................	741.6	....	....	....	....	806.4	....	....	....	....	122.4	....	....	....	1,670.4	...
Pearl River and tributaries (Miss.)....	4.0	....	....	....	....	632.0	....	....	....	....	165.0	....	....	....	801.0	...
Total	A 804.4	....	....	....	....	C 1,503.0	....	....	....	....	306.2	....	....	....	B 2,613.6	...
MISSISSIPPI SYSTEM																
Upper Mississippi Basin																
Kickapoo Creek and tributaries (Ill.)..	33.4	....	68.8	....	0.1	213.6	....	....	....	....	146.9	....	1.8	....	464.6	...
Sangamon River (Ill.)..................	....	....	....	....	2.0	132.0	....	....	25.0	....	....	....	....	1.0	160.0	...
Illinois River (Ill.)..................	....	....	....	....	....	50.0	....	....	....	....	....	....	....	....	50.0	...
Meramec River (Mo.)....................	....	....	....	....	0.4	9.0	....	....	1.0	....	....	....	....	....	10.9	...
Kaskaskia River (Ill.).................	....	....	....	....	....	295.0	....	0.5	0.5	....	....	....	10.0	....	305.5	...
Mississippi River between Dam 10, Guttenberg, Iowa and Cape Girardeau, Mo..................................	....	....	....	....	....	1,399.0	....	....	....	....	....	....	16.0	1,025.0	2,440.0	...
Total	33.4	....	68.8	....	2.5	2,098.6	....	0.5	26.5	....	146.9	....	27.8	1,026.0	3,431.0	...
Missouri Basin																
Smith River (Mont.)....................	....	....	....	....	10.0	1.2	....	....	0.5	....	50.0	0.5	....	....	62.2	...
Musselshell River (Mont.)..............	A1,200.0	....	....	....	....	C 800.0	....	....	....	....	D 700.0	....	....	....	B 2,700.0	...
Bighorn River and tributaries (Mont.)..	....	....	....	....	....	....	....	....	....	....	1,096.3	....	....	....	1,096.3	...
Yellowstone River and tributaries, except Bighorn River (Mont.).........	....	....	....	....	....	....	....	....	....	....	175.0	....	....	....	175.0	...
Bad River (S. Dak.)....................	A 80.0	....	....	....	....	C 20.0	....	....	....	....	....	....	....	....	B 100.0	...
White River and tributaries (S. Dak. and Nebr.)...............................	A 60.0	....	....	....	....	C 440.0	....	....	....	....	....	....	....	....	B 500.0	...
Niobrara River and tributaries (Nebr.).	A 40.0	....	....	....	....	....	....	....	....	....	....	....	....	....	B 40.0	...
James River and tributaries (S. Dak.)	A 75.0	....	....	....	....	700.0	....	....	....	....	....	....	....	....	B 775.0	...
Little Sioux River and tributaries (Iowa)...............................	....	....	....	....	....	C 60.0	....	....	....	....	....	....	....	70.0	B 130.0	...
Elkhorn River and tributaries (Nebr.)..	A 540.0	....	....	....	....	C 6,800.0	....	....	....	....	D 800.0	....	....	....	B 8,140.0	...
Platte River and tributaries, except the Elkhorn River (Nebr.)................	2,301.0	....	560.0	....	410.0	C15,000.0	....	....	....	....	D 8,864.0	....	....	....	B27,133.0	...
Nishnabotna River and tributaries (Iowa)	A 605.0	....	....	....	....	C 400.0	....	....	....	....	120.0	....	....	....	B 1,125.0	...
Nemaha River and tributaries (Nebr.)...	....	....	....	....	....	C 369.2	....	....	....	....	....	....	....	....	B 369.2	...
Nodaway River (Iowa)...................	....	....	....	....	....	C 189.5	....	....	....	....	....	....	....	....	B 189.5	...
Platte River and tributaries (Mo.).....	A 6.0	....	....	....	....	C 1,176.4	....	....	....	....	D 270.3	....	....	....	B 1,452.7	...
Sappa Creek (Kans.-Nebr.)..............	....	....	....	....	....	C 233.0	....	....	....	....	D 165.0	....	....	....	B 398.0	...
Solomon River (Kans.)..................	....	....	....	....	....	C 709.0	....	....	....	....	D 1.0	....	....	....	B 710.0	...
Smoky Hill River and tributaries (Kans.)	....	....	....	....	....	C 1,016.5	....	....	....	....	D 2.0	....	....	....	B 1,018.5	...
Big Blue River and tributaries (Nebr.).	5.3	....	8.4	....	5.6	C 2,452.7	....	....	....	....	D 39.8	....	....	....	B 2,511.8	1
Kansas River and minor tributaries (Kans.)...............................	6.5	....	....	....	0.9	C 1,671.0	....	....	0.5	10.0	0.6	....	....	....	B 1,689.5	...
Blue River and tributaries (Mo.).......	....	....	....	....	....	C 60.0	....	....	....	....	D 90.0	....	....	....	B 150.0	...
Little Blue River (Mo.)................	....	....	....	....	....	C 130.0	....	....	....	....	....	....	....	....	B 130.0	...
Grand River and tributaries (Mo.)......	....	....	....	....	....	C 5,365.0	....	....	....	....	D 448.0	....	....	....	B 5,813.0	...
Chariton River and tributaries (Mo.)...	....	....	....	....	....	C 460.0	....	....	....	....	D 41.9	....	....	....	B 501.9	...
Little Chariton River and tributaries (Mo.)................................	....	....	....	....	....	C 824.4	....	....	....	....	D 15.8	....	....	....	B 840.2	...

See reference notes at end of table.

ESTIMATED FLOOD LOSSES FOR 1967

In Thousands of Dollars

River and drainage	Urban Property					Rural Property					Other Property		Miscellaneous *	Unclassified	Total Loss	Lives Lost
	Residential		Commercial		Public	Crops		Livestock	Other		RR's, bridges, Highways, etc.	Public Utilities				
	Fixed	Movable	Fixed	Movable		Growing	Stored		Fixed	Movable						
Missouri Basin (Cont'd)																
Blackwater and Lamine Rivers (Mo.)	...	...	...	...	...	C 490.0	...	...	...	...	...	...	...	...	B 490.0	...
Osage River and tributaries (Kans. and (Mo.)	1.5	...	...	...	...	C14,010.3	...	...	3.5	...	D 119.0	...	6.0	...	B14,140.3	...
Missouri River and tributaries	442.0	...	6.0	...	...	C25,888.2	...	...	106.0	...	D 1,792.3	...	...	...	28,234.5	...
Total	5,362.3	...	574.4	...	426.5	79,266.4	...	...	110.5	10.0	14,791.0	0.5	6.0	70.0	100,617.6	1
Ohio Basin																
Allegheny River and tributaries (Pa. and N. Y.)	76.0	78.0	51.0	89.0	96.0	...	...	...	...	...	233.0	17.0	183.0	...	823.0	2
Monongahela River and tributaries (Pa. and W. Va.)	175.0	193.0	1,704.0	826.0	273.5	...	...	...	...	...	141.0	52.0	3,228.3	...	6,592.8	...
Little Kanawha River (W. Va.)	...	...	...	...	...	...	...	...	...	...	...	...	...	1,260.0	B 1,260.0	1
Hocking River (Ohio)	...	...	...	...	...	...	...	...	...	...	...	...	...	71.4	B 71.4	...
Elk River (W. Va.)	...	...	...	...	...	...	...	...	...	...	...	...	...	51.0	B 51.0	...
Kanawha River (W. Va.)	...	...	...	...	...	...	...	...	...	...	...	...	...	1,870.2	B 1,870.2	...
Guyandot River (W. Va.)	...	...	...	...	...	...	...	...	...	...	...	...	...	4,110.0	B 4,110.0	1
Paint Creek (Ky.)	5.6	0.2	...	...	9.4	...	...	...	...	0.2	1.0	8.5	...	...	24.9	...
Big Sandy River and tributaries, except Paint Creek (Ky.)	...	...	...	...	...	...	...	...	...	...	...	...	...	865.6	B 865.6	1
Little Sandy River (Ky.)	...	...	...	...	...	...	...	...	...	...	...	...	...	194.5	B 194.5	...
Little Miami River (Ohio)	...	...	...	...	...	...	...	...	...	...	...	...	...	85.0	B 85.0	...
Licking River (Ky.)	92.0	52.0	53.0	9.0	14.0	1.0	0.2	0.8	3.0	5.0	3.0	0.5	23.5	...	257.0	...
Kentucky and Red Rivers (Ky.)	755.0	100.0	175.0	75.0	200.0	85.0	20.0	10.0	72.0	60.0	90.0	40.0	250.0	...	1,932.0	...
Barren River (Ky.)	...	...	...	...	...	...	...	...	...	...	...	...	...	36.0	B 36.0	...
Rough River (Ky.)	...	...	...	...	...	...	...	...	...	...	...	...	...	48.0	B 48.0	...
Green River and tributaries (Ky.)	...	...	...	...	...	1,500.0	...	5.0	25.0	2.0	1,000.0	50.0	5.0	713.0	B 3,300.0	...
Wabash River and tributaries (Ind. and Ill.)	20.0	18.0	1.0	4.0	30.0	380.8	...	...	51.0	...	8.0	3.0	10.0	10.0	535.8	...
Cumberland River (Ky.)	2.0	...	...	...	20.0	...	...	...	...	...	...	...	1.0	...	23.0	...
French Broad River and tributaries (N. C.)	15.0	...	...	...	...	1,100.0	...	...	14.6	...	...	...	38.5	...	1,168.1	...
Flash Flood on Cow Creek in and near Oliver Springs, Tenn.	75.0	69.0	25.0	130.0	386.0	...	...	...	...	...	...	...	...	...	685.0	2
Duck River (Tenn.)	A 10.0	...	...	...	...	...	...	...	...	...	...	...	...	...	10.0	...
Ohio River and minor tributaries	3,390.0	223.0	979.0	381.0	768.5	440.5	29.0	34.0	141.0	30.0	765.0	427.0	6,166.6	14,281.9	28,056.5	1
Total	4,615.6	733.2	2,988.0	1,514.0	1,797.4	3,507.3	49.2	49.8	306.6	97.2	2,241.0	598.0	9,905.9	23,596.6	51,999.8	8
MISSISSIPPI SYSTEM																
White Basin																
Spring River and tributaries (Ark.)	...	...	...	...	...	300.0	...	...	...	...	800.0	...	...	...	1,100.0	...
Black River and tributaries, except Spring River (Ark.)	...	...	...	...	...	25.3	...	1.0	4.0	4.0	5.0	...	...	...	39.3	...
Cache River (Ark.)	...	...	...	...	1.5	281.6	...	...	...	...	...	...	...	...	283.1	...
White River (Ark.)	...	...	...	...	...	55.0	...	...	...	...	...	...	...	...	55.0	...
Total	...	...	...	...	1.5	661.9	...	1.0	4.0	4.0	805.0	...	...	...	1,477.4	...
Arkansas Basin																
Verdigris and Fall Rivers (Kans.)	A 111.8	...	...	...	...	24.0	...	...	5.5	...	...	...	...	...	141.3	...
Neosho River and tributaries (Kans.)	A 109.6	...	...	...	...	1,733.0	...	2.0	256.6	...	8.0	...	...	...	2,109.2	...
Poteau River and tributaries (Okla.)	...	...	...	...	...	...	...	...	...	...	3.0	...	...	...	3.0	...
Total	221.4	...	...	...	...	1,757.0	...	2.0	262.1	...	11.0	...	...	...	2,253.5	...
Red Basin																
Sulphur River (Texas)	...	...	...	...	...	20.0	...	...	...	...	...	...	...	...	20.0	...
Ouachita River (Ark.)	...	...	...	...	10.0	...	...	1.0	7.0	...	10.0	...	...	...	28.0	...
Total	...	...	...	...	10.0	20.0	...	1.0	7.0	...	10.0	...	...	...	48.0	...
Lower Mississippi Basin																
Yazoo River (Miss.)	...	...	...	...	...	388.0	...	...	...	...	...	...	...	3.0	B 391.0	...
Mississippi River and minor tributaries below Cape Girardeau, Mo.	17.2	...	...	...	...	608.6	...	...	11.0	3.2	1.4	1.0	12.6	...	655.0	...
Total	17.2	...	...	...	...	996.6	...	...	11.0	3.2	1.4	1.0	12.6	3.0	1,046.0	...
WEST GULF OF MEXICO DRAINAGE																
Flash flood near Smyer, Tex. (June)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2
Flash flood near Hatch, N. Mex. (June)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2
Flooding in Texas resulting from Hurricane "Beulah" rainfall (Sept.): Streams in Cameron, Stare, Hidalgo, and Willacy Counties	G15,032.0	...	E2,963.0	...	...	C11,835.0	...	...	...	...	...	...	...	13,954.0	43,784.0	...
Streams in Kenedy and Kleberg Counties	...	...	...	...	...	C 2,541.0	...	...	...	...	...	...	...	2,586.0	5,127.0	...

See reference notes at end of table.

ESTIMATED FLOOD LOSSES FOR 1967

In Thousands of Dollars

River and drainage	Urban Property					Rural Property					Other Property		Miscellaneous *	Unclassified	Total Loss	Lives Lost
	Residential		Commercial		Public	Crops		Livestock	Other		RR's, bridges, Highways, etc.	Public Utilities				
	Fixed	Movable	Fixed	Movable		Growing	Stored		Fixed	Movable						
WEST GULF OF MEXICO DRAINAGE (Cont'd)																
Streams in Nueces and San Patricio Counties	G 5,006.0	...	E 1,194.0	...	...	C 7,331.0	...	...	...	...	...	...	...	8,232.0	21,763.0	...
Streams in Aransas, Calhoun, Jackson, and Matagorda Counties	G 183.0	...	E 274.0	...	...	C 394.0	...	...	...	...	...	...	...	316.0	1,167.0	...
Streams in Live Oak County	G 1,532.0	...	E 843.0	...	...	C 474.0	...	...	...	...	...	...	...	1,096.0	3,945.0	...
Streams in Jim Wells and Duvall Counties	G 55.0	...	...	...	...	C 1,877.0	...	...	...	...	...	...	...	1,854.0	3,786.0	...
Streams in Brooks and Jim Hogg Counties	G 2,026.0	...	E 785.0	...	...	C 565.0	...	...	...	...	...	...	...	1,611.0	4,987.0	...
Streams in Bee, Refugio, Victoria, Goliad, DeWitt and Karnes Counties	G 1,585.0	...	E 288.0	...	...	C 5,984.0	...	...	...	...	...	...	...	5,771.0	13,628.0	...
Streams in Gonzales, Lavaca, and McMullen Counties	...	...	E 21.0	...	...	...	...	...	...	...	...	...	...	31.0	52.0	...
Total	25,419.0	...	6,368.0	...	...	31,001.0	...	...	...	...	...	...	...	35,451.0	B98,239.0	F 12
GULF OF CALIFORNIA DRAINAGE																
Colorado Basin																
Flash Flooding.																
Near Green River and near Ferron, Utah	...	...	...	12.0	...	2.0	...	...	...	...	8.0	...	...	...	22.0	...
Safford and San Francisco River Valleys (Ariz.)	25.0	1.0	...	4.0	55.2	628.8	5.0	0.8	18.0	42.0	40.0	1.0	93.5	...	914.3	...
Yuma County, Ariz.	...	...	...	...	...	...	...	...	...	...	70.0	...	...	...	70.0	...
San Pedro and Santa Cruz Rivers (Ariz.)	...	...	...	...	...	...	...	...	...	...	1.0	...	...	...	1.0	2
Gila River and tributaries (Ariz.)	14.9	12.3	144.8	...	1,554.2	2.8	282.0	...	...	122.3	98.5	17.8	341.6	...	2,591.2	1
Total	39.9	13.3	144.8	16.0	1,609.4	633.6	287.0	0.8	140.3	42.0	217.5	18.8	435.1	...	3,598.5	3
GREAT BASIN																
Flash Flooding in scattered areas in Utah and Nevada	2.0	5.0	...	...	3.0	24.0	...	...	1.5	...	375.0	1.0	...	...	411.5	...
Utah Lake drainages (Utah)	...	...	1.0	...	13.0	...	...	...	50.0	...	...	...	...	...	64.0	...
Total	2.0	5.0	1.0	...	16.0	24.0	...	...	51.5	...	375.0	1.0	...	...	475.5	...
PACIFIC SLOPE DRAINAGE																
California and Columbia Basin																
Flash Flooding in Coast Ranges of Southern California	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2
Napa River (Calif.)	50.0	...	270.0	...	100.0	180.0	...	...	...	...	...	20.0	...	...	B 620.0	...
Russian River (Calif.)	300.0	...	400.0	...	40.0	...	...	...	...	...	...	10.0	...	...	B 750.0	...
Columbia River Basin:																
Kootenai River and tributaries (Idaho)	...	...	...	...	...	90.0	...	...	47.0	...	...	...	201.0	...	B 338.0	...
Big Lost River (closed drainage-Idaho)	...	...	...	...	...	420.0	...	...	...	...	...	...	...	...	420.0	...
Snake River tributaries (Idaho)	4.0	...	1.5	0.1	3.5	...	...	...	0.8	0.2	12.0	1.5	...	...	23.6	...
Willamette River and tributaries (Oreg.)	...	...	...	...	...	...	...	...	...	...	...	...	...	534.0	534.0	...
Columbia River tributaries between Snake and Willamette Rivers	...	...	...	...	...	...	...	...	...	...	...	...	21.1	975.8	996.9	...
Total	354.0	...	671.5	0.1	143.5	690.0	...	...	47.8	0.2	12.0	31.5	222.1	1,509.8	3,682.5	2
Washington Coast and Puget Sound																
Chehalis and Wynoochee Rivers	...	...	...	...	...	168.0	...	...	...	...	...	...	...	21.3	B 189.3	...
Shohomish River and tributaries	...	...	...	...	...	...	...	...	...	...	...	...	...	1,080.0	B 1,080.0	...
Skagit River	...	...	...	...	...	124.0	...	...	...	...	...	...	...	...	B 124.0	...
Nooksack River	...	...	...	...	...	...	...	...	...	...	...	...	...	29.8	29.8	...
Total	...	...	...	...	...	292.0	...	...	...	...	...	...	...	1,131.1	1,423.1	...
ALASKA																
Tanana and Chena Rivers	16,167.0	38,000.0	4,127.0	6,000.0	9,335.0	...	...	...	100.0	...	6,941.0	1,633.0	14,997.0	1,250.0	B98,550.0	6
HAWAII																
Halawa Stream (Oahu)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
Flash Flooding on Oahu between Honolulu and Koko Head	G 475.0	...	...	...	...	...	...	...	468.0	...	2.5	7.4	76.5	...	B 1,029.4	...
Total	475.0	...	...	...	...	...	...	...	468.0	...	2.5	7.4	76.5	...	1,029.4	1
GRAND TOTAL	56,409.7	38,763.4	15,236.0	7,756.1	13,375.3	122,469.6	338.7	55.4	1,535.3	158.2	26,358.2	2,299.2	25,826.0	64,637.5	375,218.6	34

* Damage estimates under this heading usually refer to losses of income and wages due to suspension of business, and costs of emergency protection, evacuation, rehabilitation and relief.
A. Includes all urban losses. B. Furnished by U. S. Engineers. C. Includes all agricultural losses. D. Includes public utilities. E. Includes all commercial losses.
F. Includes 8 lives lost in hurricane "Beulah" floods. G. Includes all residential.

LOSS OF LIFE AND PROPERTY IN THE UNITED STATES FROM FLOODS

Property Losses in Thousands of Dollars
BY DISTRICTS AND YEARS, 1925-1967

District	1925		1926		1927		1928		1929		1930		1931		1932	
	Life	Property	Life	Property	Life	Property	Life	Property	Life	Property	Life	Property	Life	Property	Life	Property
Great Lakes----------	---	--------	---	19	48	15,750	---	--------	---	171	---	36	---	1	---	1
North Atlantic-------	---	50	---	137	40	29,408	3	2,105	---	245	---	--------	---	1,050	---	25
South Atlantic-------	---	2,999	---	--------	---	1	5	8,382	8	10,196	---	--------	---	31	---	191
East Gulf------------	2	615	---	37	8	255	---	2,428	5	8,746	---	466	---	174	---	615
Ohio Valley----------	---	33	2	5,523	94	15,639	4	10,279	34	17,050	---	7,042	---	1	---	288
*Upper Mississippi----	14	3,983	1	5,435	---	19,612	---	1,173	---	3,677	---	15	---	20	---	88
Lower Mississippi----	---	115	---	42	100	133,898	---	7,819	4	9,980	---	530	---	--------	---	1,840
Missouri-------------	---	--------	6	1,434	1	4,880	2	6,714	13	2,118	---	13	---	886	---	451
Arkansas-------------	---	224	6	8,938	132	26,183	1	4,349	12	7,516	---	213	---	6	---	2,528
Red------------------	---	--------	1	155	---	100,908	---	153	1	100	14	3,616	---	19	---	516
West Gulf------------	6	1,436	---	301	---	208	---	75	---	8,124	---	924	---	2	11	3,522
Colorado-------------	---	--------	---	447	---	12	---	100	12	175	---	--------	---	3	---	13
Pacific--------------	14	468	---	--------	---	902	---	1,032	---	--------	---	--------	---	560	---	217
Miscellaneous east of Rockies------------	---	--------	---	1,000	---	--------	---	--------	---	--------	---	2,500	---	--------	---	--------
Miscellaneous west of Rockies------------	---	--------	---	--------	---	--------	---	--------	---	--------	---	495	---	55	---	--------
Total	36	9,923	16	23,468	423	347,656	15	44,611	89	68,098	14	15,850	---	2,808	11	10,295

District	1933		1934		1935		1936		1937		1938		1939		1940	
Great Lakes----------	---	14	---	--------	---	13,185	1	9	---	690	---	240	---	11	2	--------
North Atlantic-------	2	5,418	---	142	52	16,340	24	146,035	---	2,689	8	37,068	2	56	4	2,519
South Atlantic-------	---	19	---	240	---	77	2	2,391	---	989	---	455	---	454	12	5,034
East Gulf------------	---	444	---	13	---	719	---	1,240	---	357	---	1,655	1	6,680	---	5,497
Ohio Valley----------	5	7,725	2	928	5	8,536	82	122,296	65	413,936	8	4,481	80	3,773	28	8,077
*Upper Mississippi----	4	1,157	12	1,023	---	1,506	---	313	3	1,127	2	3,659	---	228	---	199
Lower Mississippi----	---	6,933	---	--------	17	6,631	---	55	72	6,657	---	1	---	1,448	---	--------
Missouri-------------	2	1,391	6	1,906	125	58,959	---	109	2	1,367	71	4,333	---	610	5	1,759
Arkansas-------------	---	776	---	18	4	8,344	6	817	---	1,557	---	2,202	---	179	2	1,332
Red------------------	---	38	22	640	8	2,751	---	16	---	24	---	755	---	22	---	12
West Gulf------------	---	1,160	---	422	20	29,522	24	8,376	---	1,830	6	6,003	---	360	7	7,622
Colorado-------------	---	--------	1	22	---	--------	---	--------	---	264	---	256	---	13	---	180
Pacific--------------	20	11,604	45	5,008	5	557	3	892	---	9,245	85	39,990	---	--------	---	8,236
Total	33	36,679	88	10,362	236	127,127	142	282,549	142	440,738	180	101,098	83	13,834	60	40,467

District	1941		1942		1943		1944		1945		1946		1947		1948	
Great Lakes----------	---	--------	---	153	1	9,564	---	130	---	119	---	251	1	5,761	4	20,270
North Atlantic-------	---	--------	35	22,321	4	1	---	--------	3	5,729	14	8,500	---	198	4	12,467
South Atlantic-------	---	89	---	608	---	152	---	1,926	3	1,007	---	172	---	944	1	1,372
East Gulf------------	---	24	2	155	---	773	---	2,660	---	268	---	2,963	2	654	---	3,122
Ohio-----------------	---	1,122	16	16,546	44	31,416	---	806	27	52,887	---	10,914	5	7,812	16	16,871
*Upper Mississippi----	---	3,018	1	5,592	16	42,097	7	27,031	---	9,288	4	8,642	27	87,937	---	2,905
Lower Mississippi----	---	--------	---	475	---	829	---	1,550	---	3,601	---	4,407	1	2,555	---	5,390
Missouri-------------	2	12,019	1	22,511	13	62,630	13	44,616	4	34,403	---	8,305	18	163,176	1	31,490
Arkansas-------------	9	13,346	---	6,577	26	41,850	10	11,171	20	15,068	---	1,791	1	1,424	14	18,721
Red------------------	---	1,855	---	2,205	---	44	---	1,676	6	22,209	---	1,434	---	1,446	---	220
West Gulf------------	34	5,458	2	12,489	---	2,589	3	8,938	4	10,987	10	15,967	---	330	1	4,604
Colorado-------------	2	1,061	---	3	---	310	---	575	10	182	---	--------	---	3	---	1
Pacific--------------	---	1,532	11	8,872	3	7,477	---	--------	14	9,530	---	7,367	---	88	37	111,826
Great Basin----------	---	--------	---	--------	---	--------	---	--------	---	520	---	100	---	--------	---	--------
Total	47	39,524	68	98,507	107	199,732	33	101,079	91	165,798	28	70,813	55	272,328	82	229,959

District	1949		1950		1951		1952		1953		1954		1955		1956	
Great Lakes----------	---	1,619	9	33,542	---	131	---	2,350	1	2,654	---	15,000	---	2,596	---	1,327
North Atlantic-------	11	9,273	2	7,149	1	916	5	1,222	1	10,637	11	7,337	211	761,303	11	1,453
South Atlantic-------	3	291	---	1,203	---	[illegible]	---	236	---	109	1	546	2	902	3	2,720
East Gulf------------	---	1,747	---	1,435	---	4,310	---	347	2	2,444	---	543	6	5,300	1	1,379
Ohio-----------------	7	4,754	50	25,195	1	4,889	14	4,940	5	778	9	18,594	15	14,645	12	17,836
*Upper Mississippi----	---	406	2	11,060	6	71,799	7	22,439	2	5,602	4	24,656	---	85	---	388
Lower Mississippi----	---	10,020	6	10,071	---	5,996	---	444	12	7,857	---	490	---	1,352	---	865
Missouri-------------	6	33,503	18	35,090	31	889,872	8	181,335	14	44,255	---	11,999	1	2,753	1	6,360
Arkansas-------------	---	6,696	---	8,294	10	44,331	---	5	2	2,020	---	296	2	5,362	---	24
Red------------------	2	365	1	1,105	---	2,101	---	836	---	2,061	---	923	---	2,003	1	250
West Gulf------------	18	22,462	---	417	---	238	10	9,584	1	34,849	29	21,639	2	4,286	3	3,714
Colorado-------------	---	155	---	--------	---	889	---	76	---	7	---	1,890	---	2,173	---	--------
Pacific--------------	1	2,640	5	37,362	2	3,260	10	20,251	---	8,931	1	2,929	63	186,785	6	27,930
Great Basin----------	---	--------	---	4,127	---	--------	---	9,999	---	--------	---	--------	---	5,946	4	442
Total	48	93,931	93	176,050	51	1,028,741	54	254,064	40	122,204	55	106,842	302	995,491	42	64,688

District	1957		1958		1959		1960		1961		1962		† 1963		1964	
Great Lakes----------	1	1	---	10	---	12,746	2	1,942	1	216	---	--------	1	35,872	---	325
North Atlantic-------	---	11	---	167	---	6,952	2	15,274	---	1,168	---	8	6	1,325	---	11,342
South Atlantic-------	---	166	---	3,917	---	631	---	172	---	600	---	97	---	89	---	16,786
East Gulf------------	---	4,526	---	3,434	---	241	---	13,780	3	30,386	---	5,768	---	1,726	---	10,490
Ohio-----------------	25	135,972	10	68,248	8	82,503	1	7,519	31	33,748	5	30,583	26	98,824	15	94,034
*Upper Mississippi----	8	14,648	---	20,770	8	3,427	2	12,901	4	25,320	1	5,341	---	413	---	--------
Lower Mississippi----	6	15,608	---	11,979	---	199	---	496	---	11,462	---	3,546	---	293	---	1,125
Missouri-------------	15	26,057	21	45,819	3	12,162	8	28,105	7	33,990	2	10,501	3	14,705	37	41,902
Arkansas-------------	5	50,082	---	360	2	12,886	1	3,480	1	9,173	3	1,254	2	563	1	1,607
Red------------------	6	16,037	---	11,768	---	880	---	226	---	1,609	---	581	1	2,361	---	124
West Gulf------------	16	73,057	6	18,127	4	2,886	14	8,205	1	2,945	2	1,948	---	640	5	7,178
Colorado-------------	---	741	---	240	---	100	---	--------	3	552	---	1,080	---	--------	---	55
Pacific--------------	---	23,397	10	33,404	---	5,638	2	876	1	1,825	6	12,198	---	15,305	42	463,959
Great Basin----------	---	--------	---	12	---	4	---	--------	---	1,039	---	2,332	---	3,530	---	2,715
Total	82	360,303	47	218,255	25	141,255	32	92,976	52	154,033	19	75,237	39	175,646	100	651,642

District	1965		1966		‡ 1967	
Great Lakes----------	---	20	0	176	1	398
North Atlantic-------	2	55	1	535	---	3,726
South Atlantic-------	---	268	1	375	---	610
East Gulf------------	---	2,665	0	6,388	---	2,614
Ohio-----------------	8	3,591	1	10,193	8	52,000
*Upper Mississippi----	15	182,053	0	14,167	---	3,431
Lower Mississippi----	---	811	0	1,438	---	1,046
Missouri-------------	26	451,832	5	16,021	1	100,617
Arkansas-------------	16	70,152	0	5,245	---	3,731
Red------------------	---	852	2	2,702	---	48
West Gulf------------	33	40,039	14	27,608	12	98,239
Colorado-------------	8	12,648	1	4,919	3	3,598
Pacific--------------	11	18,745	4	15,525	2	5,106
Great Basin----------	---	4,315	0	11,712	---	475
Total	119	788,046	29	117,004	27	275,639

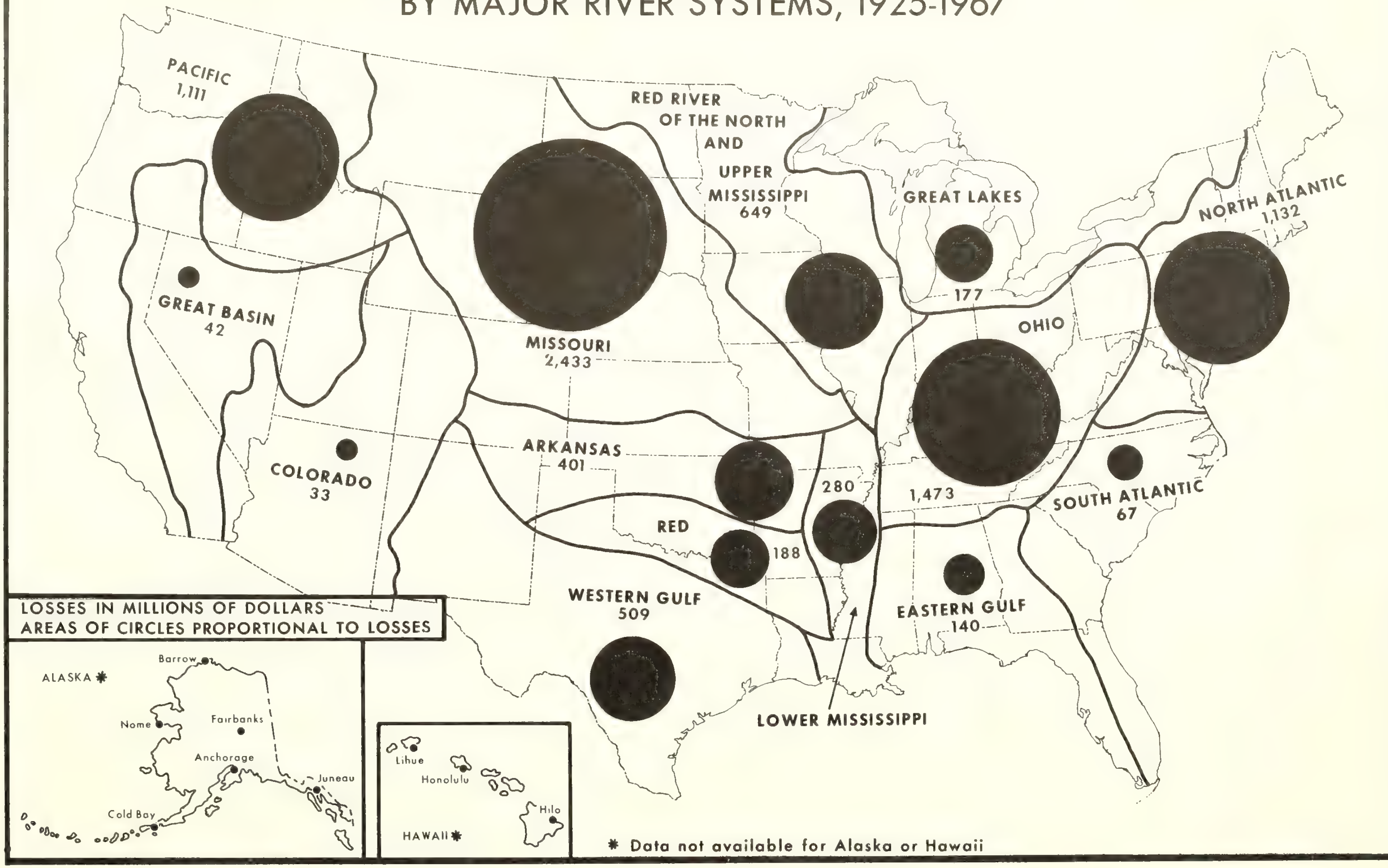
* Including Red River of the North † Total does not include $2,300 in Hawaii.
‡ Total does not include $98,550 in Alaska and $1,029 in Hawaii.

LOSS OF LIFE AND PROPERTY IN THE UNITED STATES FROM FLOODS

PROPERTY LOSSES IN THOUSANDS OF DOLLARS
By Months and Years, 1925-1967

	January		February		March		April		May		June		July		August		September		October		November		December		Total	
Year	Property	Life	Property	Life	Property	Life	Property	Life	Property	Life	Property	Life	Property	Life	Property	Life	Property	Life	Property	Life	Property	Life	Property	Life	Property	Life
1925	3,614	2	141	0	74	0	–	0	65	6	3,980	14	140	0	275	0	1,171	14	380	0	83	0	–	0	9,923	36
1926	19	0	600	0	77	0	293	0	–	0	–	1	55	0	7	0	7,729	6	12,699	6	135	0	1,854	3	23,468	16
1927	2,626	8	1,867	0	407	0	283,207	232	7,566	95	1,125	0	241	0	3,460	0	–	0	1,627	0	45,093	88	437	0	347,656	423
1928	4	0	9	0	758	0	1,168	0	105	0	12,296	1	13,339	0	9,272	3	4,047	5	–	0	3,567	6	46	0	44,611	15
1929	122	0	2,964	0	21,947	47	1,937	0	15,668	5	10,268	5	4,959	32	130	0	92	0	9,379	0	556	0	76	0	68,098	89
1930	7,110	0	7	0	146	0	–	0	5,021	14	3,042	0	244	0	251	0	–	0	29	0	–	0	–	0	15,850	14
1931	–	0	30	0	572	0	–	0	8	0	13	0	1,215	0	201	0	2	0	1	0	744	0	22	0	2,808	0
1932	1,207	0	–	0	165	0	373	0	1,552	0	1,245	0	1,627	0	763	0	2,666	11	335	0	3	0	359	0	10,295	11
1933	308	0	87	0	2,008	1	2,709	4	10,785	4	2,650	4	1,117	0	6,516	4	489	0	10	0	–	0	10,000	16	36,679	33
1934	5,002	45	9	0	706	0	1,693	34	–	0	899	0	178	0	322	9	84	0	28	0	1,287	0	154	0	10,362	88
1935	297	0	1	0	2.177	4	2,698	5	16,903	40	62,702	122	29,370	52	159	5	7,551	0	2,691	0	61	0	2,517	8	127,127	236
1936	341	0	2,107	6	145,936	24	124,743	82	1,118	6	124	0	2,248	20	205	0	5,046	4	378	0	118	0	5	0	282,549	142
1937	411,481	65	7,691	75	62	0	4,524	0	2,627	0	5,429	0	124	2	760	0	140	0	256	0	97	0	7,546	0	440,738	142
1938	260	0	3,712	2	27,819	86	3,008	0	12,402	0	3,624	58	10,373	9	232	8	39,641	17	3	0	5	0	19	0	101,098	180
1939	3	0	1,657	4	738	0	1,982	0	37	0	4,271	1	1,725	78	3,408	0	13	0	–	0	–	0	–	0	13,834	83
1940	58	0	7,246	0	1,048	2	2,185	0	438	0	2,790	12	5,314	0	18,853	40	2,135	6	88	0	95	0	217	0	40,467	60
1941	3	0	516	0	820	2	1,970	4	3,081	7	12,718	12	314	0	23	0	6,247	15	10,446	7	3,361	0	25	0	39,524	47
1942	131	0	1,901	1	327	0	18,369	2	14,837	31	25,586	1	13,064	17	267	0	3,234	0	5,678	2	–	0	15,113	14	98,507	68
1943	3,579	4	69	5	7,183	8	10,161	5	130,478	57	41,771	0	2,870	3	3,651	25	–	0	–	0	–	0	–	0	199,732	107
1944	3	0	35	1	2,633	3	42,646	13	24,103	0	24,535	16	3,198	0	928	0	1,708	0	108	0	–	0	1,182	0	101,079	33
1945	146	0	5,882	0	33,202	14	54,054	36	23,530	0	28,866	8	8,280	3	2,942	13	1,059	3	1,424	3	–	0	6,413	11	165,798	91
1946	13,385	0	4,015	0	631	0	2	0	12,587	12	20,343	3	1,636	4	1,148	0	7,346	9	1,965	0	1,134	0	6,441	0	70,813	28
1947	486	3	96	0	1,458	0	56,037	2	18,032	1	193,134	48	652	1	1,431	0	455	0	248	0	5	0	304	0	272,328	55
1948	6,479	6	11,429	1	17,896	4	28,667	15	107,244	35	22,160	15	17,550	2	1,144	0	590	0	–	0	3,553	0	13,247	4	229,959	82
1949	9,772	6	5,073	2	11,676	3	9,261	2	18,195	10	32,861	17	3,762	5	568	0	618	0	1,551	2	578	1	16	0	93,931	48
1950	4,619	3	6,925	7	3,451	7	14,668	0	51,126	21	22,340	34	19,224	6	1,687	0	3,718	4	5,562	3	6,638	3	36,092	5	176,050	93
1951	884	0	5,823	2	7,264	1	18,287	2	15,166	6	5,383	8	972,458	25	2,509	7	621	0	–	0	–	0	346	0	1,028,741	51
1952	9,139	14	926	1	1,909	9	199,127	10	6,438	3	22,775	2	3,858	9	296	0	9,376	6	–	0	30	0	190	0	254,064	54
1953	8,575	1	368	0	10,675	2	–	0	41,656	5	53,572	29	3,873	1	1,926	2	887	0	42	0	300	0	330	0	122,204	40
1954	2,554	4	84	0	20	0	557	0	6,213	1	52,076	20	2,218	2	6,606	3	3,170	8	33,341	17	–	0	3	0	106,842	55
1955	–	0	1,620	4	17,372	17	2,653	4	9,231	2	3,825	1	1,071	0	712,085	193	3,471	0	52,442	18	1,168	0	190,553	63	995,491	302
1956	9,455	0	2,731	3	3,403	2	1,202	0	24,799	10	2,300	4	5,849	15	11,671	4	–	0	1,892	0	137	3	1,249	1	64,688	42
1957	61,383	15	29,750	2	–	0	106,130	18	44,182	13	101,696	32	4,669	0	722	2	335	0	2,663	0	8,610	0	163	0	360,303	82
1958	273	0	12,501	11	11,193	0	21,145	3	24,884	2	67,537	0	42,779	29	18,631	1	14,560	0	2,336	1	2,416	0	–	0	218,255	47
1959	95,601	8	2,448	0	2,031	6	427	0	7,181	8	890	0	557	0	5,550	0	1,844	0	19,602	3	4,970	0	154	0	141,255	25
1960	534	1	713	2	29,988	4	28,056	0	2,214	3	9,956	13	9,038	1	677	0	5,266	0	5,818	6	360	0	356	0	92,976	32
1961	32	0	13,870	1	14,242	3	5,053	0	67,785	6	4,324	4	5,825	25	3,974	6	26,041	7	580	0	1,161	0	10,666	0	154,033	52
1962	884	0	24,906	9	28,417	4	8,920	0	1,893	0	2,265	2	2,428	1	708	0	3,266	3	–	0	580	0	970	0	75,237	19
1963	2,343	0	16,392	0	99,429	31	2,302	0	1,573	0	14,682	3	4,261	4	36,926	1	38	0	–	0	–	0	–	0	177,946	39
1964	787	0	15	0	97,945	14	16,763	1	1,313	0	71,666	37	29	0	517	0	5,477	3	16,432	1	750	2	439,948	42	651,642	100
1965	11,084	0	2,566	2	4,158	1	180,337	16	36,328	3	495,750	66	24,705	17	193	0	9,652	0	894	0	–	0	22,379	14	788,046	119
1966	13,114	0	12,823	2	2,012	1	40,460	16	1,315	0	4,377	1	840	4	17,773	0	658	0	–	0	528	2	23,104	5	117,004	31
1967	2,213	0	0	0	42,182	4	6,453	0	3,043	1	104,097	5	1,191	4	7,877	0	101,135	11	140	0	0	2	106,887	7	375,218	34
Total	689,910	185	191,605	143	656,158	304	1,301,917	506	772,722	407	1,555,943	599	1,228,649	371	887,214	326	281,578	134	191,068	69	88,783	107	899,383	193	8,744,930	3,344
Average	16,044	4	4,456	3	15,260	7	30,277	12	17,970	10	36,185	14	28,573	9	20,633	8	6,548	3	4,443	2	2,065	3	20,916	4	203,370	78

DISTRIBUTION OF ESTIMATED FLOOD LOSSES IN THE UNITED STATES BY MAJOR RIVER SYSTEMS, 1925-1967



LOSSES IN INDIVIDUAL SEVERE FLOODS IN THE UNITED STATES SINCE JULY 1902

Property Losses in Thousands of Dollars

Date	Location	Lives #	Property
May-June 1903------	Kansas, Lower Missouri, and Upper Mississippi Rivers----------------------	100	$ 40,000
July 1908----------	Red River------------------------------------	---	16,200
March 1912---------	Lower Mississippi River--------------------	---	70,000
March 1913---------	Ohio River and tributaries-----------------	467	147,000
December 1913------	Texas rivers-------------------------------	177	9,000
June 1915----------	Kansas River-------------------------------	---	5,950
August 1916--------	Rivers of the Carolinas--------------------	---	21,700
June 1921----------	Arkansas River in State of Colorado--------	120	25,000
September 1921-----	Texas rivers-------------------------------	215	19,000
October 1923-------	Lower Arkansas, including the State of Oklahoma---------------------------	---	15,000
March 1924---------	Potomac River------------------------------	---	6,000
Spring of 1927-----	Mississippi Valley-------------------------	313	284,118
November 1927------	New England rivers-------------------------	88	45,578
December 1933------	Columbia River and tributaries-------------	---	10,000
May 1935-----------	Rivers in eastern Colorado-----------------	---	6,000
May-June 1935------	Republican and Kansas Rivers---------------	110	18,000
	Lower Missouri River-----------------------	---	10,000
July 1935----------	Upper Susquehanna tributaries--------------	52	26,000
December 1935------	Houston, Texas area------------------------	---	2,500
March-April 1936---	Rivers in eastern United States------------	107	270,000
Jan.-Feb. 1937-----	Ohio and lower Mississippi River basins----	137	417,685
December 1937------	Sacramento Valley--------------------------	---	7,100
March 1938---------	Streams in southern California-------------	79	24,500
September 1938-----	Rivers in New England----------------------	---	37,000
July 1939----------	Licking and Kentucky Rivers----------------	78	1,715
Feb.-Mar. 1940-----	Sacramento Valley--------------------------	---	6,700
August 1940--------	Rivers in southern Virginia, the Carolinas, and eastern Tennessee-------------------	40	12,000
Oct.-Nov. 1941-----	Arkansas River basin-----------------------	---	8,500
April-June 1942----	Upper Mississippi, Missouri, Arkansas, Red, and Trinity River basins----------------	---	44,350
May 1942-----------	Delaware & Susquehanna River basins--------	33	13,000
July 1942----------	Upper Allegheny River and Sennemahoning Creek basins----------------------------	15	10,000
Nov.-Dec. 1942-----	Willamette River---------------------------	10	6,900
Dec. 1942-Jan. 1943	Ohio River---------------------------------	---	10,540
Apr.-June 1943-----	Maumee, Wabash, upper Mississippi, Missouri, White, and Arkansas River basins----------------------------------	60	172,500
August 1943--------	Little Kanawha-----------------------------	23	1,300
April-June 1944----	Upper Mississippi, Missouri, Arkansas, Red, lower Mississippi Basins and east Texas Streams---------------------------------	17	82,000
Feb.-Mar. 1945-----	Ohio River---------------------------------	18	30,000
Feb.-Apr. 1945-----	Trinity and Sabine Rivers------------------	---	9,000
Mar.-July 1945-----	Lower Mississippi River--------------------	---	9,500
July 1945----------	Lake Section of Rensselaer County, N. Y.---	---	3,500
December 1945------	Willamette River---------------------------	---	6,000
January 1946-------	Cumberland River---------------------------	---	3,925
September 1946-----	San Antonio and Nueces Rivers--------------	---	6,050
December 1946------	Willamette River---------------------------	---	5,525
April 1947---------	Allegheny----------------------------------	---	4,319
May-July 1947------	Rivers in middle West in the lower Missouri and middle Mississippi River basins------	29	235,000
June 1947----------	East Creek at Rutland, Vt.-----------------	---	2,000
Apr.-May 1948------	Red River of North and tributaries---------	---	18,700
May-June 1948------	[1]Columbia Basin--------------------------	35	101,725
June-July 1948-----	Arkansas River and minor tributaries-------	---	14,500
December 1948------	Housatonic River---------------------------	---	4,200
May 1949-----------	Trinity River------------------------------	10	14,000
June 1949----------	Shenandoah and Potomac Rivers--------------	11	8,850
Apr.-May 1950------	[2]Red River of North----------------------	---	33,000
June 1950----------	Central West Virginia----------------------	31	4,020
Nov.-Dec. 1950-----	Central Valleys of California and western Nevada-------------------------	---	23,000

Property Losses in Thousands of Dollars

Date	Location	Lives #	Property
April 1951	Upper Mississippi Basin	---	$ 18,622
June-July 1951	[3]Kansas-Missouri	28	923,224
April 1952	[4]Red River of the North-upper Mississippi-Missouri River basins	11	198,000
May 1952	Great Basin	---	8,373
March 1953	New England States	---	10,000
Apr.-May 1953	Louisiana-Texas	12	38,959
June 1953	Northwestern Iowa	14	32,950
June 1954	Middle Rio Grande and lower Pecos	16	19,079
October 1954	Pecos River in New Mexico	13	1,783
March 1955	Ohio Basin	15	14,396
August 1955	[5]Hurricane floods in Northeast	187	714,079
December 1955	[6]West Coast	61	154,532
May-June 1956	[7]Columbia and Kootenai Rivers	---	14,025
Jan.-Feb. 1957	[8]Streams in southeastern Kentucky, southwestern West Virginia, adjoining portions of Tennessee and Virginia	14	58,000
February 1957	Snake River and tributaries	---	20,500
Apr.-June 1957	Streams in Texas, Arkansas, Kansas, Louisiana, Missouri and Oklahoma	18	105,000
June-July 1957	Wabash River and tributaries	---	63,000
June 1958	White and Wabash Rivers	---	57,000
July 1958	Flash flood on East Nishnabotna River in Iowa	19	5,850
January 1959	Ohio River basin	---	81,921
January 1959	Lake Erie drainage in Ohio and New York	---	11,265
Mar.-Apr. 1960	[9]Snowmelt floods in the Missouri and upper Mississippi Basins	---	34,466
Feb.-Mar. 1961	East Gulf of Mexico drainage	---	13,997
July 1961	Flash flood on small streams in Charleston, W. Va.	22	3,238
September 1961	Kansas-Missouri	---	23,557
Feb.-Mar. 1962	Kentucky	---	16,067
Feb.-Mar. 1962	Southeastern Idaho	---	6,318
March 1963	Ohio River basin	26	97,600
June 1964	Montana	31	54,279
December 1964	California and Oregon	40	415,832
March 1964	Ohio River basin	13	81,602
Mar.-May 1965	[10]Upper Mississippi, Missouri, and Red of North Basins	16	181,325
May 1965	Brazos River	---	30,802
June 1965	South Platte Basin	16	415,076
June 1965	Sanderson, Texas flash flood	26	2,715
June 1965	Arkansas Basin	16	58,340
January 1966	Streams in Humboldt County, Calif.	---	6,850
Apr.-May 1966	Sabine and Trinity Basins, Texas	14	20,100
December 1966	Tulare and Buena Vista Lakes drainages in California	---	11,712
June 1967	Platte River and tributaries in Nebraska	---	35,275
September 1967	Hurricane "Beulah" floods in Texas	---	98,239
August 1967	Tanana and Chena Rivers in Alaska	---	98,550

Loss of life carried only where ten or more

References

1. Monthly Weather Review, January 1949
2. Monthly Weather Review, September 1951
3. Technical Paper No. 17
4. Technical Paper No. 23
5. Technical Paper No. 26
6. Climatological Data, National Summary, December 1955
7. Climatological Data, National Summary, Annual 1956
8. Climatological Data, National Summary, January 1957
9. Technical Paper No. 45
10. Technical Report No. WB-3

FLOOD DAMAGE ESTIMATES BY STATES

1955-1967
Flood Losses in Thousands of Dollars

States	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967
Alabama............	3,379	720	2,324	872	-	670	12,625	3,529	1,280	5,343	723	2,366	1,695
Alaska.............	-	*	-	-	-	-	**	***	-	-	-	-	98,550
Arizona............	226	-	-	-	100	-	325	1,000	-	55	11,330	3,050	3,576
Arkansas...........	61	255	27,938	6,202	3,090	580	3,503	91	2,500	598	143	5,055	1,497
California.........	165,767	8,745	13	33,063	4	516	95	2,780	11,834	229,168	11,321	24,347	1,370
Colorado...........	2,567	5,135	2,901	240	-	-	-	80	50	-	452,293	707	-
Connecticut........	379,360	-	-	-	-	750	-	-	-	-	-	-	-
Delaware...........	117	-	-	-	-	-	-	-	-	-	-	-	-
District of Columbia	-	51	-	60	-	-	-	-	-	-	-	-	-
Florida............	105	1,891	-	-	150	12,047	317	1,481	-	426	144	548	95
Georgia............	1	212	1,068	323	-	392	5,236	-	445	3,641	397	1,628	23
Hawaii.............	-	-	-	400	-	-	-	-	2,300	-	-	-	1,029
Idaho..............	1,371	6,222	20,896	3	500	-	939	8,112	2,766	11,704	4,184	-	792
Illinois...........	102	1,026	1,206	17,970	1,506	7,503	11,553	891	513	3,044	30,564	577	2,629
Indiana............	1,003	4,021	66,748	52,302	12,958	2,649	13,306	670	8,266	12,327	20	3,098	4,618
Iowa...............	35	51	1,543	7,508	128	7,612	9,389	6,778	70	240	32,462	904	4,416
Kansas.............	474	33	9,164	4,606	4,061	1,947	13,397	1,826	168	370	29,792	97	15,093
Kentucky...........	6,629	568	55,233	3,817	2,480	3	12,969	16,885	36,917	35,476	1,044	1,671	17,583
Louisiana..........	30	-	4,147	2,842	-	112	6,074	1,908	-	30	-	250	-
Maine..............	-	-	-	-	61	-	800	-	-	-	-	528	-
Maryland...........	5,450	837	-	40	-	-	-	-	-	-	53	-	125
Massachusetts......	155,982	-	-	-	-	6,400	-	-	-	-	-	-	-
Michigan...........	-	1,278	-	-	-	1,181	-	-	-	-	-	-	-
Minnesota..........	-	11	9,128	17	50	212	552	1,290	26	-	97,603	4,300	-
Mississippi........	3,132	1,270	2,693	13,826	280	744	15,918	1,982	19	3,152	1,931	2,706	1,192
Missouri...........	666	167	9,618	38,718	6,018	13,506	27,375	557	152	6,591	33,976	2,781	39,080
Montana............	63	317	33	1	82	57	-	147	148	54,389	253	-	2,947
Nebraska...........	1,500	865	5,983	3,064	3,753	8,884	674	2,630	13,394	5,146	1,368	11,628	40,644
Nevada.............	7,398	237	-	-	-	-	891	762	2,858	2,454	4	307	45
New Hampshire......	-	-	-	-	4,500	100	-	-	-	-	-	-	-
New Jersey.........	23,102	-	-	3	-	-	-	-	-	-	-	-	1,438
New Mexico.........	1,066	-	-	-	-	-	-	-	620	1,235	4,833	1,048	-
New York...........	30,072	1,089	166	42	5,667	7,229	608	-	33,102	3,275	-	-	777
North Carolina.....	625	831	788	3,201	506	100	1,400	-	-	15,816	88	198	1,168
North Dakota.......	2	-	100	-	28	136	-	-	-	-	5,192	9,700	-
Ohio...............	753	1,056	7	4,867	54,840	191	1,217	6,512	22,359	28,039	-	1,893	6,622
Oklahoma...........	977	-	35,665	169	8,907	2,638	2,483	792	413	798	2,508	12	3
Oregon.............	9,515	6,376	310	363	20	360	757	1,550	299	187,101	5,679	2,283	1,044
Pennsylvania.......	141,381	7,199	1,048	3,582	21,109	3,072	612	15	5,397	16,938	-	705	7,251
Rhode Island.......	28,830	-	-	-	-	-	-	-	-	-	-	-	588
South Carolina.....	74	-	60	680	122	72	369	97	89	1,809	268	140	579
South Dakota.......	11	10	3,969	-	-	3,417	1	3,030	-	-	740	470	1,125
Tennessee..........	977	279	5,118	128	-	226	2,263	651	6,262	156	2,472	1,608	1,090
Texas..............	5,165	3,715	78,881	18,101	2,886	8,093	2,846	1,948	20	5,435	39,395	28,001	98,259
Utah...............	226	210	169	10	4	-	281	1,272	64	70	1,746	1,577	453
Vermont............	-	-	3	-	-	-	-	-	-	692	-	-	-
Virginia...........	10,695	-	139	-	28	211	231	-	5,937	-	2	-	581
Washington.........	1,165	6,472	1,664	50	4,914	-	130	-	1,013	11,817	1,012	592	1,910
West Virginia......	5,187	3,185	11,052	1,170	709	370	3,455	5,914	17,624	4,169	49	1,868	14,235
Wisconsin..........	50	335	-	-	1,791	996	1,442	57	142	-	14,067	361	-
Wyoming............	200	11	526	3	-	-	-	-	899	138	390	-	1,096
TOTAL	995,491	64,688	360,303	218,255	141,255	92,976	154,033	75,237	177,946	651,642	788,046	117,004	375,218

*Major Flood in May 1956
**Major Flood in June 1961
***Ice Jam Flooding May 1962
***Serious Flooding June 1962

GENERAL SUMMARY OF RIVER AND FLOOD CONDITIONS

Year 1968

Elmer R. Nelson, Office of Hydrology

The most disastrous floods in the United States during 1968 occurred in northern and east-central New Jersey during May. This was the worst flooding in northern New Jersey since 1936 and in some sections since 1903. Preliminary estimates of flood damage were placed at $133 million.

Damaging floods occurred in southeastern New England during March and in the Ohio Basin during May. The total preliminary damages in these two floods were estimated at over $85 million.

This report contains a brief summary, by months, of the most significant flooding during 1968. A detailed summary of the flooding appears in the monthly issue of this publication.

January

The most significant flooding in the continental United States during January occurred in Texas in the river drainages west of the Colorado River. The heaviest damage and loss of life was in the San Antonio area where damages totalled about $3 million. There were four known deaths from drowning. Major flooding occurred on the lower Frio, lower Nueces, and Atascosa Rivers.

A flash flood was reported in Hawaii on January 5 in the Pearl Harbor area, Oahu. About 30 residents of the Hoolaulea Street area, near the Pearl City Shopping Center were evacuated as Waimano stream rose suddenly out of its banks. Waimalu stream near Aiea flooded a school. Eight families were evacuated. On the Ewa side of Pearl City, the rapid current of Waiawa stream, destroyed a frame house. Roads and highways in the Pearl Harbor area were clogged with mud and debris. At least 30 homes and a supermarket were damaged. The damage to property and crops was estimated at $2 1/2 million.

February

The highest crests in 8 to 9 years were reported on the Wabash River in Indiana during February. A great amount of overflow occurred along the Wabash and White Rivers. Crests along the Wabash at and below Lafayette, Ind., were mostly 8 to 11 feet above flood stage. One bridge under construction near Montezuma, Ind., was extensively damaged. A considerable amount of corn in the fields was ruined. Monetary loss was small--less than $40,000

March

The most disastrous floods during March occurred in southeastern New England. Severe flash flooding occurred along most of the smaller rivers and streams in eastern Massachusetts and Rhode Island. Practically every town in eastern Massachusetts, from about Worcester east, and most of Rhode Island reported moderate to severe flash flooding of small streams and brooks. Record to moderate flooding occurred on many streams in southeastern New England. Estimates of flood losses by the Corps of Engineers were placed at $45 million. Two lives were lost in the town of Lee, Mass.

April

The most damaging floods during April occurred in the Red Basin. Flood damage occurred along the Red River near Natchitoches, La., and to the west of the river in Natchitoches Parish. Damage to crops, livestock, and buildings were estimated at $910,000. Some heavy damages resulted from flash flooding of small tributaries of the Red and Cumberland Rivers in Tennessee and Kentucky.

May

The most disastrous floods during May occurred in northern and east-central New Jersey. More than 2,000 families were evacuated, as a record rainfall on May 28-30 caused the worst flooding in northern New Jersey since 1936, and in some sections since 1903. Severe flooding resulted in the Passaic Basin and moderate flooding in the Raritan Basin. Preliminary estimates of total flood damage by the Small Business Administration were placed at $133 million. Seven deaths occurred in New Jersey due to flooding. Northeastern New Jersey was declared a disaster area due to the record and near record flooding that resulted from the excessive rainfall.

Severe floods occurred in the Ohio Basin. Flash floods in the lower Scioto River caused damages estimated at $8 million to $9 million.

Damage was extensive to agriculture, commerce, and to the communities involved. Preliminary estimates of flood damage in the Ohio Basin were placed at over $40 million.

June

Major flooding occurred on the San Jacinto River at Lake Houston, Tex., during the latter part of June due to torrential rains associated with tropical storm Candy. The Navidad River at Ganado, Tex., reached its highest stage since November 1940. The lower Wabash River in Indiana reached its highest stage at Mt. Carmel, Ill., since 1950. The total flood loss in the Wabash Basin during May and June was estimated at $12 million.

July

Record to near record flooding occurred on the Wapsipinicon River in Iowa during July. At Independence, Iowa, the previous record stage was exceeded by 2.4 feet. The total damage was estimated at nearly $600,000. The worst flooding in the memory of many residents occurred on Rock Creek at Louisville, Kans. Locally heavy damage resulted from flash flooding in the Kansas River Basin.

August

The most significant flooding during August occurred in the Missouri Basin. The upper Wakarusa River near Auburn, Kans., observed its highest water in 20 years. Mill Creek at Paxico, Kans., reached its second highest stage and Bow Creek near Stockton, Kans., its highest stage since 1951. The Little Blue River at Fairbury, Nebr., reached its highest stage since 1960. The heaviest flooding in the memory of residents occurred on Beaver Creek in the vicinity of Norway, Kans. Moderate damages occurred along the Kansas River tributaries.

September

The most significant floods during September occurred in the West Gulf of Mexico Drainage. Heavy flow from the Conchos River in Mexico caused a crest of nearly 6 feet above flood stage on the Rio Grande River at Presidio, Tex. Farmland south of Presidio was inundated. Cotton ready to be picked was under water. The International Boundary and Water Commission estimated damages at nearly $600,000. In the Missouri Basin, the North Fork of the Solomon River at Lenora, Kans., reached its highest stage in 11 years.

October

Light to moderate overflows occurred during October on tributary streams in the Kansas and Big Blue River basins in Kansas. Damages were light as overflows had been preceded by heavier flooding in late summer or early fall. Flooding reported elsewhere was very minor.

New low water records were established in eastern North Carolina for the 3d consecutive month. New low water records were established in the Tar and Cape Fear River basins.

November

The most significant flooding during November was the flooding that began in the Minnesota Basin during the last 10 days of October. The main loss was to field crops, corn, and soybeans. Based on U. S. Department of Agriculture estimates, the value of the potential crops decreased at least $16.5 million.

December

No significant damages resulted from the flooding in the United States during December. Flood heights were generally not excessive and overflows were mostly confined to low areas adjacent to the stream. The first major rise of the season occurred in the Pacific Slope Drainage. The most important flooding was in the coastal and northern Willamette streams in Oregon where the damages were estimated at $89,000.

Major rises and light to moderate flooding occurred in streams in the lower Missouri Basin. Crests of 5 feet or more above flood stage occurred on the Lamine and Blackwater Rivers in Missouri.

SOLAR RADIATION DATA

Average daily values (direct and diffuse) received on a horizontal surface, tabulated in langleys.

YEAR 1968

Station	January	February	March	April	May	June	July	August	September	October	November	December	Annual
ALBUQUERQUE N.M.	-	357	475	608	697	736	605	593	537	411	279	256	-
AMES IOWA	166	257	356	367	447	527	521	435	363	241	143	106	327
ANNETTE ALASKA	63	119	156	308	480	481	450	401	194	111	38	49	238
APALACHICOLA FLORIDA	273	367	499	547	634	622	571	511	480	403	335	277	460
ARGONNE NAT. LAB.ILL.	160	289	358	435	472	542	-	509	377	286	150	121	-
ASTORIA OREGON	97	191	243	427	496	529	535	410	330	210	104	-	-
ATLANTA GEORGIA	184	308	447	419	521	568	493	496	385	299	223	199	379
BARROW ALASKA	# -	38	130	377	662	-	521	276	113	40	1	# 0	# -
BETHEL ALASKA	-	-	275	-	447	507	398	278	248	98	32	18	-
BISMARCK N.DAK.	166	233	377	485	524	502	646	529	402	263	159	119	367
BLUE HILL MASS.	167	263	284	455	466	438	552	463	378	258	121	132	331
BOISE IDAHO	149	227	-	-	554	607	632	430	409	267	133	97	-
BOSTON MASSACHUSETTS	-	-	-	442	442	-	503	438	379	256	-	-	-
BROWNSVILLE TEXAS	248	-	432	446	-	-	-	529	481	416	281	255	-
BURLINGTON VERMONT	145	235	262	426	448	353	489	401	323	200	97	92	289
CAPE HATTERAS N.C.	207	324	443	495	553	578	493	506	467	344	254	210	406
CARIBOU MAINE	158	279	309	412	537	489	605	458	326	195	126	109	334
CHARLESTON S.C.	221	345	472	492	566	546	553	499	423	345	270	230	414
CLEVELAND OHIO	139	259	303	433	430	522	530	488	399	259	106	85	329
COLUMBIA MISSOURI	156	281	379	471	483	607	553	465	405	323	150	152	369
DAVIS CALIFORNIA	193	260	429	-	665	729	732	610	543	353	192	171	-
DODGE CITY KANSAS	223	335	436	564	508	695	601	540	513	378	210	211	435
E. LANSING MICHIGAN	161	249	363	457	-	475	596	496	346	250	138	92	-
EL CENTRO CALIF. NPF	299	352	474	605	670	698	602	587	521	440	330	282	488
EL PASO TEXAS	295	402	466	653	769	746	672	629	593	466	322	320	528
ELY NEVADA	292	316	469	588	620	760	703	612	560	386	253	221	482
EPPLEY NEWPORT R.I.	157	254	297	454	474	469	528	456	382	271	118	128	332
FAIRBANKS ALASKA	8	61	251	411	401	552	566	385	252	82	24	7	250
FLAMING GORGE UTAH	222	283	439	506	592	692	599	-	-	298	196	-	-
FORT WORTH TEXAS	161	323	375	476	503	586	623	606	483	370	253	262	418
FRESNO CALIFORNIA	184	226	409	601	665	-	-	-	-	-	184	149	-
GAINESVILLE FLORIDA	243	340	457	513	567	540	470	-	-	-	293	292	-
GLASGOW MONTANA	149	238	344	485	564	512	651	505	376	251	125	113	359
GRAND JUNCTION COLO.	284	278	462	478	593	692	638	562	507	353	246	217	443
GREAT FALLS MONTANA	154	222	354	493	546	493	650	476	335	254	157	103	353
GREENSBORO N.C.	187	320	419	417	482	526	479	490	427	292	201	182	377
INDIANAPOLIS INDIANA	181	304	359	477	424	579	535	500	367	300	137	123	357
INYOKERN CALIFORNIA	286	337	483	613	667	685	648	-	-	-	-	-	-
ITHACA NEW YORK	125	223	256	442	375	452	538	443	370	214	82	86	301
LAKE CHARLES LA.	193	318	370	392	509	466	515	499	423	374	288	-	-
LAKELAND FLORIDA	306	354	507	547	604	503	514	550	513	422	385	316	460
LANDER WYOMING	-	333	472	500	587	-	634	525	448	326	216	183	-
LARAMIE WYOMING	208	261	389	492	508	591	540	457	402	288	217	154	451
LAS VEGAS NEVADA	291	356	519	658	721	736	657	612	568	420	331	258	511
LITTLE ROCK ARKANSAS	160	303	342	459	549	589	544	498	427	365	189	216	387
LOS ANGELES CALIF.	-	291	473	605	629	573	627	584	458	335	282	240	-
LOS ANGELES CALIF. U	259	-	455	572	-	-	-	582	457	316	281	237	-
LEXINGTON KENTUCKY	-	-	363	449	454	-	515	499	378	-	-	-	-
MADISON WISCONSIN	153	291	361	396	459	533	615	516	372	258	155	125	353
MANHATTAN KANSAS	168	254	380	445	460	528	515	430	387	283	162	-	-
MATANUSKA ALASKA	32	61	238	-	405	510	424	383	237	105	-	21	-
MAUNA LOA OBS.HAWAII	485	577	446	466	658	705	582	581	-	-	-	-	-
MEDFORD OREGON	138	196	395	541	628	721	731	530	482	302	113	104	407
MIAMI FLORIDA	316	381	497	569	445	456	-	542	430	389	379	343	-
MIDLAND TEXAS	225	322	386	537	571	637	544	500	466	382	275	284	427
NASHVILLE TENNESSEE	180	304	379	433	526	596	535	533	417	305	186	175	381
NEW YORK N.Y. U	157	272	301	468	443	469	518	488	394	245	112	131	333
NORTH OMAHA NEBRASKA	205	266	444	471	558	-	-	-	403	270	164	150	-
OAK RIDGE TENNESSEE	183	316	383	421	499	558	518	511	390	299	203	171	346
OKLAHOMA CITY OKLA.	154	319	-	528	465	569	571	509	473	365	225	240	-
PAGE ARIZONA	293	335	488	599	713	757	669	593	572	410	293	257	498
PALMER AAES ALASKA	29	59	222	359	392	477	406	362	-	112	40	19	-
PHOENIX ARIZONA	303	369	466	646	723	743	659	615	568	438	311	273	510
PORTLAND MAINE	173	275	307	443	-	378	554	482	361	240	130	129	-
PROSSER WASHINGTON	121	208	332	477	600	644	670	495	409	266	118	-	-
PULLMAN WASHINGTON	108	189	293	426	406	438	612	442	348	222	110	-	-
RAPID CITY S.DAK.	189	276	385	464	515	561	601	485	415	297	191	145	377
RENO NEVADA	212	257	420	532	591	622	591	503	490	338	189	178	410
RICHLAND 25 NW WASH.	128	216	333	477	599	634	685	475	416	260	121	105	371
RIVERSIDE CALIFORNIA	225	240	422	545	525	552	532	541	429	351	324	262	412
RUSTON LOUISIANA	155	292	338	387	477	532	512	-	397	340	233	197	-
SAINT CLOUD MINN.	140	282	335	415	399	499	559	454	341	228	126	116	325
SALT LAKE CITY	-	276	433	511	600	681	725	509	483	350	200	161	-
SAN ANTONIO TEXAS	203	322	362	395	443	516	592	568	448	355	284	237	394
SANTA MARIA CALIF.	250	273	439	579	652	691	645	617	493	389	301	234	464
SAULT STE MARIE MICH	129	261	342	393	489	445	553	478	295	162	96	86	311
SEATTLE TACOMA WASH.	75	201	247	399	513	529	629	410	304	191	93	58	304
SEATTLE WASH. UNIV.	65	189	209	347	462	462	561	351	271	-	80	-	-
SPOKANE WASHINGTON	100	227	297	433	-	593	678	468	370	219	89	88	-
STATE COLLEGE PENN.	160	264	322	474	377	529	567	490	417	243	89	115	337
STERLING VIRGINIA	197	308	378	470	445	589	546	501	412	242	151	148	366
SWAN ISLAND W.I.	391	475	563	628	568	534	566	562	522	370	353	346	490
TAMPA FLORIDA	341	385	511	585	593	498	474	425	394	355	318	276	430
TUCSON ARIZONA	290	343	430	-	431	-	-	559	523	428	331	303	-
WAKE ISLAND PACIFIC	409	458	538	589	644	622	584	520	480	478	397	378	508

Note: Langley is the unit to denote one gram calorie per square centimeter.
(U) Indicates Urban sites.
\# Sun below horizon November 19 through January 23, inclusive.

Chart 1. Departure from Normal of Annual Temperature (°F) at Surface, 1968

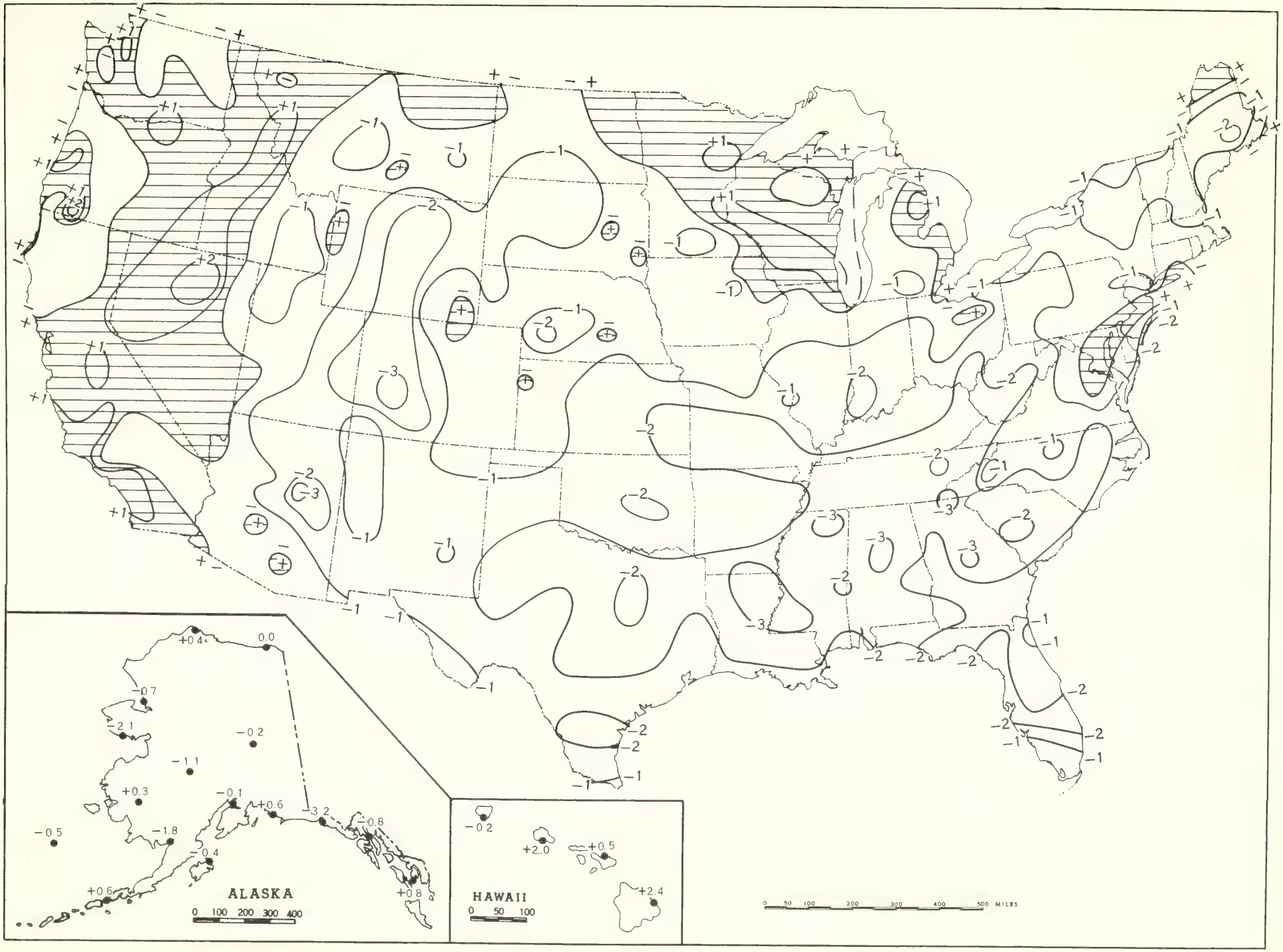


Chart II. Total Annual Precipitation (inches), 1968.

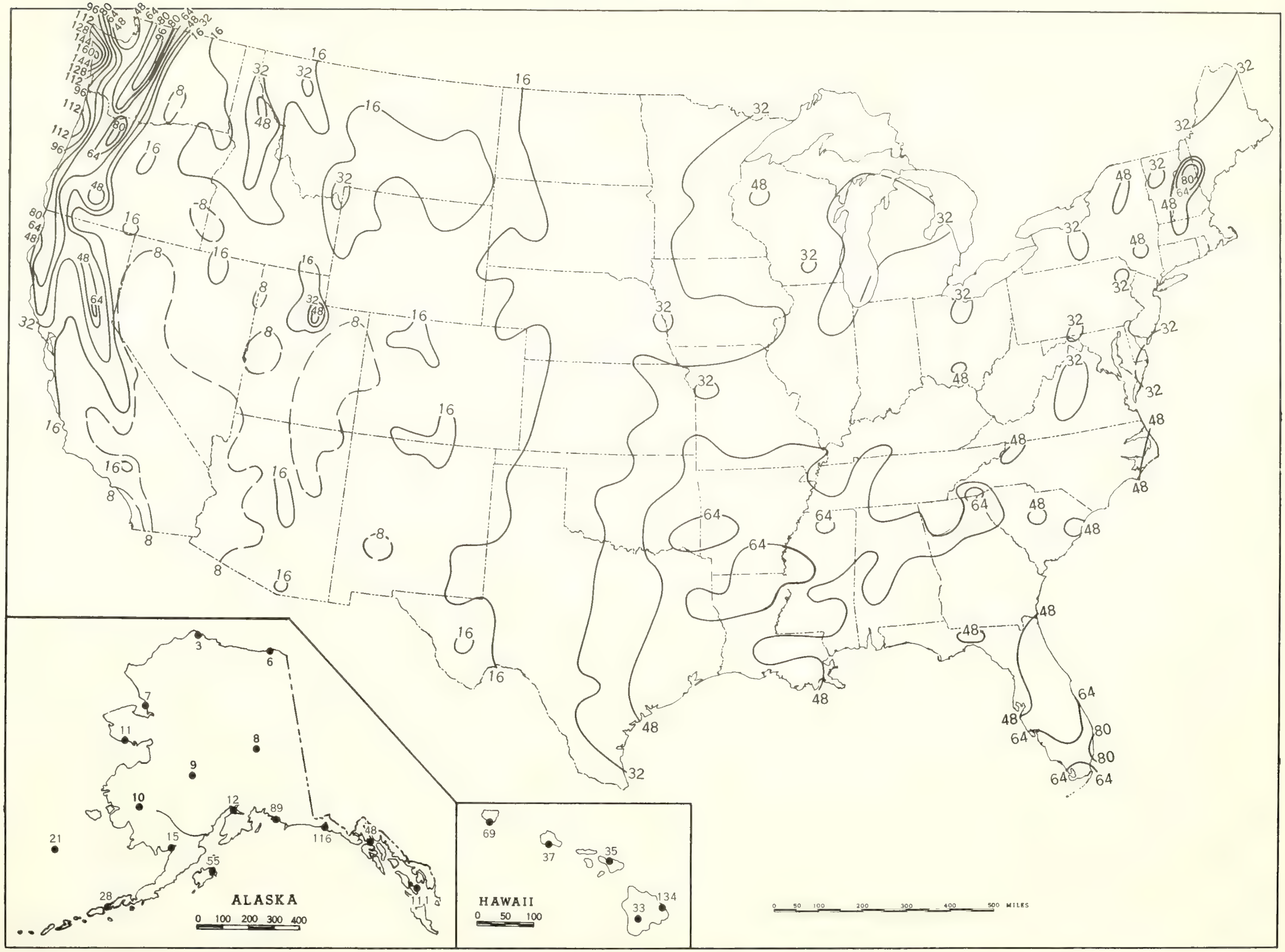
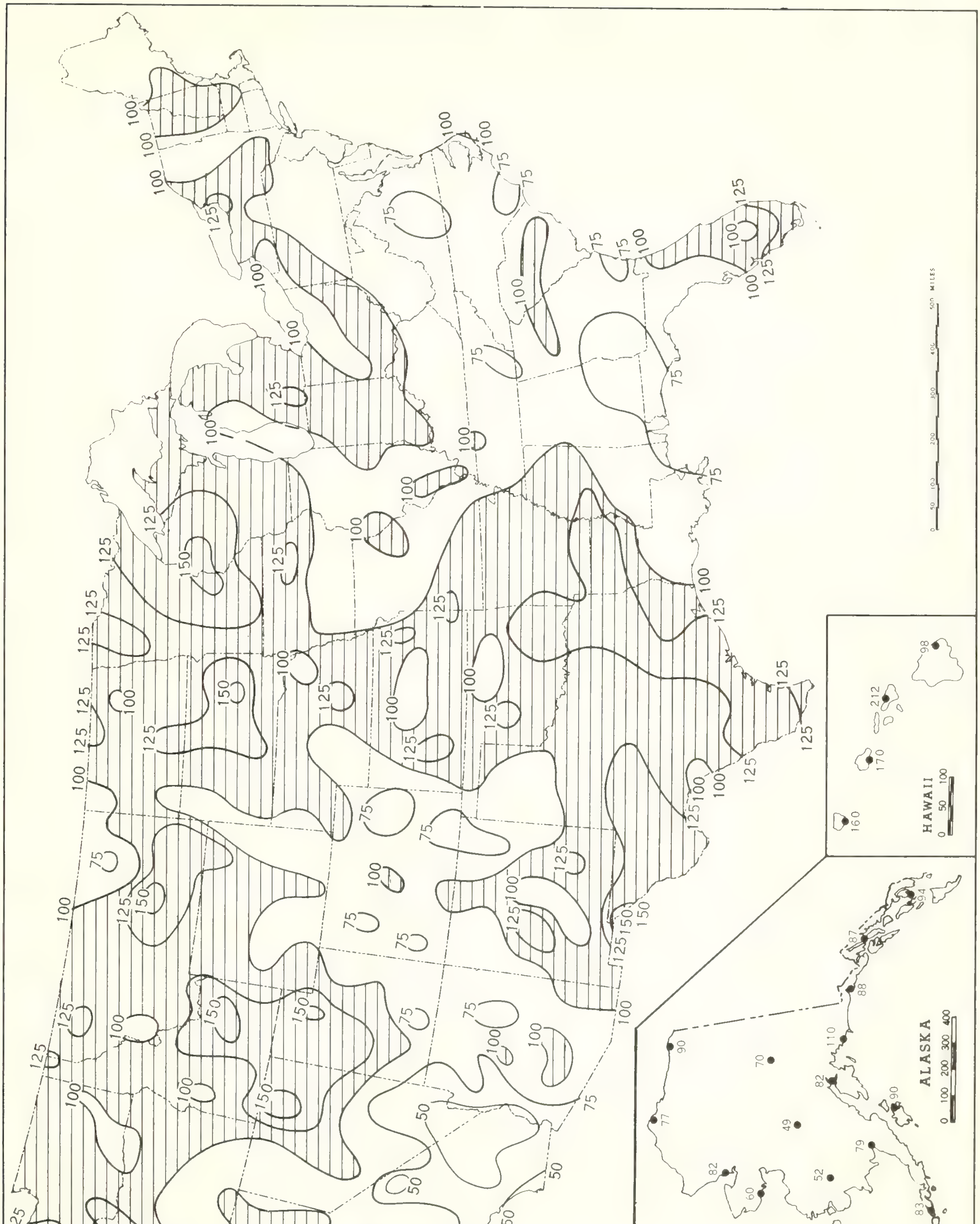


Chart III. Percentage of Normal Annual Precipitation, 1968.



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